UiO : Centre for Technology, Innovation and Culture
University of Oslo

P.O. Box: 1108 Blindern
N-0317 Oslo
Norway
www.tik.uio.no

Control and Innovation on Digital Platforms

The case of Netflix and streaming of video content

ESST
The European Inter-University Association on
Society, Science and Technology
http://www.esst.uio.no
The ESST MA

Eirik Vigeland
University of Oslo, Faculty of Social Science
Society, Science and Technology in Europe
Autumn 2012

Word count: 20 587

Preface

This thesis is part of the Master program in Society, Science and Technology in Europe at the University of Oslo. The program consists of three intensive semesters devoted to the study of science and technology in society, in both historical and contemporary perspectives. The program aims to apply inter-disciplinary research to the social and economic analysis of innovation, to strategic decision-making, management of new technologies and to political analysis of modern science and technology-based societies.

The thesis was supervised by Jarle Hildrum from the TIK centre at the University of Oslo. I would like to express my sincerest gratitude to Jarle for guiding me to this process and for providing invaluable directions and concrete advice. Furthermore, Jarle has provided much appreciated flexibility in handling unforeseen bumps during the writing process. Thank you!

I would also like to express my gratitude to Hanne-Stine Hallingby at Telenor, Ben Eaton at IFI, Håkon Normann, former employee at WiMP, and Silvia Elaluf-Calderwood at LSE for valuable input and pointers on they way. I would also like to thank Anne Raaum Christensen, Sverre Vigeland Lerum, Lisbeth Thoresen and Einar Vigeland for much appreciated comments and feedback.

Finally a big thanks goes to Ingrid for her patience and support during the completion of this work, and to little Ella, for being a good sleeper.

Oslo, 15th October 2012

Abstract

In this thesis I investigate innovation processes on innovation platforms, and look at the role played by content release for innovation in digital distribution of home entertainment. I argue that innovation platforms rely on several aspects of innovation in order to succeed, and this thesis is concerned with one of these, namely release of digital entertainment content. I use the American video streaming service Netflix as a case and example of such an innovation platform. By using technology blogs as my main empirical source, I analyse the discourse that leads up to release or withdrawal of video content between Netflix, a platform owner, and the Hollywood motion picture studios, being the legal owners of video content. I argue that Netflix´s service can be characterised as a generative Internet media platform, implying that innovation is promoted by distributing control between several heterogeneous actors, by that creating unforeseen dependencies concerning content, networks, technology and devices. Additionally, the findings suggest that content release was essential for making Netflix´s innovation succeed, and by that allowing for various innovation activities on this platform. It furthermore seems like this innovation has made a broad impact in the cultural industries, as alike versions of Netflix´s streaming service are being established for a range of different content.

Table of Contents

1 Introduction

Most forms of home entertainment have by now been through a period of digitalisation and increased online presence. Recorded music, TV, and books have all had to yield to radical digitalisation from the 1980s, 1990s, and 2000s, respectively (Tilson et al. 2010). The digitalisation of entertainment content has allowed for the development of new innovative distribution channels, and online streaming is one of such. Streaming is real-time transmission of stored content over the Internet. This means that a user can instantly watch movies or listen to a piece of music, without having to wait for the whole movie or piece of music to download and being stored on a hard drive (Dapeng 2011).

Digital streaming of video is one such innovative distribution channel that has gained much recognition and success the past years, particularly in the United States. Today there are many actors competing for shares in the emerging digital video market, and this fall Netflix and HBO, two of the largest American video streaming services, are establishing in the Nordic market (Ratvik 2012). Innovation along a range of aspects seems essential in order to stand out, attract attention and conquer the digital TV market in our region.

Innovation platforms are becoming increasingly important in contexts where innovation and exploitation of new technological knowledge requires a variety of skills and

complementary competencies (Consoli and Patrucco, 2012). Gawer and Cusumano (2002) define platforms as "a foundation technology or set of components used beyond a single firm and that brings multiple parties together for a common purpose or to solve a common problem". Innovation platforms are found in many industries, and certainly all high-tech industries. Examples of innovation platforms can range from cellular telephony, videogame consoles, mobile platforms and payment cards, to modern health-care procedures or production systems for cars (Gawer 2009; Consoli and Patrucco 2008; Eaton 2012). Gawer and Cusumano (2002) state that the value of a platform increases exponentially with (a) more complementary products and services, and (b) more users. New innovative services for distribution of digital content can be characterised as platforms, and the value of such Internet media platforms thus increases with the amount and quality of content offered. Release of content is therefore an essential aspect in platform innovation in the cultural industries, and this is what this thesis is concerned with.

A platform like an innovative digital distribution service rely on many factors in order to be able to succeed, and innovation is required along a range of aspects. *Marketing* innovation is needed to convince users that streaming technology represents a superior way of consuming entertainment content, enticing them to take the leap into novelty (Nussbaum 2009). The American streaming service Netflix have for example developed intelligent algorithms based on users´ ratings of films, allowing for individual marketing (Marmanis and Bebenko 2009). *Process* innovation is needed to develop and implement new software and hardware for digital delivery, able of storing, transmitting and distributing large amounts of content (Liu et al. 2008). *Organizational* innovation is important for establishing new external relations and for gaining access to valuable assets outside the firm´s immediate sphere of activity. Developing new business models more fitting for the digital sphere is also necessary (Rayburn 2008). Furthermore, *product and service* innovation is essential for developing

successful solutions for digital distribution of content. Although the specific content of a movie is the same on the physical format DVD as it will be digitally, a streaming service presents a new and improved wrapping of these existing products and services. Netflix have for example developed a family-friendly interface, enabling Netflix´s intelligent recommendation engine to function properly despite different individual preferences within a family/household, as well as allowing kids to browse Netflix movies and TV shows without accidentally stumbling across adult-rated content (Xavier and Basilico 2012; Roettgers 2011). A new approach on how to consume entertainment goods is offered, in terms of the availability and combination of content, improvements in user friendliness as well as other new functional characteristics (Begawan, 2012).

Altogether, these are common aspects of innovation processes that have been richly described in the innovation literature. This thesis is however concerned with an element bordering between product/service innovation and organizational innovation, namely acquisition of content. When consumers decide to subscribe to a streaming service they expect to find what they are looking for, and without the appropriate amount and type of content the service will likely not succeed nor be very popular (Henry 2012). Content acquisition is therefore an essential building block for making such innovations succeed.

Netflix´s streaming service can be regarded as a digital innovation platform, as it employs and utilizes innovations across a range of aspects, like for example the intelligent recommendation engine or the family-friendly interface. Additionally, Netflix is characterised by their dependency of exploiting technology, knowledge and assets from external actors, in order to afford smooth distribution and deliverance and subsequently creating a service that provides value to consumers. Netflix primarily combines elements within the broad subjects of Internet and media, and their streaming service can therefore be characterised as an *Internet media platform.* However, no such innovation activities would take place without an

appropriate amount and quality of content being released on the platform. This is an element of innovation platforms that does not seem to have been given much attention in the literature, and this element of acquiring digital entertainment content is what this thesis is concerned with. This aspect is related to the sharing of control of assets and resources between firms and organisations, in order to promote innovation. This can be relevant for a whole range of innovative activities in the cultural industries, in contexts where distribution of physical goods is being discharged by digitalisation and online distribution.

Innovation theorists often underline the difference between invention and innovation (Fagerberg 2003; Schilling 2008; Godø 2009). An invention is the first occurrence of an idea of a new service or product, but without being implemented and going through a process of commercialization, it is not an innovation. Many inventions never turn into innovations, just like most innovations seldom are built entirely upon one specific invention. Content acquisition is an essential ingredient in transforming a digital streaming platform from an invention to a commercially successful innovation. Content acquisition is hence an essential aspect in the market implementation of such a platform.

More specifically, I will investigate the social processes that lead up to release or withdrawal of content by studying the interaction and negotiations between large media enterprises, represented by the owners of content, and an innovative Internet distributor. This does not mean that I will analyse all contact and communication between these two parties, and my concern is mainly focused on the acts that affect release or withdrawal of content. In this thesis I am mainly concerned with the actions conducted by each party, and not as much the motivation behind. The action itself is usually easily observed and reported on by several commentaries, while the motivations behind these actions often are left to mere speculation. The thesis looks at the possible outcomes of these processes, and what these convey in terms of innovation in digital distribution. One possible outcome is improved terms for innovation

for the distributor, but the content owners have several possibilities of how to control and administer their content, and as I will look into, innovation on several levels is possible.

The empirical case chosen is the American video-streaming operator Netflix. Netflix originally started out in 1997 as a video rental service sending out DVDs by mail. At that time the DVD was a quite new format, and most households didn´t own a DVD player. However, the DVD quickly grew into becoming the dominant video format, and Netflix evolved into becoming a major actor within the home entertainment industry in the United States (Barker, 2003). Ten years later, after several attempts of developing a functional digital solution, Netflix presented a streaming offering called "Watch Instantly". In the United States today, Netflix´s streaming service has by far outgrown their DVDs, and the company has been considered a poster child of how to make the smooth transition from old to new technology (Mandelberger 2011).

After years of struggling with online piracy, there are actors in the motion picture industry in Hollywood still reluctant towards the Internet as a distribution channel (Sydell 2012). Online video streaming can be perceived as a disruptive innovation, characterised by that it disrupts an existing market and value network by displacing an earlier technology, thus creating a new market and value network (Christensen 1997). Over the years, the motion picture industry have regularly fought new ways of distributing content, like home video and cable TV, afraid of loosing control of their assets. The reluctance towards online distribution thus falls in line with an on-going pattern (Kirsner 2008). Challenges arise when innovators like Netflix face reluctance towards new models of distribution, combined with strict enforcements of copyrights and intellectual property rights. However, the content owners´ controlling actions may also inspire innovative approaches and workarounds, as I will look into.

Similar to the motion picture industry, many parts of the cultural industries have struggled with online piracy and file sharing. Being cheap, simple to use and easily available for most, Netflix´s model may be part of the solution to this problem, as it appears to be able to compete with the illegal alternative (Oswald 2011). In this thesis I look at Netflix´s streaming platform, an innovation that could turn out to make a deep impact also beyond the motion picture industry, when applied on diverse types of content like music, literature, magazines or even video games (Peoples 2011; Kafka 2012). However, Netflix´s platform is almost entirely based upon aggregating entertainment content created by others, and enrolling the content owners in contributing to this innovation is essential. This does not imply that every additional piece of content added to Netflix´s streaming offering is an innovation, but content acquisition in an overall perspective represents a vital building block for making such a platform able to succeed.

By investigating the social processes between Netflix and the Hollywood studios, leading up to the transition from physical to digital distribution, I look at what role content release plays for innovation on digital platforms. I have translated these concerns into three research questions:

1.1 Research Questions

1. What characterises innovation processes on Internet media platforms?

2. What characterises the negotiations between platform owners and content owners in such innovation processes, and under what circumstances does the content owners decide to release content on digital platforms?

3. What are the possible outcomes of these processes, and how does this outcome affect innovation in digital distribution?

To shed light on this matter, I will make use of several theoretical approaches. I have divided the literature review into two sections, one general and one more case-specific: In the first section I start out with a general introduction to the concept of innovation, referring to innovation theorists like Schumpeter (1934), Schilling (2008) and Fagerberg (2003). I review different classifications of innovation and characteristics of innovation processes. I continue with a review of innovation platforms (Consoli and Patrucco 2012), focusing on digital innovation platforms (Tilson et al. 2010; Ghazawne and Henfridsson 2012), and review how innovation processes on platforms differ from other kinds of innovation processes. Finally I will look at how innovation platforms can be understood and analysed in light of the resource-based view (Wernerfelt, 1984).

In the second section that is more case-specific, I begin by looking at what characterises innovation in cultural industries, and how this differs from other industries. I continue with a historical review of the evolution of the motion picture industry. I then review the concepts of copyright and intellectual property rights (Brook 2001; Helpman 1992; Garmon 2002), especially artistic property rights (Markus 1993), and look at what role these elements play in terms of asset control in the motion picture industry. Moreover, I argue that a service like Netflix can be viewed as a digital innovation platform, and I investigate what aspects of innovation that are needed to succeed with such a platform. I argue that one such important aspect is content acquisition, and I investigate what role the negotiation processes concerning release of content play for innovation on digital platforms.

The main methodological approach chosen is narrative analysis (Franzosi 1998; 2009; Pentland 2007). Narrative analysis is most often associated with qualitative studies, stemming from for example interviews or archival research. However, the data material in my study mainly consists of entries on weblogs, constituted by technology bloggers, by making use of

an online blog aggregator named Techmeme. This aggregator is basically a software program that selects webpages, such as blog entries or online news stories, including a vast spectre of online writings of reporters, commentators and industry players on subjects of technology, media and the digital evolution (Davidson et al. 2009). All together 989 entries have been collected and analysed, hence the quantitative character. A paper previously using this combination of narrative analysis and technology blogs, covering digital service system innovation concerning Apple and their iOS platform (work in progress: Eaton et. al. 2012), has been of much help.

I partly chose this approach because it would be difficult to conduct satisfying interviews with Netflix being based in the United States. As well, the approach serves the means of relevance (many bloggers reporting the same event), quality (cross-checking made easy by several blogs covering the same incident) and flexibility (blog entries are quick and easy to collect, categorize and filter). I have also conducted some preliminary interviews with people familiar with digital innovation and online distribution, primarily to find out more about what challenges such distribution models face and to better contextualise the role content acquisition plays in this.

1.2 Structure of the thesis

I will begin with a review of the theoretical and analytical framework. I will then present the methodological approach, and show step by step how this approach can be applied on my data. By using the results from the empirical analysis as well as the theoretical framework, I will try to answer the research questions. Finally, I will present some concluding remarks as well as suggestions for further research.

2 Theoretical and Analytical Framework

This chapter will form the basis of how I later will understand and analyse the empirical data I have gathered. I have divided this chapter into two sections. As innovation is a central concept in understanding how interaction and discourses between different actors drive development and value creation, I will begin the first section with a general introduction to the innovation literature. I will continue with describing innovation platforms, and how these can be understood and analysed in light of the resource-based view and dynamic capabilities. The second section is more case-specific, and I start out by looking at innovation in the cultural industries with focus on the motion picture industry. I continue by reviewing the role of copyrights and intellectual property rights on digital innovation platforms.

2.1 The Concept of Innovation

In this thesis I investigate the possible outcomes of negotiations between Netflix, an innovative digital distributor, and the owners of video content, represented by the Hollywood studios and distributors. My starting point is to look at innovation on digital platforms, and investigate how innovation is affected by release or withdrawal of content. It is therefore necessary to begin with a review of the term “innovation”.

One of the most famous scholars within the sphere of innovation studies is the Austrian economist and social scientist Joseph Schumpeter. He is considered a pioneer in the economic analysis of innovation, and several of his most influential publications were written in the first half of the 20th century (Pavitt, 2005). He was one of the first economists to recognize the significance of innovation and technological development in a macro-economical perspective, and he did by this introduce a new economic school, today known as evolutionary economics (Schumpeter, 1934; 1939; 1942). This was one of the two dominating, but competing, paradigms that more formally emerged during the 1940´s and 1950´s. The evolutionary approach challenged the dominating paradigm of the time, namely the neo-classical approach. The neo-classical approach is still today the dominating view within macroeconomics, and one key element in this approach is the idea of the self-stabilizing economy. This means that an economy will enter an equilibrium in the so-called steady state, given that factors like the employment rate, government and private spending, prices and the interest rate reached ideal proportions. This implies that economic cycles and recessions are caused by an economy entering outside its steady state (Blinder, 1988).

Schumpeter argued that the neo-classical approach downplayed the role of continuous innovation processes and heterogeneous actors operating in a real world, and that an economy never really would reach equilibrium or a steady state. Technological development and innovation would continuously drive an economy forwards, leaving no possibility for stagnation. Schumpeter underlined the importance of innovation in an economy, and argued it was one of the key drivers of growth and value creation. He defined innovation as new combinations of existing resources (Fagerberg 2005).

A more recent definition is provided by Schilling, who defines an innovation as “the

practical implementation of an idea into a new device or process" (Schilling 2008). Yet another definition is provided by Godø (2009). He argues that an innovation often holds several characteristics. First, an innovation may be something that yields a perceived benefit, economic or other. Second, it may be something that by most is perceived as "new". Third, it can take the form of almost anything, that being for example a new product, service, production skill or a new way to organize your business. Furthermore, Godø, Schilling and Fagerberg all underline the difference between an invention and an innovation. An invention is the first occurrence of an idea of a new service or product, but without being brought into practice and going through a process of commercialization, it is not an innovation. Many inventions never turn into innovations, just like most innovations seldom are built entirely upon one specific invention. However, the two are often closely connected and sometimes hard to separate.

Innovations can be classified according to type, and the Oslo manual (OECD 2005) distinguishes between four main types of innovation. The Oslo Manual is a document released by the Organisation for Economic Co-operation and Development (OECD), and its full title is "The Measurement of Scientific and Technological Activities, Proposed Guidelines for Collecting and Interpreting Technological Innovation Data". This document, known as the Oslo Manual, defines the concept of innovation and contains guidelines for collecting and using data on industrial innovation. However, these four types can overlap and an innovation can possess characteristics that belong within several of these:

A *product* innovation is the introduction of a good or service that is new or significantly improved. This includes substantial improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional

characteristics. A *process* innovation is the implementation of a new or significantly improved production or delivery method, in terms of improved techniques, equipment or software. A *marketing* innovation is the implementation of a new marketing method. This includes significant changes in product design, packaging, pricing, promotion or product placement. It can also include expansion into new markets, or opening up a new market. An *organizational* innovation is the implementation of a new way of organizing in the firm´s business practices, external relations or workplace. It can include gaining access to non-tradable assets and reducing transaction costs and supply costs.

Moreover, innovation can be viewed as a process. However, the highly contingent nature of innovation makes it difficult to generalize upon empirical studies, and innovation processes can differ in many respects, according to for example the type of innovation, field of knowledge, historical period, country concerned or the size of a firm or organisation (Pavitt, 2005). This facet embodies the complex and heterogeneous characteristic of innovation processes. Research has shown that the process of innovating within a firm is anything but straightforward, and it is hence hard to describe linearly (Kline and Rosenberg 1986; Van der Ven et al. 1999). Pavitt (2005) has however tried to develop a framework for describing the innovation process. Three broad, overlapping sub-processes are identified: 1) "The production of scientific and technological knowledge", 2) "The transformation of knowledge into working artifacts", as in products, systems, processes and services, and finally, 3) "Responding to and influencing market demand", involving the process of matching products and services with the users´ requirements.

2.1.1 Innovation Platforms

In the age of Internet and digitalisation, service innovation is being fuelled by digital infrastructures, lower distribution costs, global participation in service production and the exploration of new markets (Tilson et al. 2010). In such a modern context, the innovation platform emerges as a powerful mean of understanding innovation. Consoli and Patrucco (2012) define innovation platforms as systemic infrastructures for the organization and coordination of distributed and complex innovation processes. Innovation platforms are found in many industries, and certainly all high-tech industries. Examples can range from cellular telephony, videogame consoles, payment cards and mobile platforms, to modern health-care procedures or production systems for cars (Gawer 2009; Consoli and Patrucco 2008; Eaton 2012).

Innovation platforms are usually designed to facilitate a high level of inter-organizational coordination. Although the degree of participation from external units can vary, control is usually distributed between several actors, hence creating complex interdependencies and reducing the domination of one organization (Gawer et al. 2002). The rationale of innovation platforms is to maximize the variety of contributions stemming from a differentiated knowledge base, but at the same time maintaining coherence. From a static point of view, platforms connect and integrate capabilities of relevant agents within an industry. From a dynamic point of view, platforms can stimulate structural change and mechanical change for the governance of technological knowledge (Consoli and Patrucco 2008).

An industry-specific platform is called an industry platform. However, such a platform involves not only one company´s technology or service, but an ecosystem of complements that are usually produced by a variety of businesses (Gawer and Cusumano 2008). Such

platforms are designed to incorporate expertise and competencies from a range of contributors, developed in interaction with a variety of agents participating to both the production and supply of products and services. Platforms therefore enable capacity building for individuals, teams and organizations, across a range of disciplines and fields of competences.

Such a platform often starts out as a relatively simple service, appealing to a broad customer base. Its openness and flexibility will consequently appeal to more peripheral users, and marginal modifications will be done to meet the more specific needs (Wheelright and Clark 1992). As the platform grows and refines it can over time evolve into becoming a threat for existing services operating within the same sphere of activity. This disruptive character is often found in innovation platforms. There is growing evidence on the significance of innovation platforms in different sectorial contexts, where innovation and exploitation of new technological knowledge requires a variety of skills and complementary competencies (Consoli and Patrucco 2012).

An innovation platform is furthermore characterised by its cost advantage, referring to the small marginal cost an enterprise obtains due to expansion. All in all, three powerful sources of increasing returns stand in the core of the logic of innovation platforms: 1) economies of scale due to increased volumes of throughput, 2) economies of scope due to lower costs of producing the products and services offered by the platform, and 3) economies of system, meaning the creation of control procedures for best possible utilization of the installed capacity (Consoli and Patrucco 2012). Platform owners therefore have two major strategic concerns (Gawer and Cusumano 2008): The first is how to grow the platform and attract external competencies. The marginal cost due to an expansion is low, and the platform owner can provide incentives for developers to invest in innovating complements. The second concerns whether to harvest and profit on the platform now, or to expand and refine. These

two may not be mutually exclusive, but strategic decisions are essential to becoming a platform leader. These strategic decisions will usually differ from conventional business and technology strategies, since developing a successful innovation platform is more complex than launching a successful stand-alone product (Gawer and Cusumano 2008).

The platform owner must furthermore make key decisions concerning intellectual property. Gawer (2009) highlights the complex trade-offs between "open" and "closed". Platform owners aim to tap into the innovative capabilities of external firms, and they therefore need to strategically facilitate and stimulate interaction through the openness of the platform. Successful platform design an and appropriate architecture can ultimately create a competitive advantage (Peteraf 1993) and a dominant design (Abernathy and Utterback 1978)

2.1.1.1 Digital Innovation Platforms

Within information systems, platforms have previously not been offered a lot of attention. This does however seem to be changing, as "platform based software ecosystems are emerging as a dominant model for software development and software based services" (Tiwana et al. 2010). A platform as a technological concept can be defined either as the hardware configuration of an operating system, a software framework, or any other common entity on which a number of associated components or services run (Gawer 2009). More specifically, digital innovation platforms can be defined as "digital infrastructures that are configured as industry platforms and that make available digitalised components (hardware, operating system, SDKs, APIs, and application delivery mechanisms) that act as a foundation upon which developers can build complementary services" (Eaton 2012). A typical example of a digital platform is the computer platform, like Microsoft´s Windows or Apple´s OSx (Gawer, 2009). Other relevant examples are Google, Facebook or Spotify. However, any kind

of software that is open for a large user base and available for continuous adjustments and coordination can be viewed as such.

A digital innovation platform can represent a big game-changing innovation in the industries involved. Examples like Apple´s mobile operating system iOS integrated on the iPhone, or Amazon´s e-book reader Kindle with its associated bookstore, have both had deep impact in the industries they have been introduced. These are examples of disruptive platform innovations, which imply that they are able to "change the game" for consumers using such services or products. Two factors that can facilitate the success of such innovations are: First, an entrance price for consumers that is low enough to entice them to take the leap into a new, disruptive innovation. Second, the platform must provide enough products, services or experiences that provide value to people like entertainment, information or insight (Nussbaum 2009). This second factor is also supported by Walravens (et al. 2011), stating that the platform, in a conventional view, basically is an empty shell that needs to be filled with content produced by others.

As I reviewed in the introduction chapter, digital innovation platforms are dependant on a range of innovation activities to be able to endure and succeed. This research is concerned with the role of content on digital platforms, and this aspect belongs in one such type of innovation activities. To organise these different aspects of innovation, I make use of the four main types of innovation as defined by the Oslo Manual (OECD 2005). The four main types of innovation and the description of these are summarized in the below table:

Market ***Marketing innovation***	➢ ***Marketing innovation*** is the implementation of a new marketing method that involves significant changes in product design or packaging, promotion, product placement or pricing. Marketing innovations are aimed at better addressing customer needs, opening up new markets, or newly positioning a firm's product on the market, with the objective of increasing the firm's sales.
Organization ***Organizational innovation***	➢ ***Organizational innovation*** is the implementation of a new organizational method in the firm's business practices, workplace organization or external relations. Organizational innovations can be intended to increase a firm's performance by reducing administrative costs or transaction costs, improving workplace satisfaction, gaining access to non-tradable assets or reducing the cost of supplies.
Content ***Product/service innovation***	➢ ***Product innovation*** is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics. Product innovations can utilize new knowledge or technologies, or can be based on new uses or combinations of existing knowledge or technologies.
Architecture ***Process innovation***	➢ ***Process innovation*** is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software. Process innovations can be intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products.

Table 1: *The four main types of innovation as defined by the Oslo Manual* (source: OECD 2005)

Following Schumpeter (1934), digital innovation can be defined as "the carrying out of new combinations of digital and physical components to produce novel product" (Yoo et al. 2010, page 725). Yoo (et al. 2010) argue that pervasive digitization of originally physical products gives birth to a new type of product architecture, and that this facet should instigate changes in the way firms organize for innovation. This new type of product architecture extends the modular architecture of physical products by incorporating four loosely coupled layers created by novel digital technology. These four layers are devices, networks, services and contents. The layers represent different design hierarchies, and changes can be made to

one layer with minimum consideration of other layers. Hence, innovators can pursue combinatorial innovation by gluing components from different layers to create alternative digital products (Yoo et al. 2010). Such incorporation of loosely connected layers and components, often acquired from heterogeneous actors, is characteristic for the generative firm, as I will review in the next sub-chapter.

2.1.2 Generativity, Control and Innovation

Firms profiting from selling digital content do not innovate physical goods in a traditional perspective, but they present novel service-possibilities for their subscribers and users online. These firms are service-providers dependant on several types of innovation, as well as interaction with external agents, to succeed. This implies that an innovative digital service also is a generative one. This means that innovation takes place in the context of a particular kind of relationship among agents, namely a generative one (Lane 2012).

These relationships, or networks, are unlike the ones found in social settings, where the company of like-minded actors usually is preferred. Instead, innovative actors have to seek and build strong relationships with others that differ substantially from themselves, in terms of for example skills and competencies. In doing so, they have to monitor and interpret changes that occur to artefacts and other agents. Since any agent only have partial and limited understanding of what other actors do or think, they have to acquire this understanding through discourse. Generative relationships and network emerge from such discourse, often linked through the same firms, organizations or some kind of market structure.

The most important element of generative relationships is that the agents have aligned directedness, that is, “their interactions are focused around achieving similar transformations

in the same zone of agent-artifact space – and they are characterised by significant heterogeneity" (Lane, 2012). A more compressed definition of generativity is the one embraced by Tilson (et al. 2010): "Generativity denotes the ability of any self-contained system to create, generate, or produce a new output, structure, or behaviour without any input from the originator of the system".

Digital platforms and online services have proven to be important generators of innovation and value-creation. When firms seek to create development and gain economical profits within digital service innovation, they also need to support generativity. However, this needs to happen within certain boundaries of control, as generativity without control easily can cause disarray and smaller return on investments (West et al. 2006). Information technology (IT) has brought a broad set of affordances and opportunities for rethinking organizational command and control, as many processes now can be digitally modelled and controlled. This development has simultaneously both loosened and tightened organizations' abilities to exert control. In terms of generativity, innovative firms need to balance between offering stability and control on the one hand, in order to allow "enrollment" of new artifacts, processes and actors, as well as providing flexibility and individual autonomy on the other (Lane, 2012). "Generativity can be viewed as the fruit of an urge to harness the possibilities enabled by the flexibility of digitizing" (Lane 2012), but void of stability, generativity is curbed, and change will halt. Hence, this balancing of control and generativity is one of the most important challenges within digital platform and service innovation (Tilson et. al., 2010).

Innovation based on digital platforms requires that heterogeneous actors work together. This can lead to tension, as I will return to in my analysis later. Tensions can arise from disputes regarding for example resources like video content, concerning how, where and when this content is offered, or regarding what supplier of software or hardware a platform

owner chooses to use. Tensions are thought to be essential in order to create innovation between separate actors, as this often leads to unforeseen combinations and possibilities (Hargrave et al. 2006). However, tensions can also create gaps between actors with different agendas, and it is therefore important on a platform that generativity is accompanied with some sort of control. Examples of such gaps can be when a content owner withdraws content from a platform, or if a supplier decides to quit the relationship with the platform, either by moving to another platform or by establishing their own.

2.1.3 The Resource-based View

The resource-based view (RBV) argues that firms possess resources, a subset of which enables them to achieve competitive advantage, and a further subset which can lead to superior long-term performance (Wernerfelt 1984, Penrose 1959; Barney 1991). Wernerfelt (1984) argues that it is the resources a firm disposes that create competitive advantage, not necessarily the products they produce and sell. If these resources are to benefit to the firm´s position and create a competitive advantage, they need to be heterogeneous in nature and not perfectly mobile. Another important contributor to this field is Edith Penrose, and in her book *The theory of the growth of the firm* (1959, page 25) she states:

> The services yielded by resources are a function of the way in which they are used - exactly the same resource when used for different purposes or in different ways and in combination with different types or amounts of other resources provides a different service or set of services.

She thereby focuses on the service a resource yields, not the resource itself, and she argues that competitive advantage is created through continuous recombination of heterogeneous resources. Best and Garnsey (1999, page 190) summarize her main argument as “everything

cannot be done at once and one cannot do everything alone", hence focusing on the long-term perspective and the combining of resources across firms and organisations. Some also argue that in order to create a long-term advantage, a firm´s resources need to fulfil the criteria referred to as VRIN (Mahoney and Pandian, 1992; Peteraf, 1993; Dierickx and Cool, 1989). This means that the resources need to be *valuable*, *rare*, *non-imitable* and *non-substitutable*. Strong evidence has been found that supports that the resource-based view holds (Crook et. al, 2008).

As I have reviewed in the previous section, developing innovation platforms require cooperation and interaction with external actors. This also implies distributed control of knowledge, competencies and resources. Wade and Hulland (2004) have further developed the research-based view to better understand firms working with information systems. They recognize the complementarity of resources as an additional aspect, and argue that complementary resources combined from different firms are important in order to create digital innovation.

2.2 Innovation in Cultural Industries

Cultural industries offer products and experiences that are subject to rapid obsolescence and seasonal variations. The commercial success of cultural goods is often uncertain and ambiguous, and the consumers expect novelty combined with new wrapping of the old. For a provider of culture, it is hence important to be able of " (…) holding the balance between 'formula' or giving the public what it wants, and 'showmanship' as something novel, something truly different" (Perretti and Negro 2007, p. 564). Novel and innovative products are therefore in great demand, and competition is fuelled by this search for novelty. On one

hand, firms and organizations in cultural industries seek novelty by combining existing elements and artistic conventions. On the other hand, they stand out by pushing innovation beyond the existing limits by introducing products that break established traditions and style. "Consumers need familiarity to understand what they are offered, but they need novelty to enjoy it" (Lampel et al. 2000).

A work of art or piece of culture will often be compared to existing works to create familiarity, but originality and unconventional turns are consistently applauded (Kriegel 2004). A stereotypical Hollywood blockbuster movie can for example quickly be criticised for its lack of originality. This is a type of innovation, known as genre innovation, which is characteristic of the cultural industries (Perretti and Negro 2007). Providers of culture, particularly those with strong commercial interests, will strive to combine a broad selection of genres and sub-genres to attract a large an audience as possible. Hence, a new genre is often derived from borrowing and recombining different conventions of multiple genres (Lampel et al. 2000). Schumpeter (1934) argued that innovation can consist of the introduction of a new good with which consumers are still not familiar with, or new combinations of old resources with new value. Although innovation in cultural industries in some way differs from innovation in other industries, this definition is still valid (Perretti and Negro 2007).

Studies of innovation in cultural industries have so far mainly been concerned with organizational and environmental determinants (Perretti and Negro 2007). Perretti and Negro (2007) have introduced a new perspective on cultural innovation by focusing on the significance of external components as sources for innovation. They argue that by including external actors operating outside the boundary of a firm´s current expertise and knowledge, the set of potential new combinations and innovations is expanded (Perretti and Negro 2007; Katila 2002). An alternative to this approach, namely focusing solely on familiar combinations, can preclude organizations from investigating more distant possibilities, thus

decreasing their potential of developing radical innovations (Fleming and Sorenson 2004).

In their research, Perretti and Negro (2007) looked at firms operating mostly by themselves, and compared them with firms more open to incorporating resources from others. Applied on the American movie industry, these authors uncovered that the latter group was the most innovative in terms of movie production and genre innovation. Innovation and exploration was thus improved by including external actors. Taking this research into account, it is interesting to investigate whether and how Hollywood studios might instigate innovation by making movies and other content available on digital platforms.

2.2.1 Innovation in the Motion Picture Industry

The history of films and the motion picture industry began more than a hundred years ago. Since then the industry has been facing many shifts in technology and extensive innovation activity (Belton 2008). Although the motion picture industry has been shaped by both radical and incremental innovations during the last century, the industry is still accused of not being particularly innovative. In 2011, the total revenue for the industry in the U.S. was $87 billion. However, barely $30 billion of these came from the box-office (cinemas) (Blank 2012). The truth is that the lion´s share of their revenues now come from sources that the Hollywood studios over the years have claimed one day would put them out of business: Pay-per-view TV, cable and satellite channels, video rentals, DVD sales and more recently digital downloads and online subscriptions (Blank 2012). Hence, home entertainment now represents the economic keystone of Hollywood, and recent data indicates that theatrical exhibition accounts for just 15 per cent of their annual revenues (Currah 2007). However, the movie industry have continued to fight technological progress and new models for distribution, and

in each of the cases mentioned above, the new technology produced new markets far larger than the impact it had on the existing market.

Lampel and Shamsie (2003) argue that for an industry like the motion picture industry, it is important that organisations hold a set of essential capabilities in order to prosper. The authors specifically focus on mobilizing and transforming capabilities, also known as social and human capital. Mobilizing capabilities includes the necessary social skills and knowledge to assemble the right mix of people to be able to succeed with a given project, for example producing a movie. Transforming capabilities includes the necessary knowledge of being able to make good use of these resources, for example a completed movie, and transform it into a commercially successful product by acquiring the proper publicity and distribution (Lampel and Shamsie 2003). One can argue that there has been some lack regarding the transforming capabilities in the industry during the past decades. There has probably not been enough will to embrace the new technologies in which the motion picture industry clearly could have profited from at an earlier stage.

2.2.2 The Economics of Public Goods and Copyrights

Most nations regard it as important to protect innovation and to incentivize technological progress. This has been an understanding in developed societies for a long time, and Aristotle was one of the first to write about the importance of such protection. Patents, copyright laws and trademarks are all regarded as effective measure to protect intellectual property rights (IPR). Although such ideas have their roots back to ancient times, the first signs of systematic government protection were first found in early Italian Renaissance, particularly in 13th century Venice (Brook 2001). Until the 18th century though, patents were primarily used to protect technological inventions and innovations. Later such protection systems became one

of the engines behind the industrial revolution, and it was used to protect ideas, writings and discoveries, as well as technology (Brook 2001). In America, the rights to patents were remarked of such importance that it even got stated in their constitution: "to promote the progress of science and useful arts, by securing for limited times for authors and inventors the exclusive right to their respective writings and discoveries" (The U.S Constitution, art. 1, § 8). The aspects of public goods, copyrights and intellectual property protection are relevant for my research, as these explain why content like home entertainment is not freely available, and consequently why negotiations are needed for release of content on Internet media platforms.

The economic theory of intellectual property protection stem from the concept of public goods. Economists characterize a good as public if it is non-rival in use, meaning that consumption by one individual does not reduce availability to others, as well as being non-excludable, meaning that individuals cannot effectively be excluded from use (Stiglitz 1990). Classic examples are streetlights, clean air and open software. Most ideas, writings, discoveries, or even entertainment content like music and movies can be consumed by multiple economic actors with a small marginal cost, and can thus be characterized as public goods. The cost of imitation is usually lower than that of re-inventing, and thus the cost of reproducing gets lower. Copyrights and patents are therefore regarded as a distortion within economic theory, as knowledge, goods and services are being sold above its marginal cost.

For many kinds of goods, the marginal cost of reproducing has been even further reduced during the past decade. In the digital age of Internet, almost anyone can easily diffuse and multiply ideas, writings, music or movies at a minimal marginal cost. Thus the public goods problem gets even worse. The massive decline in the cost of copying has made large-scale end-user copyright infringement a more significant problem than earlier. Although copyrights are regarded as an imperfection in economic theory, most economists regard

patents as a necessary measure in order to harvest the benefits associated with innovation (Metcalfe 1993). Without some control of imitation of someone else´s work, creators will not have enough incentive to create. Weak patent and copyright regimes will therefore usually result in few inventions and little innovation.

2.2.3 Intellectual Property Rights

Intellectual Property Rights (IPR) refers to a broad range of information or knowledge that is protected by patents, copyrights or trademarks. Its underlying concept is to assess and protect the right to earn income from innovative and creative activity or information, and to decide ownership to a particular idea, discovery or invention (Garmon 2002). IPR is thought to play a critical role in economic growth and development, as it is an underlying assumption that innovation and research creates increased productivity and profitability. At the same time, IPR has been criticized as it is argued that it creates higher prices and reduced availability of goods and products on the world market (Helpman 1992).

2.2.3.1 Artistic Intellectual Property

Markus (1993) identifies two types of intellectual property, namely industrial property and artistic property. Industrial property refers to commercial innovations and assets that have industrial value. Artistic property refers to books, pieces of art, recorded music, movies and the like that have some sort of artistic value. A further development of this is the so-called neighbouring right (Garmon 2002), which protects artists and performers from unauthorized use and reproductions of their work. Home entertainment such as recorded music and video content can thus be regarded as artistic intellectual property. The neighbouring right to artistic property is in most countries protected by copyright laws, as well as organizations like Tono

in Norway and ASCAP (American Society of Composers, Authors, and Publishers) in the United States, whom see to that artists and licensees receive compensation. However, both the music and the movie industries have been struggling with immense pirate activity and copyright infringement from sites like Napster, LimeWire and the Pirate Bay (Adrian and Che-Yuan 2010; Bounie et al. 2006).

The Internet has evidently changed the economics of copyright enforcement irretrievably, and government´s property protection systems may seem to have come to short in the digitalised world. Peer-to-peer networks (web sites for online file sharing) have allowed consumers to illegally trade files on a large basis, and today almost anyone with an Internet connection can quickly and unnoticeably violate intellectual property rights. The response from the Hollywood studios has been twofold:

Firstly, they have deployed digital rights management (DRM) technologies to regulate the use of their content. DRM is a tool for content management, broadly referring to a set of policies and techniques to guide the proper use of digital content. As well as for protecting high-value digital assets, DRM technology is used for easier distribution and tracking and for distributing digital content on-demand (Subramanya and Yi 2006; Liu et al. 2003). One example is Hollywood´s new DRM tool called "Ultraviolet", intended to limit the illegal diffusion of movies bought on digital platforms. It has however proven difficult for the motion picture industry to unite on one mutual DRM standard (Fritz and Chiemlewski 2012).

Secondly, actors in the motion picture industry have arranged lawsuits, and the case of the popular p2p site Napster was one of the first to make it to court (Lemley et. al 2004; Crow 2012). The key problem about suing the facilitators instead of the end-users is that going after makers of technology may threaten to stifle innovation. Courts can usually see the advantages of well-established technologies, but novel technologies like online file sharing, by contrast,

are much more vulnerable to legal challenge. Lemley (et al. 2004) argue that when courts shut down new technologies they restrict innovation directly. Content owners have no incentive to permit optimal innovation by facilitators, because they do not benefit from these innovations, like the many p2p-sites. However, it is concerning that reducing copyright infringement over p2p networks often implies interrupting technological innovation (Lemley et al. 2004). Currah (2007) argues that the success of the DVD market has "effectively blinded studio managers to the possibilities of internet-based video". Hence, the Internet does not only pose a threat for the motion picture industry in terms of piracy, but also by endangering the economic keystone of contemporary Hollywood, namely the DVD format (Currah 2007).

One measure that many agree upon, but which has proved hard to realise, is that legal alternatives much arise as to which users of copyrighted works can turn to (Lemley et. al 2004). Legal alternatives must literally compete with "free", so cheap, convenient and user-friendly solutions are needed. In reality, most people are law abiding most of the time and "as long as it is reasonably convenient, efficient, and economical to gain access to [copyrighted content by legal means], then few people are likely to invest a lot of time and energy in obtaining the content illegally". (Bartow, 2001, page 118).

2.2.4 Netflix´s Video Streaming Service as a Digital Innovation Platform

Netflix has evolved from being an American distributor of DVDs by mail, to become a global online distributor of digital video content. Although their DVD-service still is popular, the streaming option has by far become the larger of the two in terms of number of subscribers. Today Neflix´s main focus is to develop the streaming service (Empson 2012). I have made a summary (sources: fundinguniverse.com; Henshaw 2011) describing Netflix´s development from 1997 and until present:

Netflix: *a company overview*

1997

Reed Hastings founded Netflix as a DVD rental-by-mail service as a monthly subscription.

2000

Netflix experimented with downloading movies over the internet to a set-top box for playback later. With high-speed internet still in its early days, the best result from the experiement took 16 hours to download and cost $10 in bandwidth fees. Because the technology was not ready, Netflix resumed its focus on DVD rental-by-mail business.

2002

Initial public offering. Netflix on the stock market (NFLX).

2003

Netflix revisited with internet distribution business model again with a $300 self-branded set-top box that took 6 hours for a movie to download to its harddrive.While it solved the internet delivery problem, it was far from instant streaming.

2005

YouTube demonstrated that you could stream and watch videos instantly. This inspired Reed Hastings to develop instant streaming and drop the harddrive device altogether. He subsequently re-directed his Netflix development team to build another set-top box, this time for instant streaming.

2007

Upon the launch of the ***instant streaming*** set-top box, Reed Hastings realized that an exclusive Netflix set-top box was not the way to reach the masses, but instead being incorporated in all kinds of devices, like DVD players, TVs, game consoles etc.

2008

The small technology company Roku designed the first exclusive Netflix set-top box. Netflix sold their stakes in Roku soon after.

2009

2010

Netflix-enabled devices such as Blu-ray Disc players begin to roll out.

Netflix signs several large digital content distribution deals, and offers instant streaming only plan $7.99/month. In doing so, Netflix has shifted business model paradigm to “primarily a streaming video company” that also offers DVD rentals-by-mail. CEO Reed Hastings named Fortune magazine’s Businessperson of the Year in November.

2011

Netflix announces the one-click remote control buttons on Blu-ray players and internet-connected HDTVs to make its instant streaming service easier to use. In January. Netflix memberships passes the 20 million mark.

2012

Netflix looses the content giant Starz from their streaming library.

The developers at Netflix have built a technological solution in shape of a software framework. This framework enables Netflix to offer a large library of digital video content for streaming, and it is made accessible on several different playback devices like TVs, computers, gaming consoles, set-top boxes, smartphones and tablets. Netflix´s streaming service can be perceived as disruptive by actors operating in the same sphere of activity, for example a video rental kiosk, a cinema, or really anyone that generate income by selling and distributing video content. Netflix´s digital platform also involves distributed innovation processes, meaning that external actors in addition to the platform owner share control of developing a complete and successful streaming service. Moreover, the service´s marginal cost of adding an extra consumer is low. Netflix´s streaming service can thus be understood as a digital platform.

I will now continue by reviewing the methodological approach that subsequently will be applied on the empirical data, in order to enable analysis of the research questions.

3 Methodological Approach

The aim of this thesis is to shed light on innovation processes on digital innovation platforms, and investigate what role content release plays for innovation in digital distribution of home entertainment. I use Netflix´s video streaming service as a case, as this is an innovation that fits the characteristics of a digital platform. As mentioned earlier, there are several aspects of innovation needed to succeed with such a platform. I have argued that these broadly can be identified within the subjects of *Market* (marketing innovation)*, Organization* (organizational innovation)*, Content* (product/service innovation) and *Architecture* (process innovation). This thesis is mainly concerned with one of these aspects, namely release of content in terms of being an essential component in service innovation on Internet media platforms. I will investigate the discourse and negotiations that lead up to release or withdrawal of digital content, and the possible implications for innovation in digital distribution.

The main methodological approach chosen for this research is narrative network analysis (Pentland 2007) on a set of data accumulated by technology blogs (Davidson et al. 2009). I will use the rest of this chapter to explain the steps of this method and argue why it is a relevant approach for my research. In addition to this, I have also conducted a few complementary interviews. I have done this to achieve an improved understanding of the

dynamics of Internet media platforms, and to better contextualise the role content plays on such platforms.

The interviewees chosen are key researchers and industry representatives with considerable knowledge and experience from digital innovation and distribution. These are Hanne-Stine Hallingby, researcher of digital innovation and development at Telenor, Håkon Normann, former employee at the Norwegian music-streaming operator WiMP, and Ben Eaton, innovation and information systems researcher and PhD at London School of Economics and Political Science. I have arranged the insight acquired from these interviews in the following table. This table deals with essential aspects of innovation needed to succeed with an Internet media platform like a streaming service, as well as challenges that innovators typically face. I have organised this input according to the main types of innovation as presented by the Oslo Manual (OECD 2005):

Market ***Marketing innovation***	➢ ***Attention Economy.*** Acquiring users attention for a novel service can be challenging and require new marketing techniques. The Internet offers a jungle of services, and getting attention on for example Apple´s AppStore or GooglePlay can be difficult. ➢ ***Critical mass***. Building an adequately large pool of users is thought to be important to overcome start-up problems and discontinuance. ➢ ***Convincing users*** that the new technology offered is superior to the existing technology and/or systems that previously have been used.
Organization ***Organizational innovation***	➢ ***New business models.*** One concern is establishing an appropriate price scheme to attract new users to take a leap into a new innovation. A combination of free, paid (unit priced or subscription based all-you-can eat) and advertising-funding can be efficient, as well as price-discrimination according to how advanced a user wants his/her service to be, to fully take advantage of different users willingness to pay. Another concern is developing financial models for compensating the content owners that are willing to release content on a platform. ➢ ***External Relations***. Innovation platforms are oriented around making use of external knowledge, recombining resources and tapping into the innovative capabilities of others. It is therefore important to develop external industry relations for exploring new combinations and acquiring adequate content and resources. This will subsequently usually require new models for digital licensing and distribution.
Content ***Product/service innovation***	➢ ***New Combinations.*** The platform can be viewed as a novel service or product in itself, offering new combinations of products, services or experiences. ➢ ***Improved functionality.*** A platform needs to acquire a sufficient amount and type of content to be attractive. Although the content in itself may not differ from when it is offered via traditional distribution channels, the content is presented in a new wrapping offering significantly improved functionality, user friendliness and possibilities for personal modification.
Architecture ***Process innovation***	➢ ***Storage and distribution.*** New technological solutions for storage and distribution are often needed. Particularly digital entertainment like video and music present challenges for smooth digital distribution, as the files transferred from platform to user often are very large. These challenges also include a cost aspect in terms of bandwidth. ➢ ***Interface.*** Developing a sufficiently good user interface is essential, both to attract users and content owners. ➢ ***Matching hardware.*** Developing additional hardware in where the platform´s software can run is sometimes needed.

Table 2: *Aspects of innovation on Internet media platforms* (source: interviews 2012)

3.1 Narrative Analysis

In this thesis I will look at discourse between two parties, concerning release and withdrawal of digital video content. These two parties are Neflix on the one side, an innovative Internet distributor, and a group of content owners on the other. This latter group will largely mean the six major Hollywood studios (Paramount Motion Pictures Group, Warner Bros. Entertainment, Sony Pictures Entertainment, Walt Disney Studios, NBC Universal and Fox Entertainment Group). Collectively, these six studios represent somewhat of an oligopoly and account for over 90 per cent of revenues in the U.S. motion picture industry. However, I have also included some smaller actors, as well as a few external distributors that have licensing rights for major studio content.

I will analyse the discourse between these two parties as narratives, by identifying a repertoire of broad generic actions for each side. This approach falls into a wider qualitative approach called narrative analysis. Narrative analysis, or narrative analysis inquiry, emerged as a discipline within the broader field of qualitative research in the 1920s. The approach has similarities to grounded theory (Burck 2005), as first developed by Glaser and Strauss (1967). Grounded theory "was designed to help researchers elicit and analyse qualitative data to identify important categories in the material with the aim of generating ideas and theory 'grounded' in the data" (Burck 2005). As a research method, it operates almost in reverse fashion compared to traditional qualitative research. Rather than beginning with a hypothesis, the method begins with the 1) data collection, then 2) marking the key points in the data collected, 3) grouping these key points into similar concepts, 4) forming categories based upon these concepts that finally are used for 5) the creation of a theory (Allan 2003).

The starting point of narrative analysis, as articulated by Abott (1992), is that social and organizational forms can be viewed from a narrative perspective as collections of stories.

Narrative analysis refers to a family of approaches to diverse kinds of texts that have in common a storied form. What makes such diverse texts "narrative" is sequence and consequence: events are selected, organised, connected and evaluated in order to create meaning (Riessmann 2005). Much like grounded theory, a narrative analysis often begins with collecting data. The data is then organised and connected to identify narratives, and a theory can subsequently be created based on these narratives.

There are many different narrative analysis techniques to choose from (Boje 1991; Abbott 1992; Pentland and Feldman 2007), but Pentland and Feldman´s narrative network approach (2007) is chosen for this research. Their variant of narrative analysis emerged from "Latour's (1991) call for a narrative resource that combines the technical and the social" (Pentland and Feldman 2007, p. 787). These authors´ approach, named "the narrative network", focuses on representing and visualizing patterns of technology in use: "Consistent with theory, it puts action in the foreground and expresses patterns of action in a way that retains possibilities and alternatives" (Pentland and Feldman 2007, p. 787). This is also the reason why I choose this specific narrative analysis technique, as it focuses on technology as well as accommodating easy visualization and interpretation of the collected data. This approach is well documented and fitting for my empirical data, as I will describe throughout this chapter.

The empirical data used to identify narratives is constituted by technology blogs. Blogs, or weblogs, are "a web-based publication with reverse chronological order of dated entries, usually maintained and published with a blog-authoring tool" (Davidson et al. 2009, p. 40). Technology blogs is a category of blogs concerned with different aspect of technology, media, gadgets, Internet and so forth. Gathering data from technology blogs is by Davidson (et al. 2009) argued to be a good way to collect information concerning such topics. I will elaborate on this later in this chapter. The narratives are constructed by identifying a set of generic

actions for each party (Netflix or content owner). The process of identifying generic actions is facilitated by Greima´s (1986) semiotic square.

This combination of constructing narratives (Pentland and Feldman 2007), using technology blogs as an empirical source (Davidson et al. 2009) and using the semiotic square (Greimas 1986) to identify generic actions, is not something I have come up with myself. This approach has previously been applied in Eaton´s (et. al. 2012) paper called "The Dynamics of Digital Service System Innovation: Control and Generativity in Apple iOS". This paper deals with innovation on another digital platform, namely Apple´s iOS mobile operating system. Similar to this thesis, dialogical tension between two actors is analysed, but on the contrary, the platform owner is the controlling party while independent application developers represent the innovative party. This paper has been of substantial help, and although some parts of my methodological approach are quite alike, other parts have needed interpretation to function properly on the case of Netflix and content owners.

I have chosen this methodology as my main approach for several reasons. Firstly, I found it appealing because of its flexibility in terms of gathering large amounts of data. By using blogs, I get input from hundreds of different commentators and journalists, and the quality is thus quite good (many bloggers report about the same incidents, making it easy to cross-check stories). This is also one of the reasons why I didn´t use other approaches like interviewing or conducting a survey as my main approach. With these other approaches I would not end up with the same range of input, and not be able to look at the big lines in the same degree, spanning over several years.

Secondly, I wanted to look at a streaming service that had been in operation for some time, and the Norwegian music-streaming service WiMP, which would be the most obvious interview object for me, have not been around for that long. Netflix is therefore a better

choice, as they have been offering a streaming solution for more than five years. Since Netflix is not yet established in Scandinavia at the time of writing, it would be challenging to arrange interviews. I could of course do a survey instead, and attempt to get response from several streaming operators. However, I would still not receive the same amount of data, which in my case is represented by 989 unique blog entries.

However, this method also has its weaknesses. For once, it does not let me dig as deep into single incidents as I would by for example conducting interviews. Nonetheless, as I will return to later, narrative analysis is not concerned with exploring the actors´ intentions or motives leading up to their actions. Its only real concern is the action itself. Another weakness is that it is difficult to be a 100 per cent sure that all bloggers report the full truth. Although I can crosscheck with several blogs to reduce this weakness, rumours spread fast on the Internet and several bloggers can quickly happen to report on the same piece of gossip. As mentioned in the above chapter, I have also conducted a few supplementary interviews. These are supposed to complement the main methodological approach chosen, namely the narrative analysis, by elaborating on the findings from the technology blogs.

3.2 Narrative Network Analysis

I am going to study individual acts by either Netflix or a content owner, and narrative network analysis is applied to present and analyse such action sequences. A narrative network can be defined as a set of actions or events that embodies coherence or unit of purpose that can be interconnected in many different ways (Pentland and Feldman 2007). These single actions or events are called narrative fragments, and together they make up a single narrative. Each narrative fragment can be presented as a node, and ties from one node to another present the sequential order. Each narrative can consist of several fragments and the ties between the

nodes reveal the progress. These ties and nodes can be illustrated graphically in order to present each narrative. By presenting these fragments graphically as nodes, it makes it easy to spot any clear patterns or common replies by any part. By using this method I get to study one specific element of innovation on digital platforms, namely the social processes leading up to the release or withdrawal of content. I get a detailed insight in this process, and it allows analysis of what the different outcomes of these processes mean in terms of innovation on a digital media platform like Netflix or in other parts of the motion picture industry.

Pentland and Feldman´s approach (2007) can be summarized into a five-stage method :

Stage 1: ***Defining the Focal Phenomenon***

- Defining a focal phenomenon: *Discourse between a streaming service and the owners of content*
- Defining limits around phenomenon: *Netflix and the owners of Netflix´s content*
- Establishing how it is to be studied: *Start and finish, timing of actions*

Stage 2: ***Data Collection***

- Scoping what type of data needs to be collected: *Innovating and controlling actions*
- Identifying an appropriate source of data: "*Tech blogs" aggregated by techmeme.com*
- Obtain and store data: *989 blog entries, stored and tagged using Evernote*

Stage 3: ***Identifying Narratives from within the data***

- Parsing the data to find narrative fragments and identify narratives: *9 complete narratives*

Stage 4: ***Coding the Narrative Fragments***

- Developing a coding scheme using semiotic squares: *Identify 8 coded actions*
- Coding the narrative fragments

Stage 5: ***Constructing and Analysing the Narrative Networks***

- Clarifying complex interactions into simpler sequences of actions
- Identifying common patterns of action across sequences

3.2.1 Establishing a Focal Phenomenon

The object of this stage is to establish a "sphere of activity" that makes up some sort of generic storyline (Pentland et al. 2007, p. 790). Establishing such a sphere requires three steps: 1) Define the phenomenon to be studied. In my case this will be the observed actions of Netflix and the content owners. 2) Define limits in terms of the five elements of; scene, act, agent, agency and purpose (Pentland et al. 2007). Netflix´s streaming service is the scene, the acts are carried out by the agent, or agency, which here is represented by Netflix and the content owners, and their purpose are developing successful business models that may or may not encourage innovation. 3) Finally I need to develop a narrative perspective from which the narratives are being observed. For example, the narratives can be actual, typical, hypothetical or fictional (Reissman 1993). As well, they can be past, present, or future tense (Pentland et al. 2007). My narratives will thus be actual, as real actions are described, and in past tense, as they describe actions that already have taken place.

3.2.2 Data Collection

The object of the data collection is to identify an adequate number of narrative fragments, so that I can establish a set of narratives as qualitative data. Narrative analysis is most often applied on interview data or historical and archival records (Pentland et al. 1994). In this research the empirical data is constituted by blogs. Specifically, I will use a certain type of blogs called tech blogs (technology blogs). Tech blogs are like online magazines or publications, and tech bloggers discuss applications, digital music and media, Internet search engines and the like, as well as high-tech companies that produce technological products and technological innovations (Apple, Google, Microsoft etc.) (Davidson et al. 2009). Some of the

largest tech blogs are TechCrunch, Engadget and GigaOM, but the concept of "tech blogs" also includes well-known newspapers and business publications that report on such matters, like the Wall Street Journal, the New York Times or The Guardian.

To harvest the data I make use of a tech-blog aggregator named Techmeme. An online aggregator is a web software program that selects webpages, such as blog entries or online news stories. Techmeme has risen to prominence among tech-bloggers, and the trade publication *PC World* named Techmeme founder Gabe Rivera one of the 50 most influential people on the web in 2007 (Davidson et al. 2009). Although the aggregator does not include everything out there, the editors strive to keep the site as complete as possible, and the selection of online discourse is therefore well suited for my purposes.

I want to look at discourse between Netflix and the content owners, and especially concerning how Netflix convince the Hollywood studios to release content on their streaming platform. To obtain data of these discourses I enter the search phrase *netflix date:[01/01/07 TO 06/31/12]*. This gives me a list of blog entries and news stories concerning Netflix from the period of 1st January 2007 until 31st June 2012. Netflix started their streaming service "Watch Instantly" in 2007, so I have focused on entries from 2007 until present.

Dataset aggregated from Techmeme:

- A total of 989 entries have been identified by Techmeme concerning Netflix these past five years. This material make up my complete data set.
- The 989 unique entries identified are composed by 232 different blogs/newspapers.
- The three most contributing blogs, TechCrunch, Engadget and GigaOM, have together provided 160 of the 989 entries.
- The 30 most contributing blogs have together provided 607 of the 989 entries. These 30 blogs are listed in the table to the right.

About Techmeme:

"In 2012, knowing what's changing in technology is required to understand the cultural currents and business events reshaping the world. If you've been watching the tech industry evolve, it won't surprise you that social networks enable political revolutions, brand new companies can acquire millions of customers in months, or the world's most valuable company built that wealth on products that didn't exist five years ago. Techmeme is the foremost source for tracking these changes. By presenting a summary of the day's essential reports and analysis on a single page, Techmeme has become the technology news site of record for people both within and beyond the industry."
(Source: techmeme.com)

Technology Blog	*Number of entries*
TechCrunch	69
Engadget	51
GigaOM	40
CNET News	29
paidContent	28
New York Times	28
AllThingsD	26
NewTeeVee	26
The Official Netflix Blog	23
VentureBeat	23
Silicon Alley Insider	22
Reuters	21
Gizmodo	19
Ars Technica	18
PR Newswire	18
Associated Press	16
Bloomberg	16
The Verge	15
Bits	14
MediaMemo	13
The Next Web	13
ReadWriteWeb	12
Zatz Not Funny!	12
Hollywood Reporter	11
The Business Of Online Video	11
CrunchGear	11
Tech Trader Daily	11
Media Maverick	11
Total number of entries from the 30 most contributing techblogs:	607

All entries are stored using a software called Evernote and subsequently coded (I will return to the coding scheme later). Evernote is a suite of software and services designed for notetaking and archiving. It has been characterised as "a global memory platform", and it is a very helpful tool in filtering and cataloguing webpages (Perlroth 2011). It runs as an

application in the web browser, allowing the user to tag a webpage with relevant information (tags from one specific blog entry could for example be: *Time Warner, CBS Corporation, Vampire Diaries, Gossip Girl)*. It also stores and dates any given extract of the page on the user´s computer. It is a type of software that can be used be anyone that want to catalogue, store and filter webpages, and Evernote is just one of many providers of such solutions (Evernote´s competitors and equals include among others Memonic, Simplenote and Microsoft OneNote) (Perlroth 2011). By using Evernote to tag every blog entry, I can later identify the fragments that belong together and subsequently identify a complete narrative.

Such a dataset makes a good source for online discourse for several reasons, like *relevance* (many bloggers are reporting and discussing the same events and actions. Netflix´s acquisition of video content from Dreamworks in September 2011 is for example described by "the Hollywood Reporter", "The New York Times", "GigaOM" and "Cnet News"), *quality* (the large amount of bloggers make it possible to cross-check the stories) and *flexibility* (rapid data collection, easily categorized and filtered).

3.2.3 Identifying Narrative Themes from within the Data

The 989 blog-entries identified make up the raw material being my data set. The next step is to identify themed sequences of action, and decide which blog entries are relevant and which that are not. I accomplish this through three steps: 1) I investigated every single blog entry, and by using the program Evernote, I tagged every entry that fulfil the limits I defined in stage 1 above. These entries are tagged with keywords from the text, focusing on the actors and/or the content in question. 2) The next stage is to categorize similar entries together, and I identified which entries that discuss the same story. To bind the fragments together, I mostly made use of the tags I created, as well as using the dating to try to identify the sequence of

events. 3) Finally, I filled in any gaps by additional online search. Although most of the narratives identified are more or less complete through entries found in the techmeme database, some needed elaboration from other online sources.

3.2.4 Coding the Narrative Fragments

Each narrative fragment is analysed in order to reveal the actor carrying out an action (Netflix or a content owner), the action itself (what is the actor doing) and the actor in which the action is directed upon. My focus is on the action, or the "verb", of the fragment. I am not as interested in the motivation behind or context leading up to the specific action. This is a quite common simplification to make within narrative methodology (Abbot 1992). This simplification also fits within the context of this study, as I look at how innovation is affected by release or withdrawal of content, and not the motivation behind these actions directly.

The coding of each fragment is facilitated by the semiotic square, as first introduced by the Lithuanian linguist and semiotician Algirdas Julien Greimas (1986). The semiotic square presents a mean of structural analysis based upon binary opposition from two to four, or eight analytical classes. As the generic actions are presented as oppositions, I am able to include the whole scale of actions, although relatively roughly. The semiotic square is based upon relationships, meaning that each node in the square is related to each other, being contrary, contradictory or implicative (Greimas et. al. 1968). This represents the core of the system, as every element is defined by its differences to the other elements. The semiotic square has previously been used to analyse and interpret a variety of topics, like discourse of science studies as cultural studies (Harraway 1992) and corporate language (Fiol 1989).

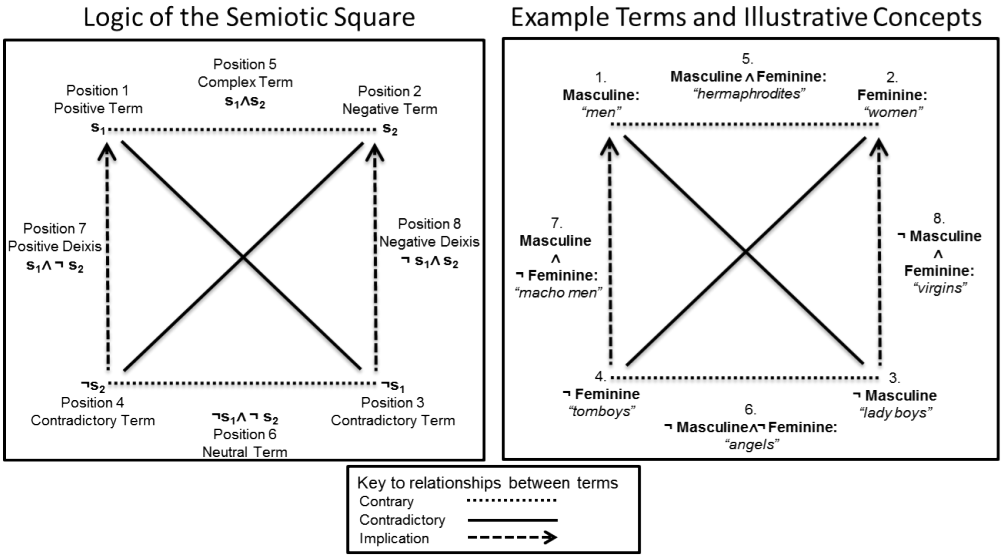


Figure 1 & Figure 2. *Figure 1 presents the logic of the semiotic square. Figure 2 presents an illustrative example.*

Two semiotic squares are designed, one for Netflix and one for the content owners. In order to limit the size of this study, the number of codes for each actor is limited to four. The four terms is identified for each party through a process of using the binary logic of the semiotic square, as well as study of the narrative fragments and some degree of interpretation. Moreover, every narrative fragment from stage 3 is labelled according to the 2 x 4 codes representing the generic actions by each actor. Every fragment is also dated, in order to help identify the correct sequence of events, as well as being coded with the company name in question (either Netflix or a content owner).

3.2.5 Constructing the Narrative Networks

The final stage is to arrange the fragments together to identify complete narratives. As each fragment is coded by one of the generic actions from the semiotic square, they can each be

presented as a node. These nodes can then be tied together in order to create a graphical presentation of the narratives. It is then possible to investigate for any common patterns of action across the sequences. As well, I think it is interesting to look at the development of the discourse between Netflix and content owners, from the very beginning of video streaming in 2007 until today.

3.3 Reliability and Validity

A social research method is often examined for its reliability and validity, as one way to judge upon its quality. Reliability can be defined as the degree to which a measure of a concept is stable, describing the repeatability of a study. The validity is concerned with the integrity of conclusions that are generated from a piece of research (Bryman 2001), or in other words, how well it actually measures what the researcher has decided to measure. Even if findings have high reliability, it doesn´t automatically mean that the validity is equivalently good (Gripsrud et al. 2004). In an overall perspective, reliability is about to what degree you can trust that the results are correct.

Validity

According to Yin (2009), the validity of a study can be improved by three measures. The first is called *construct validity.* This first measure is especially challenging in case study research, and such studies are often criticized for not developing sufficient operational measures and that the collection of data is too subjective (Yin, 2009). In the case of for example interviews, this can be improved by receiving comments from the respondents when the interview is transcribed. In my case, however, it is very demanding to get feedback from all the different bloggers and journalists. When it comes to subjectivity, I have tried to improve this by doing

a general search for entries concerning Netflix. Nevertheless, it is my subjective decision to use the tech blog generator Techmeme, and this affects what kind of data I end up with. I also have to decide which of the 989 entries that are relevant for my case. Although it is quite clear in the case of most of the individual entries, some are more borderline, and I have to make a subjective decision regarding their relevance. This means that some entries that others would have found relevant are left out, as well as the opposite. However, I am not that interested in identifying standalone events but complete stories or narratives. I think I most likely have not left out entries that together could make up an additional narrative.

The second measure is called internal validity. It is mainly a concern for explanatory case studies, for example when an investigator want to explain if event *x* have led to event *y* (Yin, 2009). This is known as causal relationship. Translated into my case: Is innovation in Netflix´s streaming service and digital platforms (*x)* affected by the outcome of the negotiation processes concerning release of content between Netflix and content owners (*y*)? High validity means that one with great certainty can say that *x* leads to *y,* and that all other possible factors are excluded from the study (Gripsud et al. 2004). I am not able to exclude all other affecting factors, and there are most likely many aspects within the digital media and culture industries that affect innovation. As well, digital platforms require innovation on many levels. However, I am mainly investigating the role played by content release, and hopefully this thesis can shed some light on this matter.

The last measure is called external validity, and it is concerned about if a study´s finding is generalizable beyond the immediate case study. Critics typically state that single cases offer a poor basis for generalizing (Yin, 2009).

Reliability

Reliability is also a concept that defines the quality and objectivity of a study. If an

investigator later were to follow the exact same procedures and ends up with the same results, the study has got high reliability. It is therefore important to thoroughly document the procedure carried out during the research (Yin, 2009). This is what I have been trying to document in this chapter. I have tried to be thorough and comprehensive in describing my methodological approach, and I think it should be possible to replicate it. If someone then were to repeat my study, and try to identify narratives from the same set of blog entries, the researcher would hopefully end up with the same set of narratives as I have identified. However, I have had to make decisions on what to include and what to leave out, and it is thus not obvious that s/he would end up with the same narratives. Furthermore, the upcoming analysis is a result of my ability to draw connections and to see common paths, and someone else with a different background could probably see other aspects in the material.

3.4 Ethical Considerations

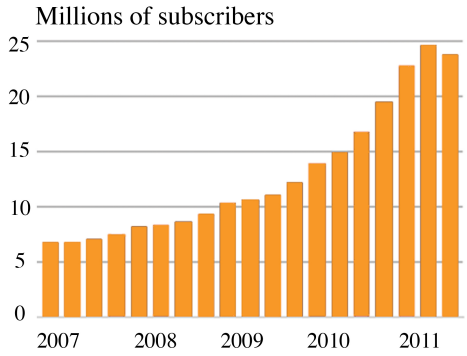
Research is systematically and socially organised exploration for new and improved insight. Within the social sciences particularly, human choices, actions, relations and norms influence the researcher and his/her findings. However, interpretation and translation are necessary elements in such research (etikkom.no). In this section I have tried to underline that my decisions on how I have conducted this study is subjective, and that these choices can be discussed. Although this can be viewed as a weakness, it can also prove to be enriching (www.etikkom.no). It is also important for the researcher to be thorough in documenting his/her method and to be open to impartial discussion and peer reviewing. I have tried to describe my method thoroughly, and as I have mentioned above, I think an external researcher should be able to backtrack my steps.

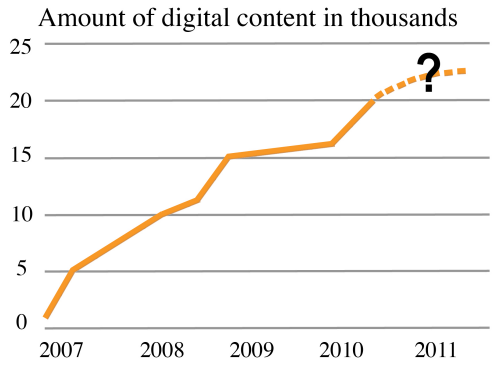
According to the Norwegian Research Ethical Committee, my research belongs within the category “Internet research” (www.etikkom.no). This implies that the research uses the Internet as a tool in order to study social phenomena. The committee underlines that using the Internet as a source of information makes it more difficult to determine whether a piece of information is public, private or of a sensitive character. My study is developed around the so-called blogosphere, and entries on such blogs are written for a public audience. I am therefore quite sure that the information I have gathered is not of a private or sensitive character.

I will now continue by applying this methodological approach to the empirical data collected.

4 Empirical review and applying the Methodological Approach

The technology blogs provide large amounts of data accommodating insight on the process concerning release of digital content. Additionally, the material also characterises the various innovation activities necessary in establishing an Internet media platform such as Netflix´s streaming platform. As I have reviewed earlier, content acquisition is one essential ingredient in this, alongside other aspects of innovation. Before I begin applying the narrative network narrative approach on the dataset, I will firstly make a brief presentation of these other various aspects of innovation on Netflix´s streaming platform that I have identified from the data:

<table>
<tr>
<td>Market
Marketing innovation</td>
<td>


➢ Netflix´s pricing sheme includes an all-you-can-eat subscription for a relatively low monthly fee ($7.99). Video rental has historically been based on pay-per-item, so this is likely a contributing factor to the service´s popularity.
➢ The graph shows the growth of Netflix´s user mass since 2007. Netflix didn´t separate their DVD-service and streaming-service until mid 2011. Hence the graph includes both groups of customers. However, the DVD-service has experienced a steady decline since 2007, and at the end of 2011 streaming-subscribers outnumbered DVD-subscribers more than two to one.
</td>
</tr>
<tr>
<td>Organization
Organizational innovation</td>
<td>➢ Netflix have been active in connecting and cooperating with external actors, among others by incorporating their streaming service on a range of devices. Examples are TVs and Blu-ray players from Panasonic, Philips, Sony, Samsung and so forth, gaming consoles like Microsoft´s Xbox, Sony´s Playstation and Nintendo Wii, and set-top boxes like the Apple TV, Popbox, Roku and Tivio.</td>
</tr>
<tr>
<td>Content
Product/service innovation</td>
<td>


➢ The graph shows the growth of Netflix´s digital streaming library. Netflix will never reveal the exact size of this library, so the graph is composed by various unconfirmed reportings by techbloggers. There have been few signs of major increases since 2010, seemingly stagnating at a total of roughly 20,000 titles.
➢ Netflix arranged an open competition, named “The Netflix Prize”, to develop a superior filtering algorithm to predict user ratings for films. The result was a highly successful recommendation engine, that adapts the website according to an individual user´s taste, and able of making satisfactory guesses of what a user would like to watch next.
</td>
</tr>
<tr>
<td>Architecture
Process innovation</td>
<td>➢ Video streaming is extremely demanding in terms of bandwidth, and in 2011 Netflix usage accounted for approximately 20% of all North-American downstream Internet traffic. To overcome problems with varying bandwidth at end-users, Netflix developed a solution that automatically changes the stream quality to ensure a constant smooth transfer.</td>
</tr>
</table>

Table 3: *Aspects of innovation in Netflix´s digital streaming platform* (sources: technology blog entries concerning Netflix identified by the aggregator Techmeme).

Following the above table, content acquisition is one of several ingredients that combined create service innovation on an Internet media platform like Netflix. To further investigate this specific aspect, I will continue by applying the narrative network analysis approach on my dataset, as presented by Pentland (2007).

Pentland´s (2007) approach can be applied by going through stages 3-5 as presented in the previous chapter: First, identifying narratives within the 989 blog entries. Nine complete narratives have been identified, and several more are found missing some fragments to make them complete. However, nine narratives are probably sufficient in this thesis. Second, deciding upon a coding scheme. I am making use of Greimas´ (et. al. 1968) semiotic square, and four generic actions are determined for each actor (Netflix or content owner). Each narrative fragment within every narrative is subsequently coded with such a generic action. Finally the material is analysed, in order to reveal any common paths or trends. In the following sections, I will work my way through these three stage

4.1.1 Identify Narrative Fragments and Complete Narratives

Nine complete narrative themes were identified from the blog data covering dialogical tensions between Netflix and content owners. Narrative fragments were arranged in sequential order around these themed stories as presented in table 4 on the next page, which will subsequently serve the analysis. This table lists the nine themed stories row by row, and against these are listed: The content owner in question, a brief description of the story and the sequence of actions.

Interaction between Netflix and content owners			
Content owner	***Action#***	***Year***	***Description of the action***
1. **Disney/ABC**	*Action#1*	2008	Netflix requests content from Disney/ABC
	Action#2	2008	Disney/ABC offers content to Netflix
	Action#3	2009	Disney/ABC tries to develop own streaming service
	Action#4	2010	Disney/ABC limits content to Netflix
	Action#5	2010	Netflix acquires Disney content from another distributor
	Acton#6	2012	Disney/ABC removes their content from Netflix
2. **Starz**	*Action#1*	2008	Starz wants to offer their content on Netflix
	Action#2	2008	Netflix accepts content
	Action#3	2012	Starz removes their content from Netflix
	Action#4	2012	Starz will offer their content on own streaming service
3. **Sony/ Columbia**	*Action#1*	2008	Netflix requests content from Sony/Columbia
	Action#2	2008	Sony/Columbia offers content
	Action#3	2008	Sony/Columbia removes some of their content
	Action#4	2010	Netflix acquires Sony content from another distributor
	Action#5	2011	Sony/Columbia removes their content
4. **20th Century Fox**	*Action#1*	2007	Netflix requests content from 20th Century Fox
	Action#2	2007	20th Century Fox will not offer content
	Action#3	2010	20th Century Fox offers content
	Action#4	2011	Netflix buys original TV-series in front of 20th C. F.
	Action#5	2012	20th Century Fox signs with other distributor: HBO
5. **Universal**	*Action#1*	2007	Netflix requests content from Universal
	Action#2	2007	Universal offers content
	Action#3	2009	Universal removes some content
	Action#4	2010	Universal offers more content
	Action#5	2012	Comcast buys Universal and decides to remove content
6. **HBO**	*Action#1*	2009	Netflix requests content from HBO
	Action#2	2009	HBO will not offer content
	Action#3	2010	HBO offer their content in their own streaming service
	Action#4	2011	Netflix requests content from HBO
	Action#5	2011	HBO will not offer content
	Action#6	2011	Netflix buys original TV-series that HBO wants
7. **Epix**	*Action#1*	2010	Netflix requests content from Epix
	Action#2	2010	Epix offers exclusive content
	Action#3	2012	Epix removes some of their content
8. **Warner Bros**	*Action#1*	2010	Netflix requests content from Warner Bros
	Action#2	2010	Warner Bros offers content
	Action#3	2011	Warner Bros removes some content
9. **CBS**	*Action#1*	2011	Netflix requests content from CBS
	Action#2	2011	CBS offers content
	Action#3	2011	CBS removes some of their content

Table 4: *Narrative fragments arranged in sequential order.*

4.2 Coding the Narrative Fragments

The type of action for each narrative fragment represents the most important element in this sequence analysis. This is firstly achieved through a static semantic analysis, as I have described earlier, using semiotic squares (Greimas 1986) in order to identify common generic actions across the stories that can be used in the subsequent analysis. Secondly a dynamic syntactic analysis was applied resulting in coded sequences of narrative fragments, as they unfold in each story.

4.2.1 Identifying Generic Actions and Coding the Narrative Fragments

The semiotic square provides a coherent but simplified range of generic actions characterizing the acts of Netflix and content owners (figure 2). This allows a simplified analysis of how the relationship between these two actors has developed during the past five years, and how the content owners have controlled their digital content. This is interesting in terms of innovation on Netflix´s digital platform, as well as innovation beyond Netflix, as I will look more into later.

The semiotic square identifies the basic oppositional positive and negative terms. Netflix can broadly either request content (*Requesting,* position 1 in figure 2) or accept content (*Accepting,* position 2). The content owner may or may not decide to offer content (*Allowing* or *Blocking,* position 1 and 2). Netflix is obviously not able to force a studio to offer content, but can instead bypass the content owner by using an external distributor (*Bypassing*). One example of this is when Netflix acquires Disney content via the distributor Starz, when Disney/ABC are reluctant to offer any themselves.

The contradictory terms to position 1 and 2, in position 3 and 4 respectively, describe each contradictory term retaining some basic characteristics of the original term, abandoning some, as well as acquiring some similarities to the original term´s binary opposite. Instead of just requesting or accepting content, Netflix can choose to bypass the content owner, as described above, or choose to outflank (*Flanking,* position 3) them, by going in directly and purchasing rights to existing shows, or by ordering brand new original material. Examples of this is when Netflix bought the rights to new seasons of "Arrested Development" in front of 20th Century Fox, or when they acquired the rights to the show "House of Cards", that HBO wanted. Both these studios have in common that they have been reluctant, in varying degree, to offer content to Netflix. The content owners also have an additional pair of generic actions when applying the same analytical process to them. In position 3 (*Advancing*), they can either choose to offer their content to another distributor or simply establish their own streaming service. Furthermore, they can decide to change or limit the content they have already offered to Netflix (*Restraining*, position 4).

Application of the semiotic square helped the identification of four generic actions for Netflix (*Requesting, Accepting, Flanking, Bypassing*), and another four, which are to the content owners disposal (*Allowing, Blocking, Advancing, Restraining*) in the dialogical tension concerning innovation in digital distribution of video content.

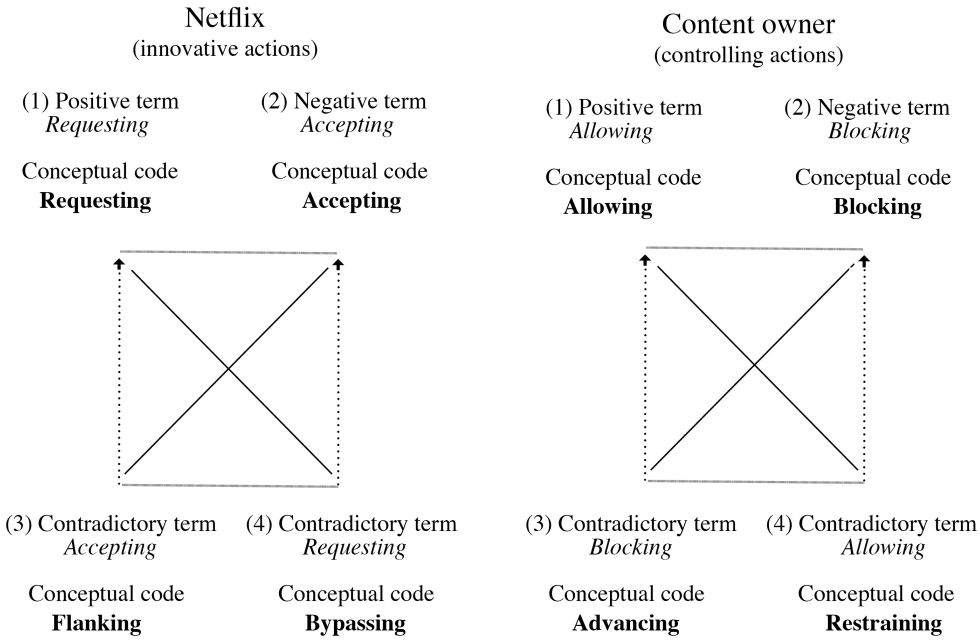


Figure 3. *Semiotic squares identifying the generic actions of each party; Netflix and the content owners.*

4.2.2 Identifying Sequences of Generic Actions

Following the identification of a set of generic actions, the sequences of narrative fragments in table 4 (page 52) can now be clustered into themed stories. I will code each fragment according to the two sets of four actions, four for Netflix and four for the content owners. This results in the following table, showing the themed sequences of generic actions:

Content owner (C)	1. Disney/ ABC	2. Starz	3. Sony/ Columbia	4. 20th Century Fox	5. Universal
Platform owner (N)	Netflix	Netflix	Netflix	Netflix	Netflix
Action#1	N requesting C	C allowing N	N requesting C	N requesting C	N requesting C
Action#2	C allowing N	N accepting C	C allowing N	C blocking N	C allowing N
Action#3	C advancing N	C blocking N	C restraining N	C allowing N	C restraining N
Action#4	C restraining N	C advancing N	N bypassing C	N flanking C	C allowing N
Action#5	N bypassing C		C blocking N	C advancing N	C advancing N
Action#6	C blocking N				

Content owner (C)	6. HBO	7. Epix	8. Warner Bros	9. CBS
Platform owner (N)	Netflix	Netflix	Netflix	Netflix
Action#1	N requesting C	N requesting C	N requesting C	N requesting C
Action#2	C blocking N	C allowing C	C allowing N	C allowing N
Action#3	C advancing N	C restraining N	C restraining N	C restraining N
Action#4	N requesting C			
Action#5	C blocking N			
Action#6	N flanking C			

Table 5: *Themed sequences of generic actions*. This table presents the nine themed stories identified by combining the narrative fragments from table 4 and the coding scheme from figure 3.

4.3 Constructing the Narrative Networks

The purpose of constructing the narrative networks graphically, is not just to visualize the sequence of actions in one particular story. It also allows analysis by comparison of the different narratives and sequences of actions, in order to try to identify and interpret underlying patterns of actions. I will conduct this analysis in the next chapter.

As in all the forthcoming narrative networks in this thesis, the illustration contains eight nodes, each representing one of the possible narrative fragments. These nodes are then linked

in sequence of which the events unfold. Figure 4 below illustrates the narrative networks by plotting the sequence of actions that occurred between Netflix and Sony/Columbia between 2008 and 2011. In the case of Sony/Columbia, the nodes are linked as follows: Netflix requests Sony/Columbia to offer their content for streaming. Sony/Columbia offers content. What happens next is that Sony/Columbia withdraws some of their content, but actually only on the playback device Xbox. The motivation for this is that Microsoft´s Xbox represents a competitor for Sony´s Playstation. Netflix answers by acquiring Sony content from another distributor of video content, namely Relativity Media. Sony/Columbia don´t seem to appreciate this, and they later remove their content from Netflix. These narrative networks, plotted for individual narratives or stories, succeed in simplifying and making sense of what would appear to be complex interactions as a consequence of the dialogical tensions between Netflix and content owners.

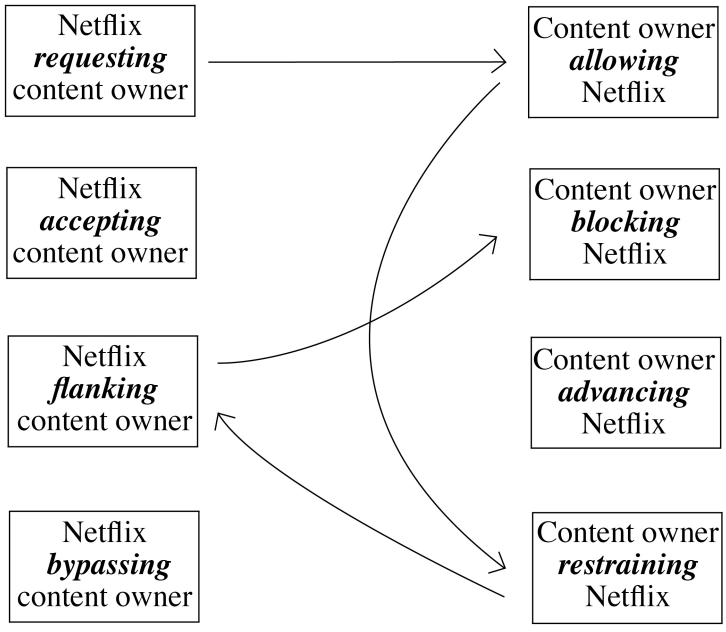


Figure 4: *Narrative network describing sequences of actions between Netflix and Sony/Columbia*.

5 Analysis and Discussion

In this chapter I will first conduct an analysis of the narratives and the combined narrative network as developed above. The narrative network accommodates analysis of the discourse between Netflix and the content owners. This discourse is concerned with the processes leading up to release or withdrawal of digital content, and as I have argued, this specific aspect is essential for creating innovation on Internet media platforms like an online streaming service.

I will continue this chapter by answering the research questions on basis of the empirical analysis and the theoretical foundations reviewed earlier. In doing so I will try to shed some light on what characterises innovation and innovation processes on Internet media platforms, and what role content release plays in this.

5.1 Empirical Analysis of the Narrative Network

All nine stories of dialogical tension from table 5 were plotted into one main narrative network (figure 5 below) to facilitate comparison and analysis. Each of the transitions is labelled with a number that links with a particular narrative as presented in table 5. The arc

thickness represents a weighting according to the frequency of the observed paths.

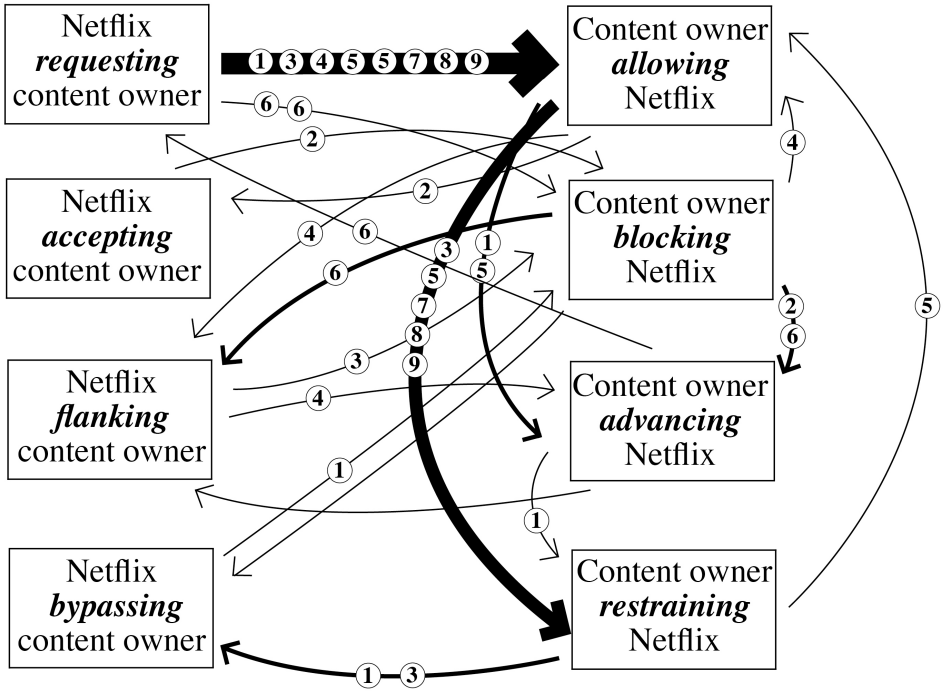


Figure 5: *combined narrative network.*

The combined narrative network in figure 5 data reveals some returning patterns concerning how the relationship between Netflix and Hollywood has evolved during the past five years, and how this evolving relationship has affected innovation on digital platforms and on Netflix´s platform in particular. This is essentially related to innovation in the sense that Netflix, as a digital platform, cannot develop and turn its distribution system into a successful innovation without the support and consent of the content owners. The content owners have to be enrolled as supporters through a negotiation process about which only the main actions are revealed, and these are the actions included in the narrative network above.

Video content can be regarded as artistic intellectual property (Markus 1993), as I have reviewed earlier. This property is protected by a set of laws and licensing schemes to reduce

copyright infringement and illegal diffusion. Due to the movie studios´ strict control of their intellectual property, Netflix must request content owners to acquire content. Hence, almost all of the narratives begin with Netflix requesting a content owner. Only one of the narratives, concerning the distributor Starz, begins with the content owner offering Netflix content. In 2008 Starz tried to develop an individual streaming service called Vongo, but it flopped and was discontinued in November the same year. This meant that Starz suddenly had a lot of content without distribution, so Netflix signed with Starz in October 2008.

The most apparent common path revealed is that content owners firstly agree on releasing content, but then later decide to limit or restrain it. In five of the nine cases content is restricted after initially released to Netflix. Most apparent are the cases of Warner Bros, Epix and CBS. They all offer content to Netflix, some exclusively, but later decide to restrict it after a year or two. These three studios released content during 2010 and 2011, so the deals were fairly short-lived. In the case of Epix, the content owner simply replaced distributor, by signing with Netflix-competitor Amazon.

Another apparent characteristic is that content owners don´t seem to appreciate when Netflix bypasses them to acquire content. In some cases Netflix have approached other distributors to acquire content from unwilling studios, and they have also purchased rights to original content that these studios wanted. One example is when Netflix acquired Sony content from the distributor Relativity Media. Sony/Columbia subsequently removed their content from Netflix. Another example is the deal where Netflix acquired Disney content by signing with Starz. Apparently Disney threatened Starz to not renew their deal if they continued to sub-license Disney content to Netflix, and Starz then discontinued cooperation with Netflix in the beginning of 2012.

Another characteristic observed is that several studios seem to have become more

reluctant in releasing content during these past years since Netflix´s streaming service first was introduced. This applies especially for larger actors like Disney, Sony/Columbia and Warner Bros. In figure 6 below I have created a timeline covering Netflix´s digital content acquisition over the past five years, using the collected data as presented in table 4 (page 52). The green entries represent actions that benefit their digital library, while the red entries represent actions that are in their disfavour. This graphical presentation reveals two major features: In 2009, there seemed to be a negative trend for Netflix´s digital library. However, this turned the following year, so this may not be so interesting. The feature I think deserves the most attention is the negative trend from 2011 and until today. All seven actions identified in this period result in less digital content for Netflix.

There seems to be a paradox of why the studios become more reluctant in offering digital content to Netflix while the revenue from streaming services at the same time increases. I think the answer is twofold. Firstly, the studios observe that video streaming has evolved into a serious source of revenue. I think the content owners want a larger slice of the cake, and this has sometimes resulted in withdrawal of content when Netflix isn´t able to offer the desired compensation. Secondly, I think some content owners become frightened when experiencing that video streaming is becoming such an important model of distribution, and that Netflix hence controls a larger fraction of their total output. This is probably part of the motivation of why certain studios have developed their own streaming services, as has been the case with for example Disney and Starz. I don´t immediately see the same development concerning the smaller studios, but many of these are probably incapable of developing functional streaming services by themselves.

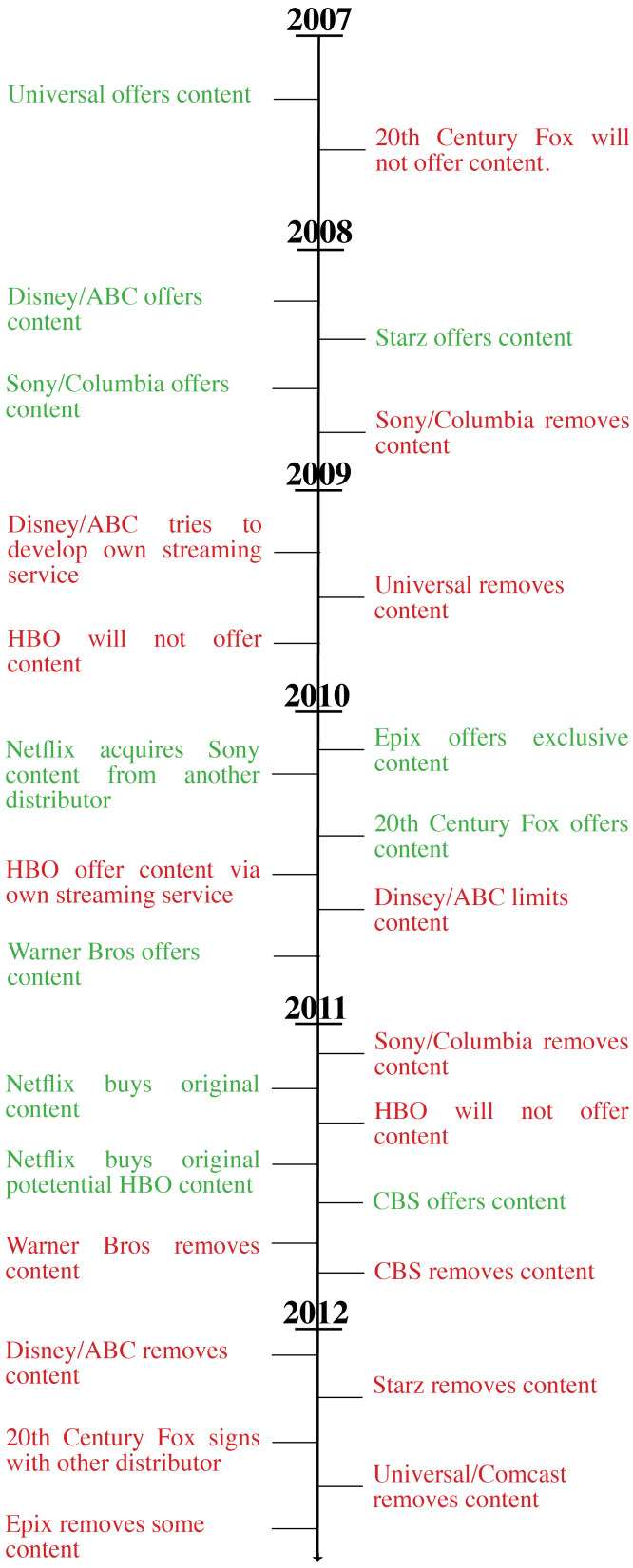


Figure 6: *An overview of Netflix´s digital content acquisition since 2007.* Green colour represents actions that favour Netflix´s streaming platform. Red colour represents the opposite.

5.2 Discussion

It is now time to restate my research questions:

1. What characterises innovation processes on Internet media platforms?

2. What characterises the negotiations between platform owners and content owners in such innovation processes, and under what circumstances does the content owners decide to release content on digital platforms?

3. What are the possible outcomes of these processes, and how does this outcome affect innovation in digital distribution?

I will attempt to answer these questions one by one under each of the following three sub-headings.

5.2.1 Innovation Processes on Internet Media Platforms

Earlier in this thesis I reviewed the concept of innovation platforms (Consoli and Patrucco 2008, 2012; Gawer et al. 2008; Gawer 2009; Wheelright and Clark, 1992). One specific type of such platforms is digital innovation platforms, and there is a vast selection of services and offerings on the Internet that can be characterised as such (Tiwana et al. 2010). Common for these platforms is often that innovation is created by combining traditional media services and novel possibilities provided by the Internet. Such digital platforms can be considered as large ecosystems, and innovation processes on these platforms are characterised by complexity: Many heterogeneous actors involved in production, design and supply, control is distributed between several firms and organisations, as well as new markets easily are explored and exploited across national borders.

Yoo (et al. 2010) argue that the product architecture of digital products differ from that found in traditional physical products. Such novel product architecture can be broken down into four layers: devices, networks, services and content. I have argued that Netflix´s streaming offering can be regarded as a digital innovation media platform, and in terms of these product layers, I have mainly investigated the layer concerned with content. I did however also conduct a few interviews to broaden my understanding of innovation on digital platforms. At the beginning of the methodology chapter I organised the input from these interviews in a table (table 2, page 33). In this table I combined this input with insight from the platform literature, and I made use of the Oslo Manual´s (OECD 2005) four main types of innovation as a frame. This resulted in table 2 that includes different innovative activities necessary in order to develop a successful digital platform, concerning the different aspects of market, organization, product/service and process. This table shows that innovation processes on Internet Media Platforms are complex and heterogeneous, involving innovation on different levels.

Table 2 reveals a general presentation of innovation on a digital platform like Netflix´s streaming offering. As I have mentioned earlier, this thesis addresses and tries to characterise a specific aspect of the innovation processes on digital platforms, namely concerning the acquisition of digital content. Digital content like video and music can be characterised as public goods. This means that it is non-rival in use and non-excludable for consumption (Stiglitz 1990). In other words, a digital movie doesn´t deteriorate when one additional consumer enjoys it, and it is hard to exclude people from taking it for free. However, this doesn´t imply that the content owner should not be compensated, or that the content is costless to produce. Digital content is also private property, and as I have described earlier, it can be characterised as artistic intellectual property. Innovation processes on Internet media platforms that are based upon the use of licensed content is hence characterised by content

owners´ enforcement of intellectual property rights. In this regard, IPR of digital content present a twofold challenge. One the one side, there wouldn´t be produced much content without some sort of property protection. On the other side, innovative and value-creating activities are possibly being contained. Illegal file sharing and online piracy is, among other factors, a result of digital content not being as available legally as it is illegally due to restrictive IPR.

Actors in the motion picture industry in Hollywood have regarded online file sharing as disruptive innovation, and the massive repurposing of content has resulted in new legislation and digital enforcement (Tilson et a.l 2010). One such measure is Digital Rights Management (DRM), limiting both the commercial and illegal use of video content. Currah (2007) argues that the studios by doing so are pursuing a "closed" sphere of innovation, making it difficult for anyone else to innovate. The pursuit of a closed sphere of innovation is a logical economic response to the conditions of non-rivalry and non-excludability, but it can mean worse terms for innovation. It alienates a wide range of activities, such as sharing and re-combining content. The perhaps overly restrictive forms of DRM has resulted in tiny islands of commercial development emerging, like Netflix, built on legitimate use of Hollywood content, within a sphere of overwhelming disruptive innovation, built on criminal use of content. Thus, "DRM has merely displaced rather than eradicated the emerging trajectories of disruptive innovation" (Currah 2007).

Another characteristic of innovation processes on digital platforms is that expansion and exploration of new markets is fairly easy. However, digital platforms that are based upon licensed content, like Internet media platforms, are in a position where expansion is more complicated. This is because content released digitally often will be followed by restrictions for regional use, for example between different countries. In this respect, the innovation processes behind Internet Media Platforms like Netflix, Hulu or Spotify, will differ from

digital platforms like for example eBay or Windows, that are not dependent on geographically restricted content. Although my dataset is concerned with Netflix´s streaming offering in the United States, I came across reportings on some of the challenges Netflix meets while expanding. Content acquisition seems to be a frequent returning obstacle, and the case of the studio Twentieth Century Fox is illustrative. In 2010, the studio signed a comprehensive deal to release content on Netflix´s streaming offering in the United States. When Netflix in 2011 tries to establish their streaming offering in the United Kingdom, they want to bring this deal overseas. The studio, however, decides to sign with LoveFilm, Netflix´s main European competitor, for exclusive streaming rights in the UK.

5.2.2 Negotiations and Release of Content

The empirical material in this thesis consists of online articles that discuss the public discourse and actions taking place between Netflix and content owners. By going through this material, it became clear that neither Netflix nor the content owners like to release a lot of details of their agreements. A new content deal is usually followed by a brief public announcement including some basic details of type of content and time-span of the deal. The exact amount of content, however, is never revealed. Several bloggers and journalists criticize this constraint, arguing that Netflix does not really inform consumers what they are purchasing. Nonetheless, the information about the negotiations that is made public, combined with additional input from the technology blogs, make it possible to identify some key characteristics about the negotiations between platform owner and content owners. It seems that the most important aspects in these processes are: 1) convincing content owners that streaming is an efficient and possibly profitable distribution model, 2) compensating the content owners of releasing digital content and, 3) control and power.

The first aspect, that is convincing content owners about this new distribution model, seems to have been most important during the first few years of video streaming. This is reflected in the increase in content released, as shown in the graph in table 3 (page 50) earlier. The recognition of video streaming as an efficient distribution model is also reflected in the many streaming services that have been established recent years, in the wake of Netflix´s success.

The second aspect identified is concerned with the price of releasing content. This may be the most important feature, as content owners probably would release more content for a higher compensation. However, Netflix being a subscription-based service, contrary to a pay-per-view service, makes compensating the studios a complicated task. There is also a limit to how much a service like Netflix in the end is able to pay for content: In 2011 Netflix´s total revenue from streaming was just above $2 billion, and at the end of the same year, Netflix had digital licensing commitments totaling $3.9 billion over the next several years (Andrews 2012; Svensson 2012). In their second year in service, Netflix signed a large licensing deal with the distributor Starz. At the time this deal represented a remarkable expansion of Netflix´s digital catalogue. When the deal expired four years later, Starz demanded a significantly higher compensation for releasing the same content to Netflix. Netflix replied by rejecting their new offer, likely because their digital catalogue had expanded a lot since when they first signed Starz, so this withdrawal of content did not make a very large overall impact. This specific deal stands out as Netflix commented publicly on a price increase concerning a content deal. Nonetheless, it seems that Netflix´ ability to pay has been an important contributor when content owners have withdrawn content during the last few years.

The final characteristic identified in these negotiations is concerned with power and control. This is related to power structures between actors involved in the negotiations, as well as the role played by comprehensive deals that extend beyond simply video content.

Netflix´ ability to acquire streaming content is not entirely comprised by their ability to pay the studios enough money. Netflix have for example been eager to incorporate their streaming service on a whole range of different of devices, like TVs, gaming consoles, set-top boxes and Blu-ray players. When Netflix for example got incorporated on Sony´s Playstation, they got streaming content from the studio Sony Columbia in return. Netflix subsequently showed their gratitude by choosing Sony´s Blu-ray format over the HD-DVD format for their physical rental service. Another example is when Netflix´s CEO Reed Hasting joined the Board of Directors at Microsoft. Netflix subsequently got incorporated on Microsoft´s Xbox, as well as acquiring Microsoft´s Silverlight playback technology.

Netflix creates innovation by connecting to external actors and resources that differ substantially from their own set of assets, skills and competencies. In doing this, Netflix needs to track and interpret changes in their environment, to make sure that the heterogeneous agents contribute in the same desired direction. They acquire this understanding through discourse, and generative relationships and networks emerge from such discourse. Generative relationships between heterogeneous actors are characteristic for digital innovation platforms (Lane 2012). Tension will often arise when such differentiated actors collaborate, but this is thought to be essential in order to promote innovation. This is because tension often leads to unforeseen combinations and possibilities (Hargrave et al. 2006). This can be exemplified by the cases where content owners withdrew content and established their own streaming service. This can also be regarded as innovation, as I will elaborate on in the next sub-chapter. However, tensions can also create gaps between actors, and it is therefore important that generativity is accompanied with some sort of controlling actions. A platform like Netflix should seek to avoid that partners feel they are loosing too much control of their assets, for example by releasing video content for streaming. If the gaps become too large, change can halt and innovation will be curbed.

Netflix is furthermore in a somewhat unique position in negotiating with content owners, at least when compared to most of the rival streaming services established in recent years. This special position stems from their original business model, namely the DVD-by-mail service. Although Netflix´s streaming option has outgrown their DVD´s, their DVD-service is still very popular. In terms of acquiring digital content, this facet means that Netflix is able to negotiate on several levels at same time. There have for example been negotiations where the studios have altered their deal so that Netflix´s DVD offering got compromised, and more streaming content was released in return. The first content owner to make such a deal was Sony/Columbia. Netflix agreed to postpone renting out new DVDs by 28 days after they hit the market, in return for more streaming content. This meant that the studios could increase profits on DVD sales before the titles were available for rent. Many studios quickly imitated this deal, and although it enhanced the studios' short-time profit on DVD sales, these deals also got a lot of negative attention from the blogosphere. Bloggers and journalists argued that piracy would rise when consumers lost another method of legally accessing new content.

5.2.3 Possible Outcomes and Effects on Innovation in Digital Distribution

As reviewed in the empirical analysis above, the sequences of actions between Netflix and content owners have different possible outcomes. Broadly stated, the analysis reveals whether or not various content owners decide to release content on Netflix´s digital platform. Additionally, Netflix can go around the content owners, for example to external distributors, or they can purchase or develop their own original content. The content owners can broadly decide to release or not release content on Netflix´s platform. If they reject to release to Netflix, they can decide not to release content for streaming at all, or they can release their

content on their own or another platform. As I now will continue to review, these different sequences of actions have different possible outcomes that in turn can affect innovation on various levels.

When a content owner allows Netflix content, this is an action that represents improved terms for Netflix´s innovation to succeed. This is related to innovation in the sense that Netflix, as a digital platform, cannot develop and turn its distribution system into a successful innovation without the support and consent of the content owners. When a content owner during the first few years of video streaming decided to release content, they also supported the endurance of this innovation. This innovation, namely streaming of entertainment content, has evolved into being a game-changing innovation in many parts of the cultural industries. The many commercial streaming services established in the wake of Netflix´s success underlines the impact. Examples of such are Vudu, Hulu, StreamPix and Blockbuster On Demand, and a joint streaming venture between telecommunication giant Verizon and video rental chain Redbox has recently been announced (Lawler 2012).

As well as video streaming services, several successful subscription-based streaming services for music have been established in the years after Netflix´s streaming service first launched. The Swedish music streaming service Spotify was for example launched a year after Netflix´s "Watch Instantly". Similar models have also started to appear for streaming of literature, magazines and audio books (Hardavar 2011; Webb 2012). It is probably wrong to state that all of these streaming services are sole imitations of Netflix. However, it seems safe to argue that Netflix, being both the largest and the first real successful streaming service for home entertainment, by large have introduced streaming of digital content as a commercial and widely embracing concept, at least within the U.S. Hence, as streaming seem to become a superior distribution model, making existing models non-competitive, digital video streaming

may qualify as a radical innovation. With this in mind, one could argue that content owners have supported the perpetuation of a radical innovation by releasing content on Netflix´s platform.

When a content owner rather chooses to restrain Netflix by removing content, the result may be the opposite, at least in terms of Netflix´s success. However, withdrawal of content can also result in the content owner using the redeemed content for establishing a separate streaming service. This would represent a diffusion of this innovation, and although implying worsened terms for Netflix´s streaming service, the effect on innovation may not be attenuated. The diffusion of this model of distribution and way of consuming entertainment content may be regarded as an incremental innovation, opposed to Netflix´s first launch of a streaming service. I will therefore argue that release of content on Netflix´s platform had a considerable effect on innovation in digital distribution, at least in the first few years after Netflix first began streaming. Today it may not affect innovation as much when content owners remove their content from Netflix. Instead, the result may as well be improved terms for innovation in digital distribution, as incremental innovations by other firms refine and improve Netflix´s model.

As I have reviewed earlier, studies of cultural innovation have mainly been concerned with organizational and environmental determinants. Peretti and Negro (2007) introduced a new perspective by focusing on the significance of external components as sources for innovation. They argue that it is important for firms and organisations in the cultural industries to cooperate and include others from the neighbourhood of their own sphere of activity. I would say the empirical data in this thesis supports this argument. In the digital age of Internet, new ways of distribution are emerging as important engines of innovation, and this seems to be particularly apparent for the cultural industries. Netflix involved different

actors in establishing a streaming service, and by that they created room for innovation and value-creation. Such involvement of heterogeneous actors is characteristic of innovation platforms (Gawer et al. 2002). The process of convincing content owners has been one essential ingredient in this.

Furthermore, Netflix have actively created coalitions with high-tech companies by incorporating their streaming service on a whole range of playback devices. This can also represent innovation, in terms of "the practical implementation of an idea into a new device or process" (Schilling 2008), and also in terms of a recombination of existing resources. Netflix have also gained other valuable assets like software and new knowledge by creating such coalitions. Wernerfelt (1984) argues that the resources a firm hold is essential in order to create competitive advantage. This thesis underlines the importance of acquiring resources, but also indicates that the way a firm chooses to control their resources is important. In terms of digital distribution, it seems that innovation can be improved by consciously relinquishing control of resources, and by including external expertise and knowledge. This resonates with the concept of generativity (Lane 2012). Such an open approach will also allow for the investigation of more distant combinations (Perretti and Negro 2007; Katila 2002), and not preclude organizations from investigating more distant possibilities or decreasing the potential of developing radical innovations (Fleming and Sorenson 2004).

6 Concluding remarks

During the past decade the Internet has emerged as an efficient distribution channel for home entertainment. Innovative service providers and content distributors have introduced novel ways to consume goods and services. During this transition from physical to digital distribution, innovation platforms have emerged as important engines for service innovation, combining new possibilities offered by the Internet with digitalised media content.

In this thesis I have attempted to shed light on digital platforms as a mean of innovation. I have argued that various aspects of innovation are needed in order for platforms to succeed and survive. This research has focused on one such aspect, namely the role played by release or withdrawal of digital content. I have used the American streaming service Netflix as a case to better understand innovation platforms, and to investigate the processes and negotiations leading up to release or withdrawal of digital content on Netflix´s platform.

By using technology blogs I have been able to track and analyse the major outcomes of the discourse concerning release of content between Netflix, an innovative Internet media platform owner, and the Hollywood studios, being the legal owners of the content. The

combination of approaches as presented by Eaton (2012), including construction of narratives (Pentland and Feldman 2007), using technology blogs as an empirical source (Davidson et al. 2009) and using the the semiotic square (Greimas 1986) to identify generic actions, has allowed for analysis and answering of the research questions. I also conducted a few complementary interviews to achieve a better understanding of the dynamics of Internet media platforms, and to contextualise the role of content.

In order to summarize the analysis, it is useful to recount some of the main findings in this thesis. These are summarised in the table on the next page, focusing on the aspect of content. According to these findings, it seems like the role played by content release first and foremost is related to the fact that Netflix´s Internet media platform would not survive without it. However, the most interesting feature in terms of innovation seems to be the whole range of innovations that are built on top of this service and incorporated on the platform. These innovations would not be developed if Netflix was not able to acquire content in the first place.

Market ***Marketing innovation***	➢ Netflix have developed intelligent algorithms based on users´ ratings of films, allowing for individual marketing. Netflix is at time of writing the largest video streaming service, both in terms of number of subscribers and amount of content. They have seemingly succeeded in convincing consumers that streaming represents a superior way of consuming video content. This is illustrated by that they in 2011 passed Comcast, the U.S.´s largest cable distributor, in number of subscribers.
Organization ***Organizational innovation***	➢ Netflix´s streaming platform has successfully been incorporated on a whole range of different devices. These devices, like Blu-ray players or gaming consoles, can in like manner be regarded as individual innovation platforms, as they allow for recombination of services, technology and software. Generativity is hence important for promoting innovation across many such platforms.
Content ***Product/service innovation***	➢ Content owners have expressed a varying degree of acceptance for Netflix´s streaming platform. Analysis of the data indicates an increased scepticism the past few years towards releasing content on Netflix, and there seems to have been sparse growth in Netflix´s digital library since 2010. ➢ Less content released to Netflix does not necessarily imply worse terms for innovation in digital distribution. Although this may deteriorate Netflix´s platform, novel services imitating Netflix´s model have emerged, making use of content previously released on Netflix. ➢ In order to secure the survival and endurance of Netflix´s innovation, it seems like content release was an essential aspect during the initial few years. ➢ Although it seems like Netflix are experiencing increased difficulty in expanding their digital library, the data reveals that innovation in digital distribution altogether is thriving. Netflix is not the sole actor in the home entertainment industry able to be innovative, but they have evidently had an important entrepreneurial and influential role in the industry. The success of Netflix´s streaming platform seems to represent an opening or a gateway for innovation in several areas, as "Netflix-like" services are being established for diverse content like music, literature, magazines and even computer games. ➢ Netflix have developed a powerful recommendation engine for their movies and TV shows. It recommends a user what to watch, and it even works for several users with different preferences using the same account.
Architecture ***Process innovation***	➢ Netflix have developed technological solutions for smooth and steady distribution and deliverance of large amounts of digital content, overcoming problems with varying bandwidth at end-users.

Table 6: *Main findings of aspects of innovation on Netflix´s Internet media platform* (source: analysis of technology blogs)

In terms of control and generativity, the findings in this thesis resonate with the main aspects of digital innovation platforms. The success of Netflix´s streaming platform is induced by innovation on several levels, accompanied by advantageous interaction with external actors. Netflix´s Internet media platform is characterised by generativity, and control is distributed between several actors. This distribution of control has created unforeseen dependencies concerning content, networks, technology and devices, and the success of such a platform is thus not only determined by the platform owner alone, but by various heterogeneous actors working together.

Similar to earlier moments of disruption, like cable-TV and home video, the motion picture industry now seem to embrace the Internet as a distribution channel in larger degree. Today the long-term growth prospects are clearer and economic parameters more certain. Digital video streaming seems to be become a valuable new source of income for the studios, and their libraries of old movies and shows have in fact seen a new renaissance with this new distribution model. This thesis suggests that the motion picture industry possibly could have profited on a more moderate control of their assets. By supporting innovation based on authorised use of content at an earlier stage, the industry could have sooner challenged online piracy and illegal file sharing by providing real legal alternatives. A recent study analysing the global trends in the music industry, reveals that illegal file sharing is reduced in areas where legal digital distribution services have high penetration (Musicmetric 2012). For further research, it could be interesting to investigate if or to what degree copyright and IPR schemes represent obstacles to innovation, especially concerning digital distribution in cultural industries. Online piracy and illegal file sharing is a problem that may not be solved with such traditional tools.

Sources

Abbot, A. (1992). “From Causes to Events”, *Sociological Methods & Research,* page 428.

Abernathy, W.J. & Utterback, J.M. (1978). "Patterns of Industrial Innovation," *Technology Review,* pages 40-47.

Adermon, A. & Che-Yuan. L. (2010). “Piracy, Music, and Movies: A Natural Experiment”. Working paper. Department of Economics, Uppsala Universitet.

Allan, G. (2003). "A critique of using grounded theory as a research method," in *Electronic Journal of Business Research Methods*, vol. 2, no. 1, pages 1-10.

Andrews, R. (2012). “PaidContent 50: The world’s most successful digital media companies, retrieved from http://paidcontent.org/2012/07/31/pc50/

Arango, T. (2010). “Time Warner views Netflix as a fading star” in the New York Times. Retrieved from: http://www.nytimes.com/2010/12/13/business/media/13bewkes.html?_r=1

Barker, R. (2003). “Can Netflix Keep Spinning Gold?” in *Business Week.*

Barney, J. (1991). "Firm Resources and Sustained Competitive Advantage” in *Journal of Management*, pages 99-120.

Bartow, A. (2001). “Arresting Technology”, BUFF. INTELL. PRP. L.J 95, page 118-119.

Begawan, B. S. (2012). “Exit physical media, enter online streaming”. Retrieved from: http://www.bt.com.bn/refresh/2012/05/30/exit-physical-media-enter-online-streaming

Belton, J. (2008). “American cinema/American culture”, McGraw-Hill.

Best, M. H. & Garnsey, E. (1999). “Edith Penrose, 1914-1996” in *The Economic Journal,* Volume 109, No. 453, pages 187-201.

Blank, S. (2012). “Why the Movie Industry can´t Innovate and the Result is SOPA”. Retrieved from: http://steveblank.com/2012/01/04/why-the-movie-industry-cant-innovate-and-the-result-is-sopa/

Blinder, A. S. (1988). “The Fall and Rise of Keynesian Economics” in *Economic Record,* volume 64.

Boje, D. M. (1991). “The storytelling organization: A study of story performance in an office-supply firm”, *Administrative Science Quarterly,* 36:1, pages 106-126.

Bounie, D., Bourreau, M. & Waelbroeck, P. (2006). “Piracy and Demands for Films: Analysis of Piracy Behavior in French Universities.” in *Telecom Paris Working Paper* No. 06-12.

Brook, J. (2001). “Competition Policy and the Stimulation of Innovation: Trips and the Interface between Competition and Patent Protection in the Pharmaceutical Industry”, Singham, S. A.

Bryman, A. (2001). “Social Resarch Methods”, Second edition, Oxford University Press.

Burck, C. (2005). “Comparing qualitative research methodologies for systemic research: the use of grounded theory, discourse analysis and narrative analysis.”, in *Journal of Family Therapy,* Volume 27, Issue 3, pages 237–262.

Christensen, C.M. (2007). ”The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail” in *Harvard Business Press.*

Clandinin, D. J. & Connelly, M. F. (2000). “Narrative Inquiry: Experience and Story in Qualitative Research”, Jossey-Bass Publishers, San Francisco.

Crook, T. R., Ketchen Jr. D. J., Combs, J. G. & Todd, S. Y. (2008). “Strategic resources and performance: A meta-analysis” in *Strategic Management Journal 29*, pages 1141–1154.

Consoli, D. & Patrucco, P.P. (2012). “Complexity and the coordination of technological knowledge: the case of innovation platforms”.

Consoli, D. and Patrucco, P.P. (2008). “Innovation platforms and the governance of knowledge: evidence from Italy and the UK”.

Currah, A. (2007). “Hollywood, the Internet and the World: A Geography of Disruptive Innovation” in *Industry and Innovation,* Oxford University Centre of the Environemnt, Oxford, UK.

Dapeng W., Hou, Y.T., Wenwu Z., Ya-Qin Z. & Peha, J.M (2001). "Streaming video over the Internet: approaches and directions," *Circuits and Systems for Video Technology, IEEE Transactions on* , vol.11, no.3, page 282-300.

Davidson, E. & Vaaset, E (2009). ”Tech talk: An Investigation of Blogging in Technology Innovation Discourse”, *Professional Communication, IEEE Transactions,* 52:1, pages 40-60.

Dierickx, I. & Cool, K. (1989). “Asset Stock Accumulation and Sustainability of Competitive Advantage” in *Management Science 35*, pages 1504–1511.

Eaton, B., Elaluf-Calderwood, S., Sørensen, C. and Yoo, Y. (2012). “The Dynamics of Digital Service System Innovation: Control and Generativity in Apple iOS”

Eaton, B. (2012). “The Dynamics of Digital Platform Innovation”, PhD Thesis, Dept Management, London School of Economics.

Empson, R. (2012): “We Expect DVD Subscribers to Decline Every Quarter … Forever”, retrieved from http://techcrunch.com/2012/01/25/reed-hastings-we-expect-dvd-subscribers-to-decline-every-quarter-forever/

Fagerberg, J. (2003). “Schumpeter and the revival of evolutionary economics – an appraisal of the literature.”

Feinberg, R.M. & Rousslang D. J. (1990). “The Economic Effects of Intellectual Property Rights Infringements” in *Journal of Business 62,* pages 79-90.

Fiol, C. M. (1989). “A Semiotic Analysis of Corporate Language: Organizational Boundaries and Joint Venturing” in *Administrative Science Quarterly* 34 (2), pages 277-30.

Fleming, L. & Sorenson, O. (2004). “Science as a map in technological search” in *Strategic Management Journal,* no. 25*,* pages 909–928.

Forskningsetiske komitéer: “Forskningens verdi og forskningsetikk” and “Forskningsetiske rettningslinjer for forskning på Internett”, retrieved from www.etikkom.no

Fritz, B. & Chmielewski, D. C. (2012). “Hollywood stumbles on next big step in home video.” in *Los Angeles Times.* Retrieved from: http://articles.latimes.com/2012/jan/11/business/la-fi-ct-ultraviolet-20120111

Funding Universe (2012): “Netflix, Inc. History”, retrieved from http://www.fundinguniverse.com

Garmon, C. W. (2002). “Intellectual Property Rights: Protecting the Creation of New Knowledge Across Cultural Boundaries” in *American Behavioral Scientist,* published by SAGE Publications.

Gawer, A. (2009). "Platform Dynamics and Strategies: From Products to Services," in: *Platforms, Markets and Innovation,* A. Gawer (ed.), Edward Elgar Publishing Inc, Cheltenham, UK, pages 45-76.

Gawer, A. (2009). “Platforms, Markets and Innovation: An Introduction” in *Platforms, Markets and Innovation,* Edward Elgar Publishing, Cheltenham UK, pages 1-16.

Gawer, A., & Cusumano, M.A. (2002). “Platform Leadership: How Intel, Microsoft, and Cisco Drive Industry Innovation” in *Harvard Business School Press*, Boston.

Gawer, A. & Cusumano, M. A. (2008). “How Companies Become Platform Leaders”. MIT Sloan management review, Vol 49, No 2, pages 28-35.

Ghazawneh, A. & Henfridsson, O. (2012). "Balancing Platform Control and External Contribution in Third-Party Development: The Boundary Resources Model," Information Systems Journal.

Gjersøe, J. (2012): “Oppturen fortsetter”, retrieved from http://www.nrk.no/lydverket/oppturen-fortsetter-2

Glaser, B. G. & Strauss, A. C. (1967). “The Discovery of Grounded Theory: Strategies for Qualitative Research”. Chicago, IL: Aldine.

Godø, H (2009). “Innovasjon i offentlig sektor – utfordringer og muligheter”, NIFU STEP.

Greimas, A., & Rastier, F. (1968): “The Interaction of Semiotic Constraints” in *Yale French Studies,* Yale University Press, pages 86-105.

Gripsrud, G., Olsson, U. H. & Silkoset, R. (2004). “Metode og dataanalyse - med fokus på beslutninger i bedrifter”, Høyskoleforlaget, Kristiansand.

Haraway, D. J. (1992). “The Promises of Monsters: A Regenerative Politics for Inappropriate/d Others” in *The Haraway Reader,* New York.

Hardawar, D. (2011). ”Netflix now accounts for 25 % of North American internet traffic”, retrieved from http://venturebeat.com/2011/05/17/netflix-north-america-traffi/

Hardawar, D. (2011b). "Amazon eyes Netflix-like e-book library for Prime", retrieved from http://venturebeat.com/2011/09/12/amazon-eyes-netflix-like-e-book-library-for-prime

Hargrave, T.J. & Van de Ven, A.H. (2006). "A Collective Action Model of Institutional Innovation" in *The Academy of Management Review 31,* pages 864-888.

Helpman, E. (1992). "Innovation, Imitation and Intellectual Property Rights", National Bureau of Economic Research, Massachusetts.

Henry, L. (2012). "The Netflix Syndrome: Not enough new content". Retrieved from: http://www.lehsys.com/2012/02/the-netflix-syndrome-not-enough-new-content/

Henshaw, A (2011): "Netflix Company History", retrieved from http://www.ehow.com/facts_5489980_netflix-company-history.html#ixzz29QU7jyzA

Kafka, P. (2012). "Finally, a reason to read magazines on a tablet". Retrieved from: http://allthingsd.com/20120403/finally-a-reason-to-read-magazines-on-a-tablet/,

Katila, R. (2002). "Innovative product portfolios by navigating markets and technology", Stanford University.

Kline, S. J. & Rosenberg, N. (1986). "An Overview of Innovation" in *The Positive Sum Strategy: Harnessing Technology for Economic Growth,* Pages 275-304. National Academy Press, New York.

Kirsner, S. (2008). "Inventing the Movies - The Epic Battle between Innovation and the Status Quo in Hollywood".

Kriegel, L. (2004). "Culture and the Copy: Calico, Capitalism, and Design Copyright in Early Victorian Britain". The University of Chicago Press on behalf of The North American Conference on British Studies vol 43 no 2 2004, Journal of British Studies.

Latour, B. (1991). "Technology is society made durable." In *A Sociology of Monsters: Essays on Power, Technology and Domination.* pages 103–131. Edited by Law, J. Routledge, London, UK.

Lampel, J., Lant, T., & Shamsie, J. (2000). "Balancing act: Learning from organizational practices in cultural industries" in *Organization Science,* 11, pages 263-269.

Lampel, J. & Shamsie, J. (2003). "Capabilities in Motion: New Organizational Forms and the Reshaping of the Hollywood Movie Industry", in *Journal of Management Studies*, City University, London; Michigan State University.

Lawler, R. (2012). "Redbox and Verizon announce their Netflix competitor but leave out details about pricing content", retrieved from http://techcrunch.com

Lane, D. A. (2012). "Complexity and innovation dynamics" in *Handbook on the Economic Complexity of Technological change,* ed. Cristiano Antonelli, Edward Elgar Publishing Limited, Cheltenham, UK.

Lemley, M. A. & Reese, R. A. (2004). "Reducing Digital Copyright Infringement without Restricting Innovation"

Liu, Q., Safavi-Naini, R. & Sheppard, N. P. (2003). "Digital rights management for content distribution" in *ACSW Frontier ´03 Proceeding of the Australasian information security workshop*

conference, Vol. 21, pages 49-58.

Liu, Y., Guo Y. & Liang C. (2008). "Peer-to-peer networking and applications" in *A survey on peer-to-peer video streaming systems,* Volume 1, Number 1. Pages 18-28.

Lorien, C. (2012). "How Hollywood promotes piracy". Retrieved from: http://www.mobiledia.com/news/128075.html

Mahoney, J.T. & Pandian, J.R. (1992). "The Resource-Based View Within the Conversation of Strategic Management" in *Strategic Management Journal 15*, pages 363–380.

Mandelberger, S. (2011). "The Netflix Controversy", www.filmfestivaltoday.com, visited September 11th 2012.

Marmanis, H. & Babenko, D. (2009): "Algorithms of the Intelligent Web", Manning Publications Co Greenwich, USA

Maskus, K. (1993): "Intellectual Property Rights and the Uruguay Round" in *Economic Review 78,* page 11-25.

Metcalfe, L. (1993). "Public Management: From Imitation to Innovation" in *Australian Journal of Public Administration*, Pages 292–304.

Nussbaum, B. (2009). "Apple and Amazon do Platform Innovation – And Succeed in a Recession". Retrieved from: www.businessweek.com.

Oswald, E. (2011). "Is Netflix The Solution To Movie Piracy?". Retrieved from: http://technologizer.com/2011/04/28/is-netflix-the-solution-to-movie-piracy/

OECD (2005): "The Measurement of scientific and technological activities. Oslo Manual", European Commision, Eurostat.

Pavitt, K. (2005). "Innovation processes" in *The Oxford Handbook of Innovation,* edited by Fagerberg, D. C. Mowery, and R. R. Nelson (eds.). Pages 86-114. Oxford University Press, London.

Pavitt, K. (2005). "Innovation Processes" in *The Oxford Handbook of Innovation,* Oxford University Press, Oxford.

Perlroth, N (2011). "Why Evernote Is Winning With The Soft Stuff", retrieved from http://www.forbes.com/sites/nicoleperlroth/2011/07/13/why-evernote-is-winning-with-

Penrose, E. (1959). The Theory of the Growth of the Firm". First edition. Basil Blackwell and New York, Oxford University Press, Oxford.

Pentland, B. T. & Feldman, M (2007). "Narrative Networks: Patterns of Technology and Organization" in *Organization Science,* 18:5.

Pentland, B. T. & Reuter, H. (1994). "Organisational Routines as Grammars of Action" in *Administrative Science Quarterly,* page 494-510.

Peoples, G. (2011). "What the Music Business Can Learn From Netflix's Success". Retrieved from: http://www.billboard.biz/bbbiz/industry/digital-and-mobile/netflix-a-subscription-model-the-music-business-1005154202.story

Perretti, F. & Negro, G. (2007). “Mixing genres and matching people: a study in innovation and team composition in Hollywood” in *Journal of Organizational Behavior 28.*

Peteraf, M.A. (1993). “The Cornerstones of Competitive Advantage: A Resource-Based View” in *Strategic Management Journal,* Volume 14, Issue 3, pages 179–191.

Pierleoni, A. (2011). “The Netflix Of Audiobooks”, retrieved from http://www.huffingtonpost.com/2011/06/27/audiobooks_n_885062.html

Rayburn, D. (2008). “Stream This: Netflix Needs a Business Model”. Retrieved from: http://www.streamingmedia.com/Articles/Editorial/Featured-Articles/Stream-This-Netflix-Needs-a-Business-Model-65340.aspx

Ratvik, E. H (2012): “HBO følger Netflix – kommer til Norge”, retrieved from http://www.nrk.no/kultur-og-underholdning/1.8283445

Reissman, C. K. (1993). “Narrative Analysis”, Sage, Newbury Park, CA.

Reissmann, C. K. (2005). “Narrative Analysis” in *Narrative, Memory & Everyday Life,* page 1-7. University of Huddersfield, Huddersfield.

Roettgers, J (2011): “Netflix on Wii just got Kids-friendly”, retrieved from http://gigaom.com/video/netflix-wii-kids-ui/

Satarino, A., Levy, A. & Grover, R. (2009). “Netflix vs. the Hollywood Studios”. Retrieved from: http://www.businessweek.com/magazine/content/10_02/b4162054151330.htm

Schilling, M. (2008). “Strategic management of technological innovation”, McGraw-Hill/Irwin, New York.

Schumpeter, J. (1934). “The theory of economic development”, Harvard University Press, Cambridge.

Schumpeter, J. (1939). “Business Cycles: A Theoretical, Historical and Statistical Analysis of the Capitalist Process”, 2 vols., New York: McGraw-Hill.

Schumpeter, J. (1943). “Capitalism, Socialism and Democracy”, Harper, New York.

Stiglitz, J., E. (1990). “Knowledge as a Global Public Good.” in *Global Public Goods*.

Subramanya, S.R. & Yi, B.K. (2006). "Digital rights management," in *Potentials,* vol.25, no.2, pages 31- 34.

Svensson, P. (2012). “Verizon set streaming-service redbox”, retrieved from http://www.msnbc.msn.com/id/46281051/ns/technology_and_science-tech_and_gadgets/t/verizon-set-streaming-service-redbox/#.UHVzzGhnJJ4

Sydell, L. (2012). “A California Civil War Over Internet Piracy”. Retrieved from: http://www.npr.org/2012/02/23/147294229/california-industries-spar-over-internet-piracy

Tidd, J. & Bessant, J. (2009). “Managing innovation: Integrating technological, market and organizational change”. John Wiley and Sons, Chichester.

Tilson, D., Lyytinen, K., and Sørensen, C. (2010). "Digital Infrastructures: The Missing IS Research Agenda," *Information Systems Research.* Pages 748-759.

Tiwana, A., Konsynsky, B., & Bush, A.A. (2010). "Platform Evolution: Coevolution of Platform Architecture, Governance, and Environmental Dynamics," in: *Information Systems Research,* pages 675-687.

Teece, D. J., et. al (1997). "Dynamic Capabilities and Strategic Management" in *Strategic Management Journal,* vol. 18:7, pages 509-533.

Van deVen, A., Polley, D. E., Garud, R. & Ventkataraman, S. (1999). *The Innovation Journey,* Oxford University Press, New York.

Van Ooijen, R. (2010). "Home Streaming is Killing Piracy - how streaming music affects the notion of music piracy". Master: New Media & Digital Culture. University of Utrecht.

Wade, M. & Hulland, J. (2004). "Review: The Resource-Based View and Information Systems Research: Review, Extension, and Suggestions for Future Research" in *MIS Quarterly,* Vol. 28 no. 1, published by Management Information Systems Research Center, University of Minnesota, pages 107-142.

Walravens, N. & Ballon, P. (2011). "The City as a Platform: Exploring the Potential Role(s) of the City in Mobile Service Provision through a Mobile Service Platform Typology" in *Tenth International Conference on Mobile Business (ICMB*), Como Italy, pages 60-67.

Webb, J (2012): "Publishing News: A magazine platform, ala Netflix", retrieved from http://toc.oreilly.com/2012/04/netflix-for-magazines.html

Wernerfelt, B. (1984). "A Resource-based View of the Firm", in *Strategic Management Journal,* Vol. 5, pages 171-180.

West, J. & Gallagher, S. (2006). "Challenges of Open Innovation: The Paradox of Firm Investment in Open-source Software" in *R&D Managemen 36,* pages 319-331.

Wheelwright, S. C. and Clark, K. (1992). "Organzing and leading "heavyweight" development teams" in *California Management Review.*

Xavier, A. & Basilico, J (2012): "Netflix Recommendations: Beyond the 5 stars (Part 1)", retrieved from http://techblog.netflix.com/2012/04/netflix-recommendations-beyond-5-stars.html

Yin, R. K. (2009). "Case Study Research – Design and Methods", fourth edition, Sage Publications.

Yang, J. (2012). "What We`re Sacrificing for Streaming Video Access". Available at: http://www.apartmenttherapy.com/whither-goes-blu-ray-and-physical-media-174615

Yoo, Y., Henfridsson, O., & Lyytinen, K. (2010). "The New Organizing Logic of Digital Innovation: An Agenda for Information Systems Research," Information Systems Research (21:5 - 20th Anniversary Special Issue of Emerging Challenges)