

BEHAVIORAL CHANGES OF THE AUDIENCE BY THE ALGORITHMIC
RECOMMENDATION SYSTEMS INSIDE VIDEO-ON-DEMAND
PLATFORMS CONSIDERING THE EXAMPLE OF NETFLIX

A Master's Thesis

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Bilkent University 2019

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The Graduate Schools of Economics and Social Sciences
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ABSTRACT

BEHAVIORAL CHANGES OF THE AUDIENCE BY THE ALGORITHMIC RECOMMENDATION SYSTEMS INSIDE VIDEO-ON-DEMAND PLATFORMS CONSIDERING THE EXAMPLE OF NETFLIX

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Digital media revolution has provided new possibilities for different industries globally, in lives of individuals including business related areas, entertainment and personal relations. Technological advancements have sped up these changes, especially with the Internet and computational devices. Convergence of the Internet and existing media elements like telephones and computers have altered media, society and the culture of 21st Century. Traditional media forms like television has started to be affected by these changes as well. Streaming platforms have emerged over the last decades that are providing unlimited access to video or music material for monthly subscription fees. Netflix is one of these platforms which uses algorithmic recommendation systems that analyze user behavior for

generating relevant material for each user. Recommendation systems are fundamental elements inside Video-on-Demand services that provide a unique experience for each user. With studies around the world, effects of Video-on-Demand services is being researched over the years, such as its effect on binge-watching behavior among the users. This thesis aims to focus specifically on the effects of algorithmic recommendation systems on the watching behavior of the audience of Video-on-Demand platforms by focusing on Netflix. As to analyze these possible effects, a theoretical background is presented that focuses the steps of these changes happening in the digital media era; followed by a research study conducted by Turkish Netflix subscribers through detailed interviews. Two main behaviors are observed over the study, which are presented in detail within the findings.

Keywords: Algorithms, Digital Culture, Netflix, Recommendation Systems, Video-on-Demand Services.

ÖZET

NETFLIX ÖRNEĞİNDE VIDEO-ON-DEMAND PLATFORMLARININ İÇERİSİNDEKİ ÖNERİ SİSTEMLERİNİN İZLEYİCİLERİN İZLEME ALİŞKANLIKLARININ ÜZERİNDEKİ ETKİLERİ

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Dijital medya evrimi, birçok endüstri için yeni imkanlar sağlayarak dünyanın dört bir yanındaki insanların hayatlarına iş, eğlence ve diğer insanlarla iletişim alanlarında yenilikler sağlamıştır. Teknolojik ilerlemeler bu gelişmeleri hızlandırırken, en önemli pay sahibi faktörler internet ve bilgisayar sistemleri olmuştur. İnternetin özellikle telefon ve bilgisayar gibi teknolojik medya elemanlarıyla bir araya gelmesi, 21. Yüzyılın toplum, medya ve kültür anlayışının şekillenmesine neden olmuştur. Televizyon gibi geleneksel medya araçları da bu gelişmelerden etkilenmiştir. Son yıllarda ortaya çıkan akışlandırma platformları, kullanıcılarına aylık ücret karşılığında sınırsız müzik veya video erişimi sağlamaktadır. Netflix de bu platformlardan biri olup, her gün dünyada milyonlarca insanın internet üzerinden içerik izlemesine imkân veren bir sistem halini almıştır. Netflix gibi platformlar

algoritmalar kullanarak bir öneri sistemi sayesinde kullanıcıların izleme alışkanlıklarını analiz etme yoluyla onlara içerik önermeyi sağlamaktadır. Bu öneri sistemleri Netflix gibi Video-on-Demand servisleri için büyük bir öneme sahip olmakla beraber, her kullanıcıya özgü bir deneyim yaratmak amacıyla oluşturulmuşlardır. Son yıllarda dünya çapında yapılan araştırmalar, Video-on-Demand servislerinin binge-watching gibi alışkanlıklar üzerinde etkili olduğunu göstermiştir. Bu tez ise, özel olarak algoritmalarından oluşan öneri sistemlerinin izleyicilerin izleme alışkanlıkları üzerindeki etkilerini ortaya koymayı amaçlamaktadır. Bu olası etkileri incelemek amacıyla öncelikle teorilerden oluşan bir bölüm halinde dijital medya içerisinde meydana gelen değişimler ele alınmıştır. Müteakiben, Türk Netflix katılımcılarının oluşturduğu bir deney düzenlenmiş olup, detaylı röportajlar neticesinde hedeflenen etkilerin ortaya konulması amaçlanmıştır. Çalışma sonucunda ise katılımcılar tarafından sergilenen iki ana davranış bulunmuş, bu davranış kategorileri de sonuçlar çerçevesinde detaylı bir biçimde incelenmiştir.

Anahtar Kelimeler: Algoritma, Dijital Kültür, Netflix, Öneri Sistemleri, Video-on-Demand Servisleri.

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CHAPTER I

INTRODUCTION

Media has always been the shaping force of cultures and societies throughout the ages and, 21st Century is no exception. None the less, the influence of media over the culture and society has been increasing in the digital media era; where the Internet and mobile devices are dominating people's lives around the world in labor and leisure at the same time. Search engines have become the new encyclopedias of information and knowledge, even without verification in some cases. These search engines such as Google provide results for millions of people every day in a quick and efficient fashion. Search engines are one of the key components inside the phenomenon of Internet of things, which are benefiting all possibilities of the digital media; in the forms of streaming services, online shopping sites, social media platforms, or even as dating applications. The Internet of things, especially the search engines have given birth to a new culture called query culture; where the society around this culture relies on the search results over the Internet for the majority of their daily tasks. Nowadays, individuals

are using computers, smartphones and the Internet infrastructure for almost all tasks on a daily basis, such as for communication through e-mails, video calls, texts messages for both business related situations and for their personal lives.

Entertainment area has undergone a major change as well with the emergence of the Internet and computers over the years in the digital era. Movies could be downloaded or streamed legally and illegally, and music content nowadays is principally listened over Internet-based platforms.

Television as a medium has been the gathering place of families for entertainment in decades, is now being replaced by streaming services that could be used on smartphones, computers, tablets, or Smart TVs.

Convergence of the Internet and computers have created new possibilities for traditional entertainment industries such as television and music, where the audience could access music or video content anywhere at any given time, with a device that is connected to the web. Platforms of that sort have started to appear in the digital media era in the forms of streaming systems, where for a monthly fee, users are given access to databases that consists of thousands of hours' worth of audio or video material. As the streaming industry grows, companies like Netflix and Spotify have become dominant platforms for entertainment. For almost the price of a music album or a movie ticket, users of these platforms can access to far more content; without restrictions or advertisements, in a quick and efficient way. Streaming platforms gather new subscribers all around the world by these motivations

every day, gradually becoming the predominant figure in entertainment and media ecosystem.

Netflix is the biggest Video-on-Demand platform as of today with millions of daily users, operating in more than hundred countries around the world. One of the most important feature in this success along with its user-friendly interface and content library, is its recommendation system. Netflix database relies on this system, which monitors user behavior over the platform.

Recommendation system consists of algorithmic engines, that analyze users' ratings for the content, watching history, favorite content type, watching duration over time, and generates relevant content for each user for their specific interests. Recommendations as a whole is an important factor in Netflix's popularity, since the system evolves over time by analyzing more and more personal user data over time. Video-on-Demand platforms have already been affecting audiences' watching habits by such as increasing the behavior called binge-watching, where the user consumes multiple episodes of video material in a short period of time. The relation of binge-watching and Video-on-Demand services has been shown by various studies around the world and for that matter; the effects of Video-on-Demand services on content and audience have been studied with researches and studies in the recent decade.

This thesis will focus on the effects of algorithmic recommendations systems on the Video-on-Demand audience's watching habits. Since recommendations are a fundamental part of Video-on-Demand services, the

effects of these algorithmic systems could cause behavioral changes in the audience. So as to analyze these possible effects, firstly a theoretical background will be presented; consisting of an analysis of digital media era, evolution of Video-on-Demand services, and operation of recommendation algorithms with theories and researches. This analysis will be followed by a research study, focusing on the audience of Video-on-Demand platform Netflix in Turkey; with detailed interviews aiming to observe and analyze user behaviors while finding and watching content. In order to address these given problems, two hypotheses are formulated as such:

Hypothesis #1: Algorithms inside recommendation systems on Video-on-Demand services are changing audience's watching behaviors.

Hypothesis #2: Technological changes in the digital media era are affecting media and society directly, convergence of the Internet and traditional media/entertainment elements is an influencing factor in this process along with the emergence of smart-mobile devices and computers.

CHAPTER II

THEORETICAL PART: NEW MEDIA, TECHNOLOGICAL ADVANCEMENTS, ALGORITHMS, ON-DEMAND SERVICES & RECOMMENDATION SYSTEMS

2.1 New Media, New Possibilities

The term new media is widely used to define the complicated system of entertainment, information and infrastructure of the 21st Century World. Social blogging sites like Twitter, Instagram, video databases like YouTube, game consoles like PlayStation, file formats like .mp4 or “older” forms of storage such as DVDs are considered under the term new media. But where does new media actually start and end? In classical notion, new media elements are products of computational power which are created, distributed and displayed electronically (Manovich, 2001). All electronical storage units, websites, digital software and files are considered new media according to this statement. Thus, for example; if a photograph is stored electronically

inside a flash drive, it requires a computer to view it therefore it becomes new media whereas printing it to a paper transforms the photograph to be an “old” media element (Manovich, 2001, 43). This classical definition of new media however, does not stand in today’s media ecosystem. The limits of new media have expanded over the last decades and the notion of new media have changed as well. The stipulation of computers while defining the new media concept is not an accurate way to study or analyze. “There is no reason to privilege computer in the role of media exhibition and distribution machine over a computer used as a tool for media production or as a media storage device” (Manovich, 2001, 43). Manovich approaches the phenomenon by stating one should concentrate on the culture evolving around in order to study, classify or understand new media.

As any culture, digital media has its own language which consist of codes and algorithms that makes a specific software or a product. These codes describe how a particular product or information is created, stored or viewed (Galloway, 2011, 378). Communication through new media is provided by these codes and information is being created by means of this new language. Accordingly, a new literacy form has been born with new media which has its own language (Kress, 2003). Information and knowledge inside the new media world makes sense in its own terms and characteristics. New media cannot be studied as traditional media because of the difference in its creation. “We are *required* to think critically and historically because the digital is so structural, so abstract, so synchronic” (Galloway, 2011, 378). The complex nature of new media also affects the audience and the behavior of it

accordingly. With new media, audience have recovered from the passive state of the traditional media environment and become a contributor of knowledge or information while receiving it. With the Internet, audience of media have gradually become more active; as a matter of fact, with social media the term “audience” is replaced with “users” in order to signify their significance in terms of production and reception (Sundar & Limperos, 2013, 504-05).

Arguably, the audience have affected significantly inside the media environment through the evolution of the new media. In parallel with the involvement in the process of production of knowledge, audience’s behaviors have changed significantly. This phenomenon will be examined in detail thereafter accordingly. In this chapter, the current state of new media audience will be analyzed along with the culture that new media has created over the years. The society and culture of this “new” audience will be scrutinized with changes in terms of their behavior and reception. In order to show the interrelation between the audience and the new media, steps of the evolution inside the media ecosystem have to be observed. Mediatized culture of 21st Century could be examined by studying the notion of mediatization, which is a meta-process. Along with mediatization, globalization and eventization meta-processes will also be examined in order to depict changes in the audience of the digital world.

One of the most influential sides of new media is the search engines. Millions of search entries are being made every day by Internet users all around the

world. Information within the World Wide Web have been transferred into cloud and becomes available to users via algorithms on services like Google. The big data of the world, being all the information, knowledge and elements could be found on the world wide web; actually nests inside this vast system. With proliferation of computers and the Internet, search engines like Google have become increasingly popular and the data they offer have increased in parallel with that. Advertisements, encyclopedia entries, kitten pictures; basically, almost every digital content available today are separated by codes inside this network. That had a reciprocal effect on the culture as well. “If you don’t know, Google it!” phrase has become the dioristic term for the mediatized world of 21st century (Ippolita, 2013, 17). Googling for knowledge, information or anything that do not have significant importance like cute animal pictures have become a habit for users all around the world.

It is undeniable that Google has provided the Internet users with easy access, fairly accurate results based on the entries for years. But with that extensiveness over the Internet, these engines also had great power over on both the users and the content. Nowadays, with the new media culture, most accurate and true information has become the closest one to the user or in terms of search engines, ones that appear higher on the search results. That made search engines like Google cultural dominators in today’s world (Ippolita, 2013, 17). Within this “big data” system, users (audience) and content (information) have been affecting each other correlatively and creating the so-called Google culture of today. This Google culture is also called “query culture” or “query society” by media theorists to signify the

importance of these search results (König & Rasch, 2013). These algorithm-based infrastructures are dominant enough to create and shape a culture based on their products. Search engines have undertaken the role of informants, resources of information and knowledge (Knight, 2013). And that knowledge could only be accurately found by entering the correct keywords, or following the designated path for the corresponding data (Knight, 2013). From this point of view, search engines do not guarantee accuracy or precision while providing the existing knowledge inside it.

That brings the subject to the liability of the search engines while providing information. Keywords are the language of search engines that coded specifically for particular outcomes and search engines profit from each entry with advertisements (Scardamaglia, 2013). More entries mean more profit for these systems and that creates a problem for the users. Legislations for search engines like Google have been put in use in order to prevent misleading and deceptive results for profit (Scardamaglia, 2013). Yet no matter how users try to reach most accurate and fast results, search engines are in the business of making money antecedently; that means “information” inside these engines could lose its accuracy.

New media and the Internet have also been affecting the audience's motivations while consuming media content. Behavioral changes of the audience will be analyzed in detail in following chapters. Yet, inside this section; a global phenomenon will be scrutinized, which is escapism. With proliferation of the Internet and emergence of new media, content in the

digital environment have increased significantly. That is to say, media has become a tool far beyond entertainment; a place to escape problems and real life. The escapism term basically means “self-selected separation of oneself from one’s immediate reality— through the consumption of media resources, or texts, such as television, music, games and movies” in contemporary media studies (Jones, Cronin & Piacentini, 2018, 498). That means, if an individual separate himself/herself deliberately from reality with the intent of media consumption; this behavior is classified as escapism. The term principally being used in game studies inside contemporary media discussions and mostly about online based video games. Gaming culture has changed significantly with the digital evolution and the Internet over the last decades. One of the significant outcomes of this evolution in gaming has occurred in the audience’s behavior or motivation to play contemporary games and that is the escapism phenomenon (Kücklich & Fellow, 2004). Gaming has become a medium of a new reality, where players gather to escape from their everyday lives and problems.

Yet, gaming is not the only medium where escapism phenomenon occurs on the audience side. As stated, escapism is defined as consumption of any media related material while separation from reality. Recently, escapism phenomenon has become the topic while defining the changing behavior of audiences of television and cinema. With convergence of the Internet, television is becoming an abstract medium of the digital, rather than the traditional form which was both a medium and a physical technological device. Streaming services like Netflix has started replacing the traditional

linear television and the theatre saloons, giving audience the liberty to consume media content anywhere they like with an Internet-connected device. Streaming platforms and behavioral changes of television audiences will be analyzed elaborately in subsequent chapters yet, escapism behavior of the audience is a relevant topic to this part since the change is related to the new media evolution. Escapism in television consumption occurs with the term “binge-watching”, which could be translated as a media marathon in a sense. Jones et al. refers to binge-watching as a “passive or observational form of escapism” that audiences aims to fill some gaps in their lives or get away from their real-life problems (Jones et al., 2018, 498). Being active or passive in the topic of escapism is related to interactivity involved in the process, and in the subject of streaming television content or cinema on streaming platforms are considered as a passive behavior. (Jones et al., 2018, 500) In their study, Jones et al. have researched the connections of binge-watching and escapism in the Netflix content *House of Cards* series with a series of interviews. According to their findings, binge-watching behavior originates as a free-time activity; and continues as a way to escape from problems of everyday life. That behavior is stated as “heterochronism”, originally defined by Foucault (1986) meaning: By escaping from the reality surrounding them by sacrificing long periods of time for a specific action, individuals get rid of their problems temporarily and find comfort in this new reality (Jones et al., 2018, 504). Escapism and binge-watching phenomena are in parallel with each other as a result of the new media environment of 21st Century thus, directly related to the audience and their behaviors. It is also stated in Jones et al. research that streaming platforms like Netflix

encourage consumers to watch more content as bingeing shows, ultimately leading to escapism which creates a loop inside the platform. (Jones et al., 2018, 506) Escapism in contemporary media environment is directly related to new media and the digitalization of the culture since, new technologies such as smartphones and social media phenomenon provide individuals around the world liberty to be alienated on demand.

Another similar study upon escapism and binge-watching was made by Pittman and Sheehan (2015) researching the audience of Netflix and motivations for binge-watching. According to the results of the research, majority of the users stated that they are binge-watching in order to “pass time”, “relaxation”, or for “engagement”. In other words, users are binge-watching to fill up their free time and while doing so: They feel more engaged with the characters and the narrative of the content. That means, while consuming huge amounts of video successively, users create a new reality that is engaged with the content itself. Pittman and Sheehan state that this relation between binge-watching and engagement is also known by streaming platforms like Netflix as well, and these companies try to encourage binge-watching by releasing all of the episodes of popular series inside their catalogues of original programming (Pittman & Sheehan, 2015). And by increasing the binge-watching behavior, these platforms also facilitate escapism phenomenon along with their content. Escapism in the end, is a direct result of the digital media of today and affect the audience directly by causing behavioral changes in their media consumption habits.

As stated earlier in the chapter, media as we know today has been changing for a long time and evolved into the form of what we call new media today. Principles of this new media environment is different from the traditional media system and therefore new approaches are needed in order to study it and its effects on agents like content and audience. Besides, this new media evolution has been taken place for a long time and the starting point cannot be clearly determined, just like the definition of new media elements have changed over time such as CDs to DVDs and now software based files for example.

Modern society as we know consists of several components like culture, masses, communication and the media which is the plural form of medium. According to Krotz, mediatization is a process of evolvement of modernity and the modern society (Krotz & Hepp, 2008). Mediatization concept basically focuses on the changes in communication media and its reflections of it over the society and its components like institutions. Changes that occur in the society and institutions by the media and communication is essentially called mediatization. By focusing on the changes in society, mediatization meta-process tries to find the characteristics of the modernity (Driessens, Bolin, Hepp & Hjarvard, 2017). Mediatization term has been used in media studies since the early 20th Century. One of the first users of the term was Manheim (1933), who suggested mediatization to define the changes of society and its relations by the effects mass media in the modernity (Krotz & Hepp, 2014). In other words, mediatization term is directly linked to society and culture while observing the media's effect over time.

This definition of mediatization continued to be used inside media studies in order to observe the effects of media based communication over time. That is the case for the new media as well. In order to understand new media, changes of it over the society, culture or audience are need to be analyzed within its own contexts:

Crucially, this means acknowledgement of the mutual interdependence of media and societies, appreciation of the contextual differences of how mediatization can potentially be realized—in terms of geography and social fields, for example—and attention not only for these outcomes of change but also for its dynamics and underlying causes and how these can be interacting (Driessens et al. 2017, 7).

This means, mediatization not only observes the changes in the society; but handles all of its components' relations and reasons of the effects to each other. Hepp (2012) identifies mediatization as the “molding force” of the media, which affects and creates audience, content, culture and communication. Observing the changes for example of new media upon audience, similarly requires presenting the changes inside the medium in question, the content and the culture evolving around the environment; since every component is related to each other. That perspective of mediatization will be used inside this research as well, in order to accurately show the changes in the audience of television.

Globalization is another meta-process in order to define the characteristics of new media. The digital based technological world which we are living today is a transnational place that is connected with the Internet and modern infrastructures. Globalization term originates from economics, in order to define the connected form of modern markets; but also, similar to other meta-

processes it is connected to different areas and disciplines such as politics, culture, society, technology, and media (Singh, Bartikowski, Dwivedi & Williams, 2009). These components that globalization deal with are called global megatrends; then again, they form up a complex structure which could affect one another. “To leverage insights from trend analysis, it is also important to not fixate on one trend over another. Global megatrends, as mentioned before, are not mutually exclusive” (Singh et al., 2009, 15). Again, globalization or its outcomes, global trends, are connected to each other inside the modern world.

In the context of media, globalization works with other meta-processes like mediatization by affecting the culture and society. Since the beginning of global communication, globalization started to take place in the media ecosystem by overcoming barriers of geography. By transcultural communication, globalization in media has created the term “global public sphere”: A media environment that connects each end of the communication together (Krotz & Hepp, 2008). With the Internet and emergence of social media, globalization has reached to a pinnacle and created a new wave of globalization movement inside the media. As stated, inside globalization phenomenon, different disciplines are connected with each other and affect one another. In this way, media and economics in global scale have created new markets and new business opportunities. The Internet is the most important component of global communication, which connect individuals all around the world by social networking sites, blogs and peer-to-peer communication systems (Singh et al. 2009). By proliferation of the Internet

and advancements in technology such as smartphones, connected individuals around the world have increased significantly. Reciprocally, globalization in media and economics have affected each other and new business opportunities have born from this association. Online entertainment has become a dominant element inside media environment by streaming platforms like Netflix and YouTube, which again structured as global products or mediums in the first place (Cunningham & Craig, 2016). With globalization, companies could reach vast numbers of new customers and consumers could reach different products: In the case of Netflix, as a huge library of entertainment content in a global scale. Globalization of entertainment has created a new form of global media system which Cunningham & Craig (2016) refer as “communitainment”. This term reflects the significance of globalism inside media by bringing two important components of media, communication and entertainment; to a global audience, for example in the case of Netflix.

Another meta-process to be discussed in this chapter with new media is eventization. Eventization is a relatively new subject in the media studies compared to mediatization and globalization. Eventization phenomenon also takes place along with mediatization and globalization inside the digitalized world of 21st century. Eventization term basically, focuses on events while mediatizing specific topics or subjects. Started as a marketing strategy, eventization focuses on events in order to alter the experience of consumers; also, to transform the value of the product in question (Pfadenhauer, 2010). By presenting a product or a subject around an event, producers could reach

wider audiences or consumers. This strategy is being used in many areas and disciplines to gather more people and signify the meaning of the product. For instance, the usage of World Youth Day as a propaganda event for the German Catholic Church in 2005, in order to reach more young people could be an example of a different execution of eventization (Pfadenhauer, 2010). By organizing a religious publicity campaign around an existent event, Catholic Church gathered a significant attendance compared to earlier campaigns and also had gained publicity by the media coverage globally.

Similarly, Maasø (2016) researched the impact of eventization over the Norway music industry by looking at Norwegian music festivals. According to the findings, streaming of the artists who participated the in music festival in question grew by 40% on streaming platforms such as Tidal and Spotify. That is to say, in parallel with the increase in streams; it also increased the attention to the local festival by the hype on the streaming platforms (Maasø, 2016). This eventization example signifies the importance of events in the new media age where event, content and audience gather around in order to create a unique coalescence; which also increases the publicity in media channels, while at the same time increasing the actual events' attendance and attention. Eventization strategy works in the mediatized and global world which is driven by the Internet and social media. With the evolution in the media ecosystem, new strategies and approaches have been created to signify the message that needs to be conveyed. By bringing media and events together, one can gather more attention and audience with the help of global power of the Internet compared to traditional media. Eventization

strategy is being used by streaming services like Netflix to gather attention and consumers for some time being, which will be presented accordingly in following chapters while analyzing the success of Netflix and streaming platform; with the help of mediatization and globalization.

2.2 Creation of the Internet of Things

The Internet and computers are two concepts which are taken for granted in the 21st Century. These two phenomena are parts of human-beings' lives via hardware and software in various areas diverging from household goods to cars, in labor as e-mails; in leisure as music and video streaming platforms. In this day and age, millions of applications are being downloaded all around the world, individuals are connecting with each other on the social media, sharing content, having video calls and consuming content on platforms like YouTube or Spotify constantly. These actions have been enabled by the Internet and of course via computers, or tablets and smartphones. The Internet's evolution into a network housing these diversified functions such as being platforms of video streaming centers like Netflix has happened through certain steps, eventually evolved into what is called Web 2.0. This chapter will be analyzing stepping stones of the evolution or creation of the Internet, eventually becoming what we call digital media and the influence of the network over the media ecosystem in general.

Before the analysis of the Internet, a brief explanation about the computers would be beneficial, since the Internet needs computers to operate.

Computer, in very simple words, means both “one that computes” and “a programmable usually electronic device that can store, retrieve, and process data” (Merriam-Webster, 2018). That is the term which is familiar to the generation who has brought up with digital media and technology. But in simple terms, computer comes from the computability concept directly related to mathematics and equations. Personal computers being used today or the origin of the computers are actually coming from Alan Turing’s vision of the “computing machine”, which is known as the “Turing Machine” concept. According to Turing’s abstract concept, problems or questions could be solved by mathematical equations based on logic (Petzold, 2008). By entering inputs of equations that are introduced to the computer, the system could produce specific outcomes by mathematical algorithms (Petzold, 2008). These results could be either 1 or 0 based on the equations, following the basic principles of mathematical logic. Concisely, Turing’s vision of a “computer” is based on simple mathematics, combined with algorithms. Turing’s computer model is an abstract form of a powerful calculator, which does not specifically limit the computer to be a machine: As a consequence, it could be a human as well, evaluating the algorithms (Petzold, 2008, 325). Modern computers are far more complicated than simple mathematical calculators consisting of transistors, logic boards and relays; yet the concept of a computer has not changed over time (Petzold, 2008, 325). Computer is a machine or a mediator which calculate outcomes based on inputs via algorithms, just like the Turing Machine itself.

The Internet as we know today originates from the rudimentary computers mostly used in government agencies or in research laboratories around the world. In 1960s, United States Department of Defense has created a network which consist of just several connected computers called ARPANET (Advance Research Projects Agency Network), researchers were able to send data from one computer to another (Haigh, Russell & Dutton, 2015). This network between computers gradually connected to more points over the United States, mostly to other research laboratories around the country. Transferring data from one computing device to another at 1970s was considered a substantial achievement and engineers tried to define this emerging concept. Convergence between the words “communication” and “tele” (originally télé), telecommunication concept was born basically, means communication over distances (Haigh et al., 2015, 144). This new communication medium or form was the result of computing machines and fundamentally, by algorithms. Later on, researchers and engineers have worked on the ARPANET system and came up with a new network based on TCP/IP protocol in the 1980s (Haigh et al., 2015, 144). Transmission Control Protocol (later on the term Internet Protocol added to this definition) compendiously provides connection between number of local networks, acting as a binder agent through some encryption codes (Haigh et al., 2015). This encryption codes are called packet-switching, that confines the communication or data transfer to only receiver and sender, creating a closed system for transferring data. Even though, more local systems could connect to each other by this protocol; it limited communication into data

transfers only. Thus, there were still many small networks around the world which had been using different protocols and packet-switching methods. In that sense, although communication over distances was achieved, it was yet limited to data transfers and not global indeed. As stated, many of these networks were to connect government facilities and research laboratories, out of reach from the public. For complete convergence of terms tele and communication, this network needed to be available to more people and local systems and more importantly, needed to be in a unified form. Needless to say, computing devices were not widespread and could be operated by government facilities and research laboratories due to the fact that they were huge in size and quite expensive for the masses.

Computers at that time were running on operating systems far complicated for the masses and were used for research purposes rather than personal usage. Yet, as the technology advanced, computer manufacturers have decreased the sizes of the devices and made them more compact.

Companies like IBM have identified the gap in the public side of the industry and started creating the first personal computers. In the 1980s, companies like IBM and Apple were offering devices for personal use with lower costs compared to previous decade since the components costs for the computers were decreasing with mass production (Angel & Engstrom, 1995, 81). With the advancements in the computer technology both software and hardware, personal computing has become a huge market. With affordable prices, more and more people purchased computers for their workplaces or homes; especially for work related purposes.

In parallel with the proliferation and advancements in the personal computing, the scattered networks around the world started unifying and thus creating the Internet as we now know. Similarly, the Internet or telecommunication technology could be applied widespread in order to create a new economic market. Janet Abbate, author of the book *Inventing the Internet*, states that the Internet was formed as a result of: “privatization of the Internet’s core infrastructure during its transition from a government-run academic network to a commercially operated one” (Haigh et al., 2015, 148). By opening the protocols to public usage and unification of different research networks all around the world, the Internet has formed connecting the masses all around the world. Again, the Internet’s formation is directly related to computing, especially personal computing since the computing industry has increased significantly with the public access.

Telecommunication convergence concept is made possible by the proliferation of personal computing. By telecommunication, a new culture has started to form since millions of people could communicate and send data to each other by the Internet all around the world: “...telecommunications technologies, political economies, and user cultures shaped the new, hybrid cultures that emerged with the convergence between two previously distinct sectors and practices—communications and computing—around digital processing and transmission technologies between the 1970s and the 1990s” (Haigh et al., 2015, 153). By emergence of different sectors, subjects and technologies, unprecedented markets and areas could be formed. In this case, by convergence of the government-operated networks and proliferation

of personal computing; the Internet as we now today have been formed along with the Internet culture. As the technology advanced in the computing industry, more and more individuals around the world started using computers and connect themselves to the global world by the Internet.

Public's integration to computing and the Internet has a significant importance in the history of technology and also media. By the widespread public access, the Internet has started to change and evolve constantly, forming the familiar structure current state. Public access has transformed the initial state of the Internet from a simple bridge between local computers into a platform which houses various platforms inside. The digital media revolution is directly related to the Internet as it has become a medium for content as well as a communication tool. Telecommunication concept then, is made possible by the effect of global Internet access between millions of people. With the widespread access of the masses, the Internet has become the Web 2.0, which has a participatory structure and also housing the social media environment.

As a result of this transformation, the Internet has become a phenomenon what could be called "the Internet of Things". Haigh et al. (2015, 144) explains the Internet of Things as a network that connects various technologies like "televisions, telephones, computers, refrigerators, airplanes, front doors, and cars" and also being used for business operations from different sectors like "bookstores, cable television providers, electronic retailers, newspapers, travel agents, taxi companies, and record labels". As

could be seen from the diversified examples which people use the Internet of today, it is not a mere network connecting people or provide communication. The Internet has become a subsidiary tool for business sectors, creating new capitalistic opportunities in today's world. The Internet is more than an infrastructure; but also, a medium for the global economy. Business areas before the Internet have used the network in order to increase their profit and reach more customers. One of the best examples for this could be the case of Netflix. Netflix was founded as a DVD rental service operating over the Internet and evolved into a video-streaming platform over the last decade. In a way, Netflix also affected the Internet's transformation; even though it was an operation platform inside it:

The greatest challenge to historians is that as our understanding of the Internet broadens, so too does the range of earlier technologies and practices that lead directly to its development. For example, in explaining the rise of Netflix, the video-streaming and DVD rental service, which accounts for something like a quarter of North American Internet traffic today and so is inescapably a major part of the Internet as understood in 2014, one would not get very far by examining the history of TCP/IP and its gradual spread over broader networks and faster connections (Haigh et al., 2015, 149).

As could be seen, the Internet today – or “the Internet of Things” is in a constant transformation state: By the users and the platforms inside the network which could affect whole structure of the network itself. The Internet of today, has been mediating human-beings' lives and re-structuring the media ecosystem incessantly.

As stated, the Internet in the form of the Internet of Things dominate contemporary lives of human beings both in leisure and labor. Most of the business branches use the Internet for their operation and people spending their free time surfing, streaming content or shopping over the web network.

It is obvious that the Internet dominates our mediated lives in this decade. Communication nowadays depend on the Internet platforms such as social media, becoming a form of a computer-mediated communication or mediated communication. That mediation could be seen in other areas such as business, education and free-time activities as stated. In a way, people are living in a mediated world, which has shaped by the Internet and its platforms.

The Internet has been constantly changing the media environment since the 1990s and shaping the culture and society around it as well. The Internet has speeded up the process of digital media transition and also social media; which both control and shape everyday life of today. With emergence of smartphones, the rate of change has speeded up significantly. Currently, an individual does not need a personal computer to access the Internet; because smartphones are altered forms of computers which provide access to the web with mobile connections. Digital media that also houses streaming platforms like Netflix are now directly connected to this notion of being mobile. Peil and Röser (2014) have conducted a research on public sphere and free time activities in contemporary media environment and state that today the place of home is mediatized with smartphones and tablets, which provide a mediated communication model; altering the sphere of home compared to the traditional sense (Krotz & Hepp, 2014). The reason behind this change in the notion or entity of home according to Peil and Röser are digitization, mobilization and mediatization; which are all constituents or products of the Internet. Digitization of media and our lives have speeded up

by the Internet increasingly, also creating a new culture around this emerging media ecosystem.

Convergence notion was stated in the subjects of the Internet and computers where these two technologies have affected each other in their way of transformation, which is the case for the media as well. The Internet and mass media have been affecting one another, forming concepts like digital and social media. Convergence inside the media is another important topic that creates and shapes the contemporary popular culture around it. In the topic of digital media, scholars tend to use the terms like “old” or “traditional” media along with the “new” media. But what actually makes up digital media? Jenkins explains the concept by his convergence theory as: “Each old medium was forced to coexist with the emerging media. That’s why convergence seems more plausible as a way of understanding the past several decades of media change than the old digital revolution paradigm had. Old media are not being displaced. Rather, their functions and status are shifted by the introduction of new technologies” (2006, 14). According to this notion, new media is not an independent concept on its own, but co-exist of traditional media elements and characteristics. Convergence theory states that existing concepts and media elements come together with new technologies to form a “new” one where by not losing their characteristics radically. To illustrate this point, newspapers are considered to be traditional media channels and have been situated inside the culture and society for centuries. With the Internet and proliferation of it, newspaper medium is also available in digital form as online medium but, online newspapers are not

completely new media for information. The message and purpose of the newspapers have stayed the same, but by changing its space into digital rather than printed paper. This is the notion of convergence theory and that could be applied to more places such as in the case of Netflix, where streaming over the Internet is a new way of distribution and access yet; the content's message and purpose have remained unchanged.

In a similar way, Bolter and Grusin (1999) defines new or digital media with remediation theory. According to it, traditional media elements could be present inside new media elements without losing their message, just the medium changes. Remediation concept exists in the traditional media ecosystem as well. Yet, the digitalization has speeded up the process of remediation of traditional media products inside the new one (Bolter & Grusin, 1999, 5). From the essence of the theory, it also could be applied to Netflix case where television content and movies have existed in the traditional media course; and now these contents remediate inside new media as digital forms without losing their message as media products. Remediation phenomenon occurs in the contemporary media environment abundantly in areas like social media, streaming services with their traditional forms such as photographs, paintings or movies. Appearance of remediated content on contemporary media is also affected by culture and society, and also affects and shapes the culture around it.

In the traditional media discourse, mass media is always interdependent with culture and society. That is the case for digital media as well, because the change in medium does not affect the characteristics and the message of the content in question. Digitalization of media and convergence of it with the Internet have changed many areas like how content is distributed, consumed or evaluated by the public or audience; yet being digital have not changed its message which is the most important aspect in terms of media analysis.

2.3 Capitalism, Labor, Leisure and Roots of the Modern Society

Capitalism phenomenon has been the driving force of the modern society of 21st Century and, some of the terms describe it like globalization, technology, urbanization and industrialization. The phenomenon itself derives from an economic principle yet, it has affected areas such as sociology, philosophy, technology and media throughout centuries. Originally, capitalistic economy model originates to the 16th Century as the free market economy model, where the means of production are privatized for the operation profit, and a society that organized around class differences according to capital distribution which is rootedly related to power (Jenks, 1998, 383). This idea of privatization in capitalist system is based on liberalism ideas, and according to Durkheim's perspective, it derives from the contrast of rationalist philosophers who have influenced the political atmosphere of the 18th Century, especially with the French Revolution in 1789; addition to

conservative philosophers (Giddens, 1976, 710). Liberalism, in a sense, is based on liberty and equality in all areas of the social and political spheres; including free markets.

These changes inside the political and philosophical atmosphere in the Western culture has formed a neoteric discipline, which unified all social interaction inside science as sociology. According to Durkheim, social atmosphere of Europe has been affected by the two revolutions of the time, being the Industrial Revolution and the 1789 French Revolution; which are also the factors causing the social changes in Europe in the 18th Century (Giddens, 1976, 705). In a way; social, political and economic phenomena have interoperated to form a new world order which will start new phenomena like colonialization, globalization and urbanization. The cause and effect relationships between these notions are interconnected and could not be separated from each other while making an analysis.

The effects of capitalism on the society are analyzed differently by philosophers and sociologists. Durkheim for instance, argued that this new economic model has brought individualism which is the most suitable notion for ultimate freedom; direct opposition to utilitarian approach, where it argues the ultimate good should be for the society and not for the individual directly (Giddens, 1976, 708). Individualism notion is a result and a collaborative effect of liberalism movement, and also connected to capitalism. Compared to conservative idea of utilitarianism, individualism seeks the ultimate benefit of the individual not the entire society. Similarly, liberal economic model

suggested just that in terms of politics and economy; where the modes of production should not under control of a certain group which have the power in the society like the state itself. In a similar way, Marx objected to the notion of utilitarianism, stating that man should be liberated in society in all areas such as in terms of production (Giddens, 1976, 713-714). Marx defended the idea of individualism in society, yet contradicted Durkheim arguing in a capitalist society, human beings become alienated and unfree; bound by the limitations of the society and class differences (Giddens, 1976). Alienation is a different interpretation in terms of freedom compared to individualism however, both of these notions state that with liberalism and especially industrialization; humans become more individualistic in the society compared to feudalistic times.

With liberal economic model's proliferation and adaptation in Europe, capitalistic economies have started to appear in the 18th Century as stated. Capitalistic model creates and operates along with other notions such as urbanization, industrialization and class structures (Giddens, 1976, 719). As the economic operations grow, differences between class structures become more visible, urbanism rate increases as well, as Marxist point of view suggests; resulting as the increase of alienation inside the society. Similarly, Marxist perspective states that societies are active notions which adapt to the external factors like political, economic changes over time; making every society different from each other according to the economic and political environment of that time (Giddens, 1976, 720). That again shows the

connection of economy, politics and society of a capitalist system; where every factor affects the structure coordinately.

Another sociological effect of capitalism and liberalism could be observed in the atmosphere of Europe, where starting from the 19th Century, industrialization and political transformation led to the formation of a global community; making interconnected markets (Giddens, 1976, 721). This is the birth of globalization phenomenon as we know today, bringing industrialized countries closer to each other; easing their way through colonization and basically separating the World into two parts as rich and poor, where industrial power directly affects the economy (Giddens, 1976). Adaptation to the capitalistic economy model has influenced the globalization phenomenon, which also affected the society ultimately. Contemporary markets and countries are connected with each other by the principals of globalism by politics and economy, and as a result, societies around the world are connected with these notions respectively.

Another aspect of capitalism inside the sociological change has occurred as the division of labor. This phenomenon is studied extensively in the Frankfurt School movement in terms of various disciplines such as economics, politics, philosophy and sociology. Walter Benjamin, on the other hand, not focused directly on the structure of the labor division, but combined the subject with the notion of leisure. With the increase in urbanization and completion of industrialization, European societies have faced a change in the labor division compared to feudal times, where majority of the people lived in

villages as agrarian workers. With the Industrial Revolution, cities have started to form, where people started to work as workers in mass production systems, which is stated as the Division of Labor by Durkheim (Giddens, 1976). Benjamin also starts his ideas from this perspective but by analyzing the early 20th Century, where the system's structure is solidified as the urbanization and industrialization rate increased. This division of labor however, also affected the free-time of the society, along with the changes inside the society. Working hours of the people have decreased since the agrarian era with the help of industrial machinery (Rojek, 1997). That has resulted as an increase in leisure time of workers eventually. Benjamin attributes this sociological change to the efficient infrastructures of cities, improved transport structures, increases in education level and emergence of mass media channels as these factors increase the mobility of the society and also, increases the efficiency in work; resulting as a decrease in the work and increase in the leisure life (Rojek, 1997, 167). In parallel with that, this urban society needed its own leisure culture and leisure space. The leisure space in the urban societies are directly related to mass communication, technological advancement and ultimately to popular culture according to Benjamin (Rojek, 1997, 170). Also, he points out that the origins of the popular culture of today's world originates from the beginning of the 20th Century with mass communication and mass media developments, as the needed gap to fill in the increasing leisure time (Rojek, 1997, 156). According to Benjamin, popular culture and leisure are connected economically, creating an emerging capitalistic notion which is the consumer culture system (Rojek, 1997). Yet, Benjamin does not simply state that leisure and popular

culture exist because of pure economic interests; but these notions have other reasons of existence, as results of Western ideology and modern society structure (Rojek, 1997). Theoreticians like Adorno, Horkheimer, Marcuse and Kracauer also signify the importance of technological advancement and popular culture on leisure by focusing on cinema, music, dance and travel in the subject of urban leisure activities; as a way of distraction of the masses (Rojek, 1997, 170). Benjamin's reference to consumer culture in the subject of capitalism is significant, since it analyzes the importance of leisure and entertainment in a capitalist society; which also could be applied to the modern society of the 21st Century.

Benjamin's perspective of leisure, labor and urban life signifies the importance of connectedness of the metropolitan world. Economic factors, politics, global markets are operating together to create the urban life; ultimately the popular culture. The significance of capitalist effect on the culture, according to Benjamin, is undeniable, yet culture of modernity does not simply relate to economics only. Benjamin uses "Urban Dreamworlds" term to analyze the contemporary urban culture, where mass media, city infrastructure, social, political and economic contexts work together in order to create this unique capitalist society (Vandertop, 2016). In this theoretical sense colonization, imperialism and globalization phenomena have effects on building of these urban metropolises as a part of the Western ideology; concrete worlds of illusions that signifies the capitalistic power (Vandertop, 2016). The inclusion of popular culture inside this argument is significant since the theory relates economics and capitalism with leisure life. This urban

culture and leisure world have been fed by the media ecosystem of that time, eventually creating the popular culture and its by product, consumer culture relies on consuming:

Through film, music and advertising a phantasmagoria of images and possibilities become projected into ordinary life experience, so that walking down a city street with advertising hoardings or watching a movie in the evening after work provide the symbolic materials and disturbing perspectives to challenge 'normality'. (Rojek, 1997, 168). This separation and importance of leisure life have remained unchanged

over the last century; in a way, the market for entertainment has increased significantly with technological changes, new media and the Internet.

However, the effect of capitalism on media and the society have remained the same; a system which is interconnected with each other, with its own culture that evolves with the sociological, technological and economical changes. Similar case could be stated about the Video-on-Demand services of today that originates from capitalistic motivations, creating its own popular culture and affecting the society accordingly inside the contemporary leisure world of the 21 Century.

2.4 Television as Technology, Evolution and History of the Medium

Invention of the television has a great effect on the leisure notion where it has created its own audience and altered the media culture since the 1950s.

Television is the medium of entertainment, news, sports events and advertising; which makes the invention closely connected to capitalism.

Television has evolved with technological developments throughout the last century and in a way, television was the new media of the early 20th century

and should be evaluated as a technology. With many steps, television has evolved into a non-linear, consumer-driven structure with the integration of the Internet and digital characteristics. Television of today consists of two very different categories one being the cable or satellite television resembles the form of traditional form and the other is Video-on-Demand services where the audience could select what they like to watch anytime and anywhere with Internet connection. In order to understand the Video-on-Demand services, the changes inside the television technology must be analyzed with historical steps.

Television as a technology does not appear as a single event, but it is the convergence of other existing technologies of the 19th and 20th Century such as electricity, telegraphy, photography, motion pictures and radio (Williams, 1974, 14-15). Especially the second half of the 19th Century has a great importance in the way of invention of the television as we know today, where the essence of the television was to transfer images to remote distances with the principles of telegraphy. Coming to the television invention directly, some scientists have focused on the idea of transferring images through the electricity. One of the first attempts in this area was made by Irish scientist Joseph May in 1873, where he discovered the photoelectric effect using selenium bars; which meant that by the help of electricity light intensity could be transmitted (Peters, 2000, 3). Following that, George Carey in 1875 created a panel with bulbs and photoelectric cells jointly in Boston; with a result of an image appearing on the panel with the help of electricity (Peters, 2000). Yet, the system had some flaws as the panel needed too much wiring

in order to reflect a proper image. In 1881, Constantin Senlerq improved Carey's idea by combining the cells with lamps and two rotating switches in order to eliminate the necessity of the excessive wiring (Peters, 2000, 4). These were significant achievements in technology in the way of transmitting images to distant places, yet the panels used in those experiments were still complicated with many elements. Paul Nipkow in 1884 tried to overcome this problem by sending a single beam of light to a rotating disc with small holes in it rather than using panels and achieved to transmit an image continuously for a small period of time (Peters, 2000, 4). With that event, the system has simplified once more but was not suitable for larger scales and longer periods of time.

Following these incidents, a breakthrough in physics has opened a new door to scientists for further researches. Study of the electron particle has become the focus in many physics experiments along with in other inventions. Karl Ferdinand Braun invented the cathode ray tube in 1897, a system with two electromagnets and a fluorescent screen where with the help of electronic beam, movement appeared on the screen (Peters, 2000, 5). Braun's invention was modified by various scientists over the years for better image displays. One of them being the Campell Swinton's system consisted of two cathode ray tubes that consists of send and receive ends; that meant the light intensity of the image could be adjusted with the intensity of the electrons have sent into the system (Peters, 2000, 5). In those cathode ray systems, selenium cells were used in order to change the light intensity but later on these were replaced with potassium cells and triodes respectively;

which were both faster in terms of changing the light intensity (Peters, 2000, 7). Science and technology have worked collaboratively with areas such as physics and chemistry in order to achieve the goal of sending images to distant places.

One of the most important names in the television history is the Scottish engineer John Logie Baird. In 1925, Baird invented a system that could show white letters on a black background with electrical signals (Peters, 2000, 7). The image was produced through two discs located on the same shaft and by that, the images do not appear in real time but with some delay (Peters, 2000). Therefore, this system cannot be considered as a television; it transmitted images to a remote place but not in real time. However, in 1926 Baird achieved to show a real scene of a person with 30 lines and 5 frames per second; this attempt is considered as the first live television broadcast in the history. Baird named this invention as “televisor” respectively (Peters, 2000, 10). The name television was not used for a long time to name the technology which could transmit images. One of the first names to describe the device were “télétroscope” or “electrical telescope”. Following that, the word “Fernsehen” was proposed by German scientists, which means seeing the far in German; same meaning we use today. Later on, French word television was used by Constantin Perskyi, which caught on in multiple languages to define the device; also means seeing the far just like Fernsehen (Peters, 2000, 6).

After the successful attempt of Baird in transmitting images to other sources, many scientists applied the same principle with their own television designs. In parallel with that, television broadcasting has started as well in various locations. With the efforts to broadcast the 1936 Olympics in Berlin, German scientists have initiated a television service in the capital in March 1935 (Peters, 2000, 11). Viewing centers in Berlin and Leipzig have been formed called “Fernsehstuben” for people to watch Olympics in real time (Peters, 2000, 13). 1936 Olympics were the first biggest event to be televised for the public audience in a large scale. As the television technology spread around the world, new countries have initiated broadcasting programs while trying to improve the technology as well.

Most of the early television broadcasts were made in black and white since the technology for transmission of color images were not available. In 1928, Baird achieved to perform the first color demonstration in television technology but it was not suitable for larger scales (Peters, 2000). The experiments and researches in color television have continued with the works of scientists like H.E. Ives, Georges Valensi and Peter Goldmark; and Baird’s color filters were improved for large scale usage (Peters, 2000, 17). These color filters consisted of three colors, green, blue and red; which could be displayed independently on the screen. Following these attempts, National Television Systems Committee (NTSC) was established to set standards for the television industry in 1953 (Peters, 2000, 17-18). Committee has formed a color television system which the hue, saturation and brightness of the image could be adjusted by the viewer; and the NTSC

system was launched in 1954 in United States (Peters, 2000, 18). Color television technology was referred as NTSC globally, until the formation of Phase Alternation by Line (PAL) system in 1963 by German engineer Walter Bruch (Peters, 2000, 18). The working principles of NTSC and PAL systems were different from each other yet the color image formation was the same in both technologies. NTSC and PAL systems have become available in European countries such as Germany and England with color television broadcasting channels in 1967 (Peters, 2000, 18). Color television broadcasting structure has been formed this way and with time, more and more countries have started to adopt the technology inside their own broadcasting systems.

Apart from the color television formation, another technological advancement affected the television medium and broadcasting is in the High Definition subject. The 1964 Tokyo Olympics were broadcasted in High Definition quality by the Japanese broadcasting agency, making the first ever High Definition broadcasting in a large scale (Bayus, 1993, 6). Following this incident, investments have been made in High Definition television systems and broadcasting globally and HDTVs have spread around the world from the 1980s. European countries adopted the Japanese HDTV technology, with important historical events like 1990 Italy World Cup and 1992 Barcelona Olympics were both broadcasted in high definition quality in selected television channels (Bayus, 1993, 7). United States initiated its own High Definition broadcasting service in 1988, with a government initiative; and this program has become prevalent in the following years (Bayus, 1993,

7.). High Definition broadcasting and HDTV technology is the global standard in the television industry, and improvement in the quality has been made since with full 1080p and 4K systems.

The television technology has gone through many changes after Baird's first attempt in terms of broadcasting and in the form of technology.

Improvements in the form and picture quality of television also continues as of today. From the black and white television systems, color television has become the standard. Flat panel displays have been developed since the 1950s and improvements have been made in those television platforms (Magoun, 2007, 145). Invention of Liquid Crystal Displays by Richard Williams in 1962 has changed the television technology with improved display quality, increased frames per second, durability and contrast (Magoun, 2007, 146-148). Around the same time period, a different displaying technology has been developed as well being the plasma displays for televisions (Magoun, 2007, 149). Plasma and LCD displays were different from each other by working principles and formations yet, both of these technologies have been improved over the years and become widespread around the world until the 2000s (Magoun, 2007). Following the plasma and LCD television technologies, Light-Emitting Diode (LED) structures has been the standard for television medium; which then evolved into Organic-LED (OLED) displays starting from the 2010s. OLED technology provided cheaper, flexible and more versatile displays compared to previous standards and has improved the viewing experience of the audience (Magoun, 2007, 179). Over the last two decades, television sets have

become thinner, larger and cheaper with the technological advancements and, due to increased sales and production in the global scale.

With the integration of the Internet, television sets have become Smart TVs with the ability to access all the data available in the web. With that, platforms such as Netflix, Hulu or Amazon Prime could be accessed by the users inside their living rooms; giving the audience the opportunity to watch thousands of hours of content whenever they like. The linearity of the television system has come to an end with the integration of the Internet, and the television has become a technology again or a mediator in the media ecosystem; rather than the medium itself. The Internet connection inside televisions of today provide an alternative to the linear broadcasting systems, changing the perception of television radically. Nowadays, Video-on-Demand services are gathering more subscribers compared to cable or satellite television user numbers increasingly; which again signifies the important change in the television medium in the digital age.

Changes in the media based communication are ultimately part of the mediatization process that affects the society and popular culture of the era. The changes in the television medium happened through some stages as well. Firstly, by Fernsehen tubes, the society has met with the television technology in public spaces, then television has become a part of the living room of families around the world, becoming a private experience. With the proliferation of Pay-Per-View technologies, individuals have started to cancel cable television plans and gathered in public places such as pubs in order to

watch televised events such as football matches, making the television experience public again. The convergence of the Internet and television on the following years however, has provided the medium with new capabilities where the linearity of the broadcasting has been broken. Moreover, action of watching television from that point on has not been bound to spaces, where an individual could watch a television broadcast from the Internet both in public with other people, and privately in his/her home. Through these changes, the experience of watching television has changed significantly, giving the audience more control and options while watching content from the Internet. In the Video-on-Demand era, these changes have continued for the advantage of the audience as well, where with streaming platforms; users could also have the liberty to choose what content to watch, whenever they like to watch. That is an extension of the broken linearity, where with streaming technology, audience have liberated from the restrictions of the traditional television technology. In addition, with the Video-on-Demand era, both movies and television content have been remediated inside platforms such as Netflix; making an inclusionary experience for all entertainment content in video form.

Eventization process is a part of the changes happening inside television as well. Where by “Fernsehenstuben”, events such as Berlin Olympics are televised for the audience publicly, and the entrance of television to the living rooms, the experience has changed again, becoming an entertainment experience for the whole family. When people around the world have started to gather in public places such as pubs again for watching televised events,

the experience has become collective once more. With the integration of the Internet and television, television watching experience has grown into both private and public states, by leaving the choice for the audience. Watching television is no longer had to be shaped around specific events with the Internet since the watcher could choose the content and time. In the Video-on-Demand era, audience has given the full liberty as stated and also, experience of television watching has altered once more by the emergence of social media channels; where platforms like Netflix has been trying to integrate social media platforms with their content for promotions, ultimately to reach more subscribers around the world. As it may be seen, the changes inside the television medium have significant effects on the audience and society, affecting their experiences over time.

2.5 Platform Capitalism & The Stack

Capitalism continues shaping the world of today both in business and entertainment industries, where in many cases these two phenomena cannot be separated particularly with the digital media revolution. Computers and smartphones are used by the individuals around the World in order to access world-related e-mails along with accessing social media, communication over application or to stream music and video content over the Internet. With the Internet, proliferation of smartphones and advances in digital media ecosystem like social media; a new world has born for capitalistic business model to exploit globally. Today, majority of the global conglomerates

dominate the market by integrating their operation to digital media and the Internet. Entities called platforms are ruling the business market in various areas such as communication, infrastructure, service sector, consumer product industry and so on. The increasing share of platforms in the global economy is a result of the convergence of classical capitalist business model with the capabilities of digital media. Characteristics and types of these platforms will be discussed in this part with the focus on the product/cloud services category, which Video-on-Demand services like Netflix operate under.

Platforms in general, new business types that bring up different groups of industries and systems together. Srnicek (2016) explains platforms as digital infrastructures that enable multiple groups like consumers and providers and that use networking capabilities to operate. Since the 1990s, majority of the business leaders have seen the potential of the Internet and its capabilities despite the huge crises of dot-com; where the early digital industry crashed (Srnicek, 2016). Platforms capitalism started to appear around that time and matured after the 2008 economic crisis around the world, as an alternative business model (Srnicek, 2016). Nowadays, most of the biggest companies in the world are platforms of that sort like Facebook and Google as communication, search engine or advertisement platforms; Uber as a service sector in transport industry; Amazon for consumer products, cloud services and Siemens for technology and infrastructure for consumer goods (Srnicek, 2017, 254). Srnicek roughly categorizes capitalism platforms as advertising, cloud, industrial, product and lean platforms where advertising platforms like

Google integrate advertising with search engines inside the Internet, cloud platforms like Amazon Web Services where they could store consumer data on their service, industrial platforms like Siemens integrate the Internet and its capabilities with conventional industry standards as “Industry 4.0” to reduce expenses, product platforms like Spotify and Netflix provide subscription methods for streaming content, and lean platforms like Uber and AirBnB converge classical service sector with the Internet in order to reach consumers (Srnicek, 2016). Platforms then, are basically infrastructures that aim to connect the consumers and suppliers; along with the product, goods or the service in a same place and eliminate other mediators in the process.

The exact ability to exclude other mediators while providing the services increases the platforms’ profits and therefore their success in the global scale. Integration of the Internet services for industrial purposes that level is unique to platform capitalism consequently; this operation is seen as a new business model in the market. Platforms operate in two specific ways to decrease expenses and increase their profits; by either rather building a marketplace from scratch, they establish infrastructures and position themselves directly between users like Google where the company has built a search engine structure from one point, combining it with digital advertising as well (Srnicek, 2016). Conventional advertising industry relies on media channels like newspapers, television or billboards, where Google provide information with simple searches that are integrated with digital advertisements. Another example could be the case of Uber, where the company excludes classical taxi service; use navigation and traffic data over

the Internet, also to connect drivers and customers over the web. Second method is relying on the networking services directly, without combining it with classical industry or service methods like Facebook; where the company is founded as a social media platform, providing communication, information, connectivity and digital advertisements (Srnicek, 2016). Platforms like Facebook directly rely on user interaction and social networking for its operation, as a social media platform; which is an emerging industry and there was no equivalent structure before.

Another characteristic of the platform capitalism is to eliminate all the extra expenses at all cost. The effects of this behavior could be seen in the examples of Uber and AirBnB, where Uber as a company is not responsible for the costs of fuel, insurance or maintenance of the vehicles which are used by the driver and encourages electric or hybrid cars to lower the expenses of the driver in order to decrease the price of the service similarly; AirBnB holds the hosts accountable for costs of cleaning and insurance (Srnicek, 2017, 256). In addition to that, majority of these companies' employees have low wages, with no benefits and often work without insurances or long-term contracts (Srnicek, 2017, 256-257). In a way, platform capitalism model relies on a hyper-exploitation capitalist system; where all that matters is lowering the costs without thinking about the benefit of their employees. This ultimate strategy for lowering the costs as much as possible is referred as "siphon off" by Srnicek in his analysis of the platform capitalism (Srnicek, 2017, 257). Operating with the capabilities of the Internet assists these platforms in this direction as the exclusion of physical expenses like rent, fuel for transport, or

the necessity to hire more employees physically; where they can operate most of their systems over software.

Even though Srnicek categorizes streaming companies like Netflix and Spotify under product platforms, these companies also rely on cloud-based storage for their operation. Srnicek enucleates product platform category by an infrastructure based on on-demand operation, which makes the use of the Internet along with cloud computing systems (Srnicek, 2016). Cloud platforms according to Srnicek based on solely data storage for consumers and other companies without any involvement in other services like Dropbox or Amazon Web Services (Srnicek, 2016). Operation of cloud platforms are on the basis of physical storage rented for information or data stored on the cloud services. Coming to the product platforms, cloud services are only used for the content library storage. Product platforms like Spotify aim to siphon off expenses by offering one-time payments to artists for their work to be included in their cloud database, then offer their database to consumer with a subscription method (Srnicek, 2016). By that, huge music libraries could be formed globally under their system for small payments; and users have the ability to access all database with a friction of the cost of a physical music library. The content is distributed to the consumers via the Internet in other words is streamed by users and could be download for offline access. Same kind of on-demand streaming strategy is also being used by Video-on-Demand services like Netflix, which are started to replace traditional television platform. With monthly subscriptions, Netflix provides content streaming library for its users that consists thousands of television series,

documentaries and movies. These demand services use algorithms in order to recommend content related to their consuming history and behaviors, which is again a new operation system compared to traditional music or video industries. Nowadays, subscription based services like Netflix and Spotify increase their subscribers and revenues annually; even though competitors like Amazon Prime and Apple Music have entered the market. In fact, the market for the streaming services are continuing to grow; making the traditional equivalents of these platforms to lose their share in the global market.

Bratton approaches these new business models in a different way than Srnicek by stating a different model to analyze. Bratton uses the term The Stack, in order to define the whole ecosystem of these platforms that have emerged with the digital media evolution and the Internet. Stacks consists of multi-layered platforms, housing different industries and systems that are interconnected with each other via hardware and software (Bratton, 2015). In other words, Bratton approaches the subject in a wider sense rather than focusing on the platforms which are sub-categories of the Stack notions. Stacks are megastructures with complex mechanisms and include various systems like architecture, politics and economics (Bratton, 2015). Bratton states that stacks are modular systems and these could be operated by the combination of human input as well as algorithms and machine learning; in other words, could advance over time with their sovereign structure (Bratton, 2015, 33). Bratton signifies the importance of machine learning, artificial intelligence and algorithms in his concept of The Stack. Platforms like Netflix

could be considered as Stacks of today with their vast catalogue of content, ability to observe and analyze user behavior in order to recommend content as well as increase the user experience overall. With addition of more content in a regular basis and increase in its subscription numbers, Netflix platform could become a stack of tomorrow inside the media ecosystem; which it has already influenced the industry and the popular culture of today.

2.6 History of Video-on-Demand Platforms

Video-on-Demand services are part of the digital media ecosystem of today and have significant effects over the television and cinema industries, as well as shaping the popular culture around it. Video-on-Demand services in basic terms give the consumer the liberty to choose the content they are to watch, along with time and medium. Users could stream content whenever they like via televisions which are connected to the Internet, computers, gaming consoles, smartphones or tablets. These characteristics make Video-on-Demands services different from the linear-traditional television:

Generally available functions are pausing, rewinding, fast-forwarding and recording programs so that they could be watched later. Formats of VoD include free VoD, subscription VoD, which requires an extra month fee usually for unlimited use of VoD services, and Pay-per-View VoD. (Kovacs, 2015, 11).

The streamed content could be paused, re-winded or fast-forwarded any given time and the watcher has the ability to continue watching in another Internet connected medium.

Another specification for the Video-on-Demand is the term TV IV. According to this theory, TV I is the early television model between the 1950s and early 1980s especially in the United States; TV II is the period of 1980s to late 1990s where the network expansion happened and television medium has gained primitive networking capabilities; TV III is the period starting from 1990s until present time where digital distribution platforms increased and fragmented the audience of traditional television into smaller segments (Jenner, 2016, 258). Following these stages, platforms like Netflix has entered the market with different strategies, infrastructure system and with another audience model. The beginning of the Video-on-Demand industry has started a new era in entertainment ecosystem called matrix media (Jenner, 2016, 260). Platforms like YouTube, Vimeo, Netflix or BBC's iPlayer system are all inside this category, where television or video content creation, distribution and reception have changed significantly compared to traditional media atmosphere (Jenner, 2016). Matrix era term comes from the complexity of the digital capabilities of the Internet, where matrix media elements provide interactivity; which resulted as a new content type for a new audience (Jenner, 2016). Different media forms could interact with each other in matrix media ecosystem, audience has attained new viewing patterns, companies started using different branding strategies along with new industrial structures like cloud-storage for content and specifically, the content has shifted away from the television screen to other places with the Internet (Jenner, 2016). Video-on-Demand services are considered as the adaptation of classical television to the digital age, with all the capabilities of the Internet.

Video-on-Demand services are also named as Subscription-based VoD or SVoD, but usually Video-on-Demand platform or services terms are used to define the category. Netflix and Amazon Prime are the biggest companies in the global market with highest revenues, number of subscribers and availability worldwide; which both operate with subscription-based method. These two companies' characteristics, history and current status' in the Video-on-Demand market will be presented in this part; with Netflix being the focus since the research is based on Netflix platform.

Netflix company was founded by Marc Randolph in California United States in 1997 as a DVD rental company with a monthly subscription-fee method (Kovacs, 2015, 20). Subscribers gained access to DVD video content via postal services through the platform. In 2007, company shifted to online streaming by analyzing the potential of the Internet and its capabilities (Kovacs, 2015). Since then, Netflix has become the biggest company in Video-on-Demand industry; firstly in the United States, soon after globally: "Netflix is the world's leading internet entertainment service with 139 million paid memberships in over 190 countries enjoying TV series, documentaries and feature films across a wide variety of genres and languages. Members can watch as much as they want, anytime, anywhere, on any Internet-connected screen. Members can play, pause and resume watching, all without commercials or commitments" (Netflix, 2019). As of the early 2019, Netflix has more than 100 million paid subscribers globally which makes the company the biggest platform inside the Video-on-Demand market.

Pricing of Netflix differs from each countries' currency against the United States dollar with different plans to choose from. 720p 1 user plan starts from \$8.99, 1080p 2 user plan is priced at \$12.99 and 4K 4 user plan costs \$15.99 monthly as of 2019 in the United States (Netflix, 2019). As stated, pricing of the platform is adjusted according to the purchasing power of the country in question; for example, these plans costs ₺15.99, ₺27.99 and ₺39.99 in Turkey respectively in 2019 (Netflix Türkiye, 2019). Multiple user plans actually mean simultaneous streaming, which means the accounts could be accessed by individuals more than 1, 2, or 4 in different times. That is to say, the paid subscriber number of 139 million in total does not actually mean the number of different people who access the platform actively; it is expected to be higher from that.

Netflix's shift to streaming is an important step in the birth and evolution of the Video-on-Demand market. Since then, the platform has affected the popular culture, the audience and the content; by their original programming method. The transition from a postal-service DVD store to online-streaming strategy is made possible with the Internet infrastructure. The whole operation relies on "container technology", which is a system made up of cloud storage for the content library (Leung et. al., 2017, 38). The system is called Titus and actually a microstructure, that provides a simpler and flexible way of data storage compared to earlier cloud systems (Leung et. al., 2017). Titus container has smaller elements and containers under it, which all run a code system called Titus API; in order to operate concomitantly (Leung et.

al., 2017, 40). With these sub-containers and elements, content could be gathered in one place and then distributed via the Internet to consumers who are using different devices like smartphones or laptops (Leung et. al., 2017). The whole system uses algorithms for data storage, content access, and distribution in order to operate more efficiently and effectively: “Titus can improve cloud usage by more intelligently using resources. For example, when capacity groups are allocated but not used, Titus could run pre-emptable, best-effort batch jobs on these idle resources and yield them to the reserved application when needed” (Leung et. al., 2017, 45). Algorithms are the key elements in this system, account for the operation of the platform effectively and in a global scale. Netflix then, as the biggest company in the Video-on-Demand market operates as a video content only method for monthly fees.

On the contrary, Amazon Prime platform is not founded for the video content streaming only. Amazon Prime subscription consists of several benefits which will be stated respectively. First of all, Amazon company was founded by Jeff Bezos in United States in 1994 as an online bookstore in the beginning. Later on the company has become an online store with variety of goods including clothing, electronics, industrial supplies, games, music and movies (Schneider, 2018). With these variety of goods, Amazon has become the biggest online retailer in the world and as of 2019, Amazon is the most valuable company in the world with net worth of over \$800 billion dollars (FXSSI, 2019). In that success, the share of services provided by Amazon have significant effects. Amazon Prime service was launched in 2005 as a

shipping membership method, then different services are included inside the subscription such as movie, television series and music streaming, e-book access by Kindle service, data storage as Amazon Cloud Drive, and game services with Twitch Prime system (Amazon, 2019). Therefore, Amazon Prime service does not only consist of free and fast shipping system, but as an all-in-one service; including media streaming as well. That puts Amazon in a different place compared to Netflix, since Netflix operates only as a video streaming service.

Amazon Prime in the United States is priced at \$12.99 per month or \$119.99 annually and for students at \$6.49 and \$59 respectively (Amazon, 2019). Similar to Netflix, pricing of the service is adjusted according to the country's currency against United States dollar and purchasing power. For example, Amazon Prime in Turkey starts at €2.99 per month for the first 6 months and increase to €5.99 each month after that period (Prime Video, 2019). As of April 2018, Amazon Prime has 100 million global subscribers yet, majority of the subscribers are from the United States since not all of the Prime services are available around the world (Fortune, 2019). Prime services as a whole is available in selected countries like Mexico, Singapore, Netherlands, Luxembourg, United Kingdom, Ireland, Germany, Austria, India, Japan, Italy, Spain and France as of right now (Variety, 2018). Other countries like Turkey have the Prime Video service separately, since Amazon does not operate in countries like Turkey natively. Amazon has become an important Video-on-Demand service in recent years, but Netflix is still the leader in the global market in terms of subscribers. Since the Amazon Prime does not only

consist of a video streaming platform, it makes it harder to analyze it as a Video-on-Demand service compared to Netflix, where Netflix company operates as a streaming platform only.

Video-on-Demand market is a relatively new branch of digital media ecosystem but it has been expanding increasingly since the last decade with significant effects on audience and traditional entertainment platforms like cinema and television. Such that, according to the Digital TV Research, global SVoD industry will reach to 777 million people globally, expected to increase by 409 million active users around the world as of 2017 (Rapid TV New, 2018). Subscription Video-on-Demand (SVoD) or basically Video-on-Demand industry has been growing as more people could access to the Internet and actively use computers and smartphones. With technological advancements in the Internet infrastructure and proliferation of the technology in the global scale, more and more people access the capabilities of the digital media. Video-on-Demand services are among those digital media elements. A monthly subscription fee provides users around the world with thousands of hours' worth television series, movies and documentaries through these systems. The ease of use, ability to reach content anytime anywhere with an Internet connection make Video-on-Demand services preferable in the eyes of consumers around the world; compared traditional to television broadcasting.

2.7 Algorithms, Machine Learning and AI

Algorithms are dominating today's world, both in work and entertainment related areas. Computers, smartphones, mobile applications are all using algorithms to calculate various tasks such as in personal assistants, navigation and traffic services, and as recommendation services for websites. Algorithms are the key elements in recommendation services in Video-on-Demand services, acting as an agent to monitor, evaluate user behavior and recommend related content to watch for the individual. Today, algorithms work together with artificial intelligence systems in order to achieve various tasks, just like recommending video content in platforms like Netflix. The explanations and historical perspective for the algorithm and artificial intelligence subjects will be made in this section, in order to present a basis for recommendation services.

Algorithm as a word, comes from the word "algorism" which means "the system of Arabic numerals" and ultimately, goes back to works of 9th century mathematician and geographer abu-Ja'far Mohammed ibn-Mūsa al-Khwarizmi who had substantial works in the fields of algebra and numerical mathematics (Merriam Webster, 2019). Al-Khwarizmi is the most influential name inside mathematics for ages with his invention of algebra has changed the positive sciences effectively. Lexically, algorithm today means "a procedure for solving a mathematical problem (as of finding the greatest common divisor) in a finite number of steps that frequently involves repetition

of an operation; *broadly*: a step-by-step procedure for solving a problem or accomplishing some end esp. by a computer.” (Merriam Webster, 2019). In that sense, algorithm deals with problem solving methods inside mathematics, and broadly associated with computers today; since computers’ problem-solving abilities are higher than human beings. Even though the first name in the algorithm area is Al-Khwarizmi, Greek philosopher Aristotle had some influential works on the subject as well. Aristotle stated the link between knowledge, logic and actions inside his book *De Motu Animalium* as “actions are justified by a logical connection between goals and knowledge of the action’s outcome” (Russel & Norwig, 2016, 7). Aristotle’s perception of algorithm based on logic, that actions are decisions in order to reach or avoid an outcome. This logical algorithm was so useful that it was implemented into the GPS program by Newell and Simon after 2300 years after (Russel & Norwig, 2016). Until the enlightenment era, algorithm subject was linked to logic and therefore to philosophy; rather than to the mathematics.

Separation of algorithms from humanities has speeded up in the early 19th Century where George Boole and Gottlob Frege related classical algorithm concept to certain mathematical problems (Russel & Norwig, 2016, 7-8). Kurt Gödel then improved this work and came up with “incompleteness theorem” which states not everything could be calculated with logic or algorithms if the data is not sufficient in terms of mathematics; especially just with natural numbers (Russel & Norwig, 2016). Up until this point, philosophers thought that everything could be calculated by logic but this theorem has changed the

focus of the researches. The real breakthrough in the subject of algorithms comes with the works of British mathematician Alan Turing. Turing used Gödel's theorem as a basis point and tried to analyze what could be calculated with mathematical formulas (Russel & Norwig, 2016). Turing tried to analyze what data could be computed in terms of mathematics and came up with the work called "Turing Machine" stating; everything could be calculated if the given statement is correct in mathematical sense or with greater computational power (Russel & Norwig, 2016). Non-computable statements were also stated by Turing to show the limits of computation and algorithms such as, a machine cannot give an answer whether a program respond with a message according to a specific input or run forever (Russel & Norwig, 2016). Turing machine concept is the basis of modern mathematics and computer sciences as it defines the principles of a computer and computable data. Eventually with various steps, Turing's idea of computation machine has become the computers that we use today in order to perform tasks like writing, communication, and accessing information over the Internet.

Algorithms however, are continued to be used in various disciplines for calculation and accessorily in disciplines such as economics, neuroscience, psychology and engineering rather than just in mathematics (Russel & Norwig, 2016, 8-14). With the technological advancements, computing power of computers increased; which resulted as progress in those stated disciplines as well since these phenomena are interlinked. With the increases in computational power, number of statements and problems that could be

computed increased as well (Russel & Norwig, 2016, 14). In other words, computers could calculate mathematically accurate data faster and more efficiently. With the increase in computational power, intelligence in these computational machines is challenged many times; starting by the original Turing Machine concept. Intelligence notion is associated with human beings as the Homo Sapiens means “man the wise”, and thinking and questioning properties are linked with humans only in sciences (Russel & Norwig, 2016, 1). The process of thinking has been analyzed by human beings for a long time in disciplines such as philosophy and ultimately in computer sciences; with a goal to create a machine or apparatus with intelligence.

Intelligence terms has been categorized by mathematicians and computer scientists in four different areas being thinking humanly, thinking rationally, acting humanly and acting rationally (Russel & Norwig, 2016, 2). As it may be seen, rationality and being human are separated in this scheme, and that was the first time in the history. Categories of thinking and acting humanly basically stated that an intelligent machine should be able to imitate human qualities, whereas the rational sides have sought intelligence beyond the human capabilities (Russel & Norwig, 2016). That is the very aim of artificial intelligence concept of modern world, a greater system than the human mind with humanoid qualities like speaking, explaining and so on. Turing also has worked in the area of intelligence and came up with the Turing Test, a test to identify the capabilities of a machine in terms of intelligence. According to the test, an intelligent machine or computer should possess the entities of: “natural language processing, knowledge representation, automated

reasoning and machine learning” (Russel & Norwig, 2016, 2). As could be seen, first three of these categories are closely associated with human beings, to communicate with other intelligent systems; in this case with humans.

The last entity is the machine learning part, that suggests a computer should “adapt to new circumstances and to detect and extrapolate patterns” (Russel & Norwig, 2016). The ultimate point in the subject of intelligent machines is to make them independent in terms of data analysis and eventually, progress in terms of computational power and intelligence. As the technology has advanced over the last century, the goal of creating machine learning has become probable in some areas.

Artificial Intelligence or AI concept of today is used in order to address independently intelligent systems which could pass the Turing Test. As bound by the current technology and the understanding of computers in general; initial inputs have to be given to the systems for analysis, for creation of further patterns and schemes. In a 2016 project named *The Next Rembrandt*, a group of engineers have introduced the works of Rembrandt to computer system. 346 paintings were studied with a facial scanning software, in order to analyze the patterns of Rembrandt (Greenfield, 2017). After a long period of analysis and 500 hours of rendering, the computer created a portrait that has not existed, through machine learning; making a Rembrandt painting 3 centuries later (Greenfield, 2017). That signifies the power of

current machine learning systems, which could create authentic-like paintings by computer and software analysis.

Another example for the machine learning success could be seen in a different area with a project called *AlphaGo*. *AlphaGo* is a project consists of neural engines and algorithm systems created to play the game of Go (Greenfield, 2017). The system is only introduced the rules of the game and could calculate up to thirty moves beyond just by analyzing opponent moves and the rules (Greenfield, 2017). The system has beaten the best Go players in the world over 100 times (Greenfield, 2017). The significant success of *AlphaGo* system could be seen in another perspective. Before the *AlphaGo* project, *Deep Blue* project was the main topic in game related machine learning. *Deep Blue* managed to beat world chess champion Garry Kasparov in 1997 (Greenfield, 2017). Even though beating the world's best chess player at that time, *Deep Blue* has shown that it could be beaten after all. In order to compare games of chess and Go broadly, after the first two moves in chess there are 400 possible moves but in Go; there are approximately 130 thousand moves (Business Insider, 2016). That makes the human intelligence extremely hard to calculate further moves in the Go game, and gives advantage to the machines in terms of computational power. These examples signify the advancement in the subjects of machine learning and artificial intelligence; in the way of making the ultimate human-made intelligent machine.

Algorithms today are used in various areas along with machine learning in order to complete tasks decided by the engineers and users. In areas like web searches, GPS and navigation services or Video-on-Demand services; input data has been analyzed by the algorithmic engines in order to show results, give traffic directions or content suggestions. The advancements in machine learning and artificial intelligence have also been increasing with the advancements in computer technologies in today's world, with integration to everyday life.

2.8 Recommendation Systems & Netflix's Implementation of Algorithms

As stated in the previous chapters, algorithms are the key elements in the contents of machine learning and artificial intelligence. That is the same situation for the recommendation systems which monitor the user input, history and habits; then generate relevant information or content in parallel with their interests and needs. This section will explain how the recommendation systems work, how algorithms implemented among their operation, and Netflix's recommendation system which relies on the ratings along with user watching preferences.

Castillo, Vander Meer and Castellanos (2018) published a research analyzing the limits of recommendation system that depend on user-inputs for their operation. within the study, an important method called Cacheda recommendation approach is presented. According to this approach, in order

for more accurate and relevant recommendations to be made for the user, two methods have to be combined by the algorithm engines; being user and item-centric approaches (2018, 71). Item-centric approach being the mean ratings by all the users for a specific phenomenon or item; user-centric approach on the other hand deals with the previous ratings for a specific user. This system could be understood clearly by giving an example for its operation. For example, movie platform IMDb recommends movies for its users by this exact combined method. Movies in different genres such as drama, romance and war are rated by numerous users and, movies such as *Casablanca* include all of the genres. In order to recommend a movie, system analyzes a specific movie's ratings, along with a certain user's previous ratings for each of these different genres and gathers all of these different variables together for a possible recommendation (Cacheda, 2018, 72). By this method, recommendation system both uses the user-data for the user in question, and the pool of ratings/data that has gathered from multiple users previously; that has become the items in this case.

The data gathered by Netflix for recommendations are called analytics data. There are multiple ways for the algorithmic engine to specify a user by analyzing his/her preferences in content. The data and behavior of users that Netflix tracks are stated by Netflix Director of Global Communications, Joris Evers during an interview:

- When you pause, rewind, or fast forward
- What day you watch content (Netflix has found people watch TV shows during the week and movies during the weekend.)
- The date you watch
- What time you watch content
- Where you watch (zip code)

- What device you use to watch (Do you like to use your tablet for TV shows and your Roku for movies? Do people access the Just for Kids feature more on their iPads, etc.?)
- When you pause and leave content (and if you ever come back)
- The ratings given (about 4 million per day)
- Searches (about 3 million per day)
- Browsing and scrolling behavior
- Netflix also looks at data within movies... Some have figured these characteristics may be the volume, colors, and scenery that help Netflix find out what users like (Neil Patel, 2013).

As may it be seen, Netflix's algorithmic engines gathers data from so many different parameters in order to evaluate user behavior and eventually to generate relevant content for each user. The recommendations are not only based upon the searches and ratings but, algorithmic engines are using information such as devices that are used for accessing, geographical locations, and interruptions to content playbacks.

This combined method for recommendations is also referred as human-computer interaction or (HCI), a system that includes human-input and previous data collected from the algorithms (Jannach, Resnick, Tuzhilin & Zanker, 2016). As stated, the algorithmic engines gather user data from a specific individual, and cross-check it with previous multiple data that was collected earlier on. This whole system is also named as matrix completion, which is also used by Netflix as well (Jannach et al., 2016). This matrix system includes previous ratings for multiple contents, previous ratings from a specific user, and by cross-checking these two-different data; system aims to fill the blanks in this matrix where the user-data for a specific content/information is not available (Jannach et al., 2016, 96). In other words, recommendation system predicts missing statements in this matrix by

analyzing all of the available data, in order to recommend or not recommend a specific content for the user in question.

In order for an accurate prediction and ultimately for an accurate recommendation, different components are filtered by the algorithms such as user data, context, medium, along with previous recommendations for the user (He, Parra & Verbert, 2016, 11). All of these variables are working in relation with each other inside the recommendation system, together creating a scheme that is essentially an interactive recommender system (He et al., 2016). The algorithms continue operating according to the user input for the generated content or information as well, if the user does not find the recommendation relevant or not interested in it which these data are provided by user-input for the system; algorithms evaluate all of the process in parallel with this result and will try to make a better suited recommendation for the user. Continuation of algorithms for more accurate results for users are included in Mwinyi, Narman, Fang and Yoo's study about predictive recommendation systems (2018) as well. According to their study, in order to evaluate a recommendation system as interactive self-learning for that matter, the system should analyze different parameters such as: "popularity, similarity, currency, feedback, importance, interest, and safeness in addition to user profiles (Mwinyi et al., 2018, 2). The analysis continues as user inputs feedback for the recommendation; where the system generates updated suggestions for the user and, this loop of interaction continues until the user quits the medium in question (Mwinyi et al., 2018).

This interaction between the data, computer, and user makes these recommendation systems interactive; which puts the user in the center for its operation. In a similar fashion, Ahmed, Imtiaz and Khan (2018) presented a recommendation system method for movies that analyzes user and data patterns. Their method shows similarities to the matrix completion system, combining user ratings, user consumption ratio and user preferences through different clusters of data which also includes different genres of movies, and filtering all of this data through a neural network in order for an accurate recommendation (Ahmed et al., 2018, 145-46). Again, it could be understood that recommendation systems are interactive operations consist of many layers for user and content/information data; which aims to deliver accurate recommendations for users in multiple steps by analyzing each result.

There are also limitations for these recommendation systems since their operation rely on user-data and input. First of these problems being the cold-start issue, where for new users and new content effective recommendations cannot be made since the scarcity of data (He et al., 2016, 10). Accuracy of recommendations tend to increase in parallel with the data provided for the system. Another problem is that these systems use complex methods for suggesting recommendations through algorithm analyses and, these methods cannot be understood by the users. When systems fail to deliver accurate recommendations; users could have trust issues towards these systems which could compromise the data flow from the user end (He et al., 2016). Since these systems heavily rely on user-input, possible trust issues by the users could further decrease the accuracy of the recommendations in

the future. The last problem for these algorithmic systems is that every platform requires a unique method in order to gather user data, in other words, user-inputs for platforms such as smartphones and laptops are not the same and different methods for each platform have to be developed for gathering maximum user-data ultimately for accurate results (He et al., 2016). Every media platform is different in terms of interactivity and recommendations systems need to be tailored according to the capabilities of each platform, which requires more research, models and eventually more investment for increasing the accuracy.

As the recommendation systems are introduced with their operational methods, this chapter will continue towards Netflix's way of using of these systems. In the Hallinan and Striphas's study (2016), the development of Netflix's algorithm systems is analyzed. Netflix Inc. has carried out a competition between 2006 and 2009 called Netflix Prize, with a prize of one million U.S. Dollars for the winner who could improve its recommendation system (Hallinan & Striphas, 2016, 117). This contest has attracted various machine learning specialists, computer scientists and mathematicians all around the world for the task in hand (Hallinan & Striphas, 2016, 120). Ultimately, the winning team came up with the Netflix's long-used rating system:

Netflix invites customers to rate items in its catalog on a scale from 1 to 5 stars, the key to which is revealed as the customer hovers over each star on the website: five stars, "Loved It"; four stars, "Really Liked It"; three stars, "Liked It"; two stars, "Didn't Like It"; and one star, "Hated It." A sixth option, "Not Interested," appears in a separate box below the stars (Hallinan & Striphas, 2016, 120).

This rating system provided the user-input for the algorithmic engine, for comparing these inputs with previous ratings from the user in question and, with other user-ratings according to the similar patterns all around the world on Netflix. This rating system has continued until 2017, when it was replaced with thumbs up and thumbs down buttons for user-input; along with percentage matches for each content for the user in question (Netflix Ratings & Recommendations, 2019). Although it may seem different from the prize-winning method, apart from the visualization for the user, operation of the algorithms has stayed the same of course; with constant adjustments by the company year-over-year. Data that are analyzed from these ratings to be formed are included in the Fernández-Manzano et al. study (2016). Big data that is used for recommendations in Netflix is listed as follows:

- viewed or discarded content type;
- playback characteristics (if it plays at normal speed, if forwarded or rewind, paused or abandoned);
- playback intensity (frequency and number of streaming hours per session);
- rating the user gives the content (keeping in mind the ratings given to other content);
- the sort of device used to gain access (connected TV, tablet, mobile phone, or decoder) (Fernández-Manzano et al., 2016, 572).

As could be seen, Netflix tries to gather as much data as possible for its algorithm system for accurate results from different categories such as watching behavior, devices that are used, content types, and ratings. Study also includes where all this big data is stored as well. Netflix both uses big physical data repositories in various places, along with cloud storage; which is provided by Amazon Web Services (Fernández-Manzano et al., 2016, 572). These storage facilities are always connected to the algorithmic engines for instant results for each user around the world.

Gomez-Urbe and Hunt's (2016) study of Netflix recommendation system presents every aspect of how these algorithms structure the Netflix interface. According to the study, effects of the algorithmic systems appear in nine different categories. Netflix offers up to forty rows on each homepage, each one including up to seventy-five videos accordingly (Gomez-Urbe & Hunt, 2016, 2). First of these categories is called "Personalized Video Ranker" or (PVR), consists of different genre rows such as thriller movies or comedy generated for each user (Gomez-Urbe & Hunt, 2016, 2-3). Algorithms filters the entire catalogue of Netflix and create unique categories for each user for this feature. Second one is called Top-N Video Ranker, which recommends specific content for each individual based on watching history and ratings; but not as genres, movies or television series are generated directly (Gomez-Urbe & Hunt, 2016, 3-4). Third category is the trending now section, content that is popular around the world according to specific events or situations (Gomez-Urbe & Hunt, 2016, 4). There are two different categories of situations inside this section, first one being the repeating events throughout a year such as Valentine's Day or Christmas; and the other including contents about one-off situations such as upcoming storms and so on (Gomez-Urbe & Hunt, 2016, 4). As could be seen, specific events throughout the year are also included in the recommendation system; where its generates relevant content according to situations and events.

Next section to implement the algorithms on Netflix is the "Continue watching" part, which includes the unfinished content for each user; implemented for reminding the user to continue watching (Gomez-Urbe &

Hunt, 2016, 4). Another category is called “Video-Video Similarity”, or “Because You Watched ...” section, which generates content according to a title that has watched by the user previously (Gomez-Urbe & Hunt, 2016, 4). Next category appears as rows and it is called “Page Generation”, where as the user scrolls down on the homepage; different content categories according to moods, genres or events are created for each individual personally (Gomez-Urbe & Hunt, 2016, 4-5). It is also included that results appear in the form of Page Generation are fully personalized by analyses of advanced algorithms, where the details are not specified further.

Another category is called “Evidence”, where the system changes the descriptions or cover photos of content recommendations by analyzing their behavior or previous preferences (Gomez-Urbe & Hunt, 2016, 5). For example, if the system predicts that Oscar-winning productions are important for a specific user, it includes that statement about the content before generating it for the user (Gomez-Urbe & Hunt, 2016, 5). By that, a tailored interface is created for each user, again for a unique personal experience. Next algorithmic engine is called “Search”, where the system analyzes the word which is being written simultaneously and, if the word does not correspond to a specific content; the engine predicts the rest of it (Gomez-Urbe & Hunt, 2016, 5). For example, if the word “fren” is typed in the search bar, engine predicts it to be “French” and predicts French production movies (Gomez-Urbe & Hunt, 2016, 6). The last algorithmic engine which is used in the Netflix’s recommendation system is called “Related Work”, where if a content is not available in the system; algorithms analyze the genre,

production, cast or director of the desired content and, generates similar contents (Gomez-Urbe & Hunt, 2016, 6). As may be seen, even if a desired content is not available on the database, recommendation systems work in order to keep the user in the platform by providing similar examples for the consumer.

The effects of the algorithmic systems inside Netflix could be seen evidently, since most of the platform's operation relies on algorithms, for generating new content for each user, after analyzing habits and viewing history. By that, Netflix generates variety of content for each user inside different categories, with personal touches for each user. As presented inside categories, recommendation system of Netflix directly affects the user interface (UI) for each user, thus; affecting the user experience (UX) as well, since most of its operation are results of personal data analyses.

2.9 User Interface (UI) & User Experience (UX)

As stated in the previous section, most of Netflix user interface is shaped by the recommendation system that consists of algorithms. Since the user experience is directly influenced by the user interface, algorithmic systems in Netflix are also affecting and shaping the users' experiences. In this part, user interface and user interface phenomena will be analyzed; along with relations to Netflix platform as well.

User interface lexically means: “a computer program designed to allow a computer user to interact easily with the computer typically by making choices from menus or groups of icons” (Merriam-Webster, 2019). As could be seen, user interface is essentially the visualization of all input mechanism of a platform or a system, for the user itself. In Video-on-Demand platforms like Netflix, user interface is a fundamental phenomenon; since the platform operates through the user inputs and by analyzing user behavior through algorithms. The design of Netflix user interface was built around the user and relied on user’s input. Wilson explains different kinds of user interface methods in his book and according to presented methods, Netflix’s user interface could be classified as a pluralistic approach (Wilson, 2014, 82-92). This method of user interface aims achieve conceptual design that evolves through the feedback of the user, essentially puts the user in the center of the design (Wilson, 2014). By that, the designer could see the problems which users are experiencing directly, and could evaluate the problems in first hand to improve their experience.

Similarly, Liu analyzes the Netflix’s user interface in a study; by focusing its characteristics from the field of computer sciences (2014). According to the study, Netflix uses JavaScript coding language for its operation for all of the platforms such as smartphones, laptops, and Smart TVs (Liu, 2014, 53). JavaScript engines provide a testing method that Netflix uses as well, which is called A/B testing (Liu, 2014). A/B testing is essentially interventions to the user interface by the developers, aiming to increase the user experience by solving specific problems or removing bugs that users are experiencing. The

data collected for these tests are native, since the recommendation system's algorithms gather user data in the first place; which makes these improvements efficient and effective (Liu, 2014, 54-55). Once again, the effects of the recommendation system and algorithms in the context of Netflix's user interface could be observed; assisting developers to improve user experience through tests.

Coming to the user experience subject specifically, the term's according to the ISO standards is provided as: "a person's perceptions and responses that result from the use or anticipated use of a product, system or service" (Kraft, 2012, 1). However, Kraft explains the user experience as feelings of the user, and states it is a subjective phenomenon (Kraft, 2012). In order to analyze and eventually improve these user feelings, Kraft proposes the method of User Experience Curves; where the user's feelings are listed through the steps of a process such as before and after of an item purchase (Kraft, 2012, 1-2). By visualizing the user's feelings or in other words, experiences; further analysis and alterations could be made in order to increase each step. In the same context, Tullis and Albert (2013, 4) explain the user experience's defining characteristics as:

- "A *user* is involved
- That user is interacting with a product, system, or really anything with an interface
- The users' experience is of interest, and observable or measurable".

As it may be seen, this approach signifies the importance that the user experience has to be a measurable or quantifiable phenomenon; in order to be analyzed and evaluated properly. In order to converted into quantifiable

attributes to be essentially increased, Tullis and Albert have proposed methods called User Experience Metrics; that are stated as user satisfaction, errors, task success (Tullis & Albert, 2013, 6-7). By converting the user experience statements into these metrics, comparisons could be made for before and after the alterations for the problems towards the task thus; improvements in the user experience could be achieved.

From a different perspective, Turner approaches the user interface from its historical development. According to Turner, user experience area is actually an updated version human-computer interaction phenomenon (2017, v-vii). The analysis states that the user experience naming is started to be used in the 1990s, where personal technology has been advancing; especially by the personal computers (Turner, 2017, vii-viii). Again, the relation between technological advancements and contemporary media phenomena is exhibited; by the subject of user experience where in variety of new media systems, the term is an essential component.

Another analysis of Netflix user experience has been made by Hwang, Cheon and Kwak through an audience study (2017). In the study, researchers are aimed to find the relation between user experience of Netflix and its recommendation system. Inside the study, the term Transaction Cost Economics (TCE) is presented, which is essentially a method costs of research activities aiming to gather data or information for specific process (Hwang et al., 2017). Since Netflix's recommendation system already gathers personal data from its users, Netflix does not need an external Transaction

Cost Economics activity; where all the data needed in order to improve the user experience is available for the company locally (Hwang et al., 2017, 129). That makes Netflix platform to be efficient and effective in the subject of improving the user experience. According to the study results which are made with Netflix users, consumer-oriented system of Netflix increases the user satisfaction by effective recommendations relevant to emotions, which decreases the user's stress and time spent on the system for finding content (Hwang et al., 2017, 134). That means the recommendation system affects the user experience in a positive way by generating accurate and relevant content for its users. The relation between user interface and user experience are shown in the previous parts of this section and effects of the recommendation system over the user experience are presented by this study. Thus, it has been stated in the previous section that recommendations system essentially affects the user interface with different categories in the Netflix homepage generated for the user. By combining all these statements, it could be said that the algorithmic recommendation system of Netflix directly affects both the user interface and user experience; the key components of the platform directly.

2.10 Binge-Watching, Motivations and Effects of the Behavior

As stated previously in the thesis, binge-watching behavior has been increasing in the Video-on-Demand era among the audiences. Basically, binge-watching means consumption of multiple episodes of generally

television shows in a relatively short period of time, generally without taking breaks (Merikivi, Zhang, Salovaara & Mantymaki, 2018, 111). The effects of Video-on-Demand services on binge-watching are visible as presented in the first chapter yet, it is not a new phenomenon:

Binge-watching is not a new phenomenon. Television networks have been broadcasting occasional television marathons for decades. In addition to these marathons, viewers could have stored their favorite shows on digital video recorders and set top boxes, or binge watched them on DVD if only they have been willing to wait until the networks have first aired the episodes on television (Merikivi et al., 2018). As it may be seen, binge-watching behavior existed long before the Internet or Video-on-Demand service. However, by emergence of Video-on-Demand services, users all around the world have gained the liberty to stream the content they would like to watch anytime, with an Internet connection. In addition, platforms like Netflix uploads some of its television series content seasons as a whole; which means the user could finish a whole season of a series in just one day. By these liberties, Video-on-Demand audiences exhibit a tendency for binge-watching content regularly on platforms such as Netflix. Furthermore, these platforms operate all around the world, that has made the binge-watching behavior to become a global phenomenon in the recent years (Merikivi et al., 2018). In this chapter, motivations for this behavior will be presented along with the results of binge-watching on user psychology; by presenting studies and researches.

There are different motivations and gratifications for the binge-watching behavior according to the study. First of these motivations is presented in Merikivi et al.'s research (2018). The study presents the main motivation for binge-watching as satisfaction, where users have stated by binge-watching;

their user experiences tend to increase, especially by the advertisement-free structure of Video-on-Demand services (Merikivi et al., 2018, 118-119). A similar result has been shown by Pittman and Sheehan which researches on the subject of Netflix binge-watching and gratifications for it (2015). The results of the study presented that main motivators for binge-watching behavior are engagement and social influence (Pittman & Sheehan, 2015). By higher engagement, users stated that they are tend to feel more connected with the content and characters, which apparently increases their satisfaction overall (Pittman & Sheehan). Other significant motivation for binge-watching among the participants is stated as social influence, where it is stated binge-watching of certain programs like *House of Cards* has become almost an event such as the Super Bowl with a ritualistic viewership (Pittman & Sheehan). By that, platforms such as Netflix gains the popularity among the social media, or social circles; that could be resulted as potential new users for their service.

A resembling study has been conducted by Matrix among younger Netflix users, including the Generations Y and Z; which are between the ages of 18-34, and has born in 2005 respectively (2014). The study is shown that younger Netflix users binge-watch in order to keep up with their social circles, about the content that is popular among their friends (Matrix, 2014, 133). By that behavior, younger Netflix users consume content in short periods of time to be a part of the popular culture, that has evolved around the Video-on-Demand industry in contemporary entertainment era. Importance of social influences on binge-watching among college students is also presented by

Panda and Pandey's research (2018). The results have revealed that most common motivations among the participants for binge-watching are social influence, escapism, accessibility of content through different platforms (Panda & Pandey, 2018, 436). As it may be seen, social factors are one of the most common motivation for binge-watching, along with other reasons such as escapism which is a psychological gratification; and the easy to use structure of Netflix platform has become another rationalization for binge-watching.

Contrast to the researches that have presented social influence as one of the most common motivation for binge-watching, Shim and Kim's research aims to show the relation between self-reported binge-watching; meaning motivations of binge-watching excluding the social influences and factors. According to the study's results, most common reasons for self-binging are enjoyment, efficiency, and fandom (Shim & Kim 2018, 99). Efficiency here being the liberty to watch multiple episodes of television series at a given time, participants have all stated reasons in the context of engagement; which could be stated that even the factors of social influence are excluded, binge-watching users stated similar motivations for their behavior in parallel with previous studies that are presented.

There are also studied effects of binge-watching on the psychology of Netflix users. It has been shown that escapism could be used as an excuse for binge-watching by individuals and psychological aspects in the subject of this behavior is not limited by that. Walton-Pattison, Dombrowski and Presseau's

(2018, 23) research shows the relation of binge-watching and regret, where the participants who tend to binge-watch frequently; experienced regret for certain things in their lives. Regret in those frequent binge-watching participants appeared in the context of neglect of certain goals such as physical activity (Walton-Pattison et al., 2018, 20). Plus, it is also stated that the state of regret increases the binge-watching behavior as well (Walton-Pattison et al., 2018). That creates a loop for the binge-watchers since both of these behaviors affect each other in a negative way in terms of their goals. Similar study is conducted by Wheeler with binge-watching university students. The study shows the relation of psychological factors such as depression, loneliness and, anxiety between binge-watching behavior where these two phenomena are directly proportionated to each other (Wheeler 2015, 31-32). In other words, negative psychological states such as depression increases binge-watching behavior and, frequent binge-watching activities could affect the mental health of the user by causing moods such as loneliness and depression.

The last study to be presented in this chapter also aims to find the relations between user psychology and binge-watching habits. Hasan et al. (2018) conducted a study that researches the relationships between recommendation systems and psychological factors among excessive Video-on-Demand users. With respect to the results of the study, excessive usage of Video streaming services most commonly originates from the recommendation systems along with psychological problems of a user such as lack self-esteem, or self-control (Hasan et al., 2018, 226-227). Use of

recommendations on Video streaming platforms according to the study, increases user's amount of time that is spent online content. It is already shown that binge-watching has been increasing with the Video-on-Demand services and this behavior could affect the individual's psychology and by that study, relation between algorithmic recommendation services and binge-watching behavior is presented as well.

2.11 Brief History on Turkish Television Broadcasting, Pay-Per-View and Video-on-Demand Services

Since the research part of this thesis focuses on the Turkish audience, brief information about the Turkish television culture will be provided in this chapter. Important historical steps in Turkish television broadcasting, major pay-per-view channels, and description video streaming platforms operating in Turkey will be presented.

Broadcasting in Turkey started in the form of state-controlled radio format in 1927 (Kaya & Çakmur, 2010, 526). The radio broadcasting has stayed under the control of the state until 1971, where the autonomy that restricts the broadcasting to be made only by state is terminated (Kaya & Çakmur, 2010). Long before television broadcasts have started, Turkish Radio and Television Corporation (TRT) was established in the 1964, where the institution continued its operation through radio broadcasts only (Gül, 2011, 31). Early trial of television broadcasting firstly started in the late 1960s in Turkey,

where only a small portion of the audience could experience these efforts (Kaya & Çakmur, 2010, 526). Daily television broadcasts in Turkey officially started in 1972, where the state agency TRT has stayed as the only operating channel in the country for almost two decades.

With the 1980 military coup, TRT's monopoly for television and radio broadcasting was constitutionalized (Gül, 2011, 31). The corresponding article, which is Article 133 in the constitution; prevented any other private enterprise to broadcast in Turkey (Kaya & Çakmur, 2010, 526-527). Even though regulations against broadcasts other than state-owned TRT continued, first private enterprise started to broadcast from Europe via satellites in 1990 (Kaya & Çakmur, 2010, 527). Magic Box Company started its broadcasts in March 1990 with the channel called Star 1, being the first privately-owned television channel in Turkey (Kaya & Çakmur, 2010). Other initiatives joined the industry and eventually in 1993, regulation that prevented private sector from broadcasting was finally lifted (Gül, 2011, 31). Following that, an organization by the state is established called RTÜK; in order to regulate the free-market economy of television broadcasting (Gül, 2011). Private initiatives have continued to grow along with the industry, eventually forming big media conglomerates like Doğan and Çalık Holdings in the 2000s (Gül, 2011, 34). In parallel with these improvements, Turkish households who have access to televisions and broadcasts also continued to increase.

Digital television broadcasting in Turkey however, are essentially formed by the pay-per-view companies. Pay-per-view broadcasts provide users a selection of different content to choose from, each of them are priced differently according to the genre. Pay-per-view broadcasting in Turkey has started with CINE5 in 1995 and continued with the formation of Digiturk in 2000 (Koyuncu, 2017, 318). Digiturk in particular, is considered to be the first successful pay-per-view system in Turkey; which offered digital broadcasting and different content packages such as LigTV for football matches, movie and foreign television series packages for its users (Koyuncu, 2017). following the success of Digiturk, Doğan Holding entered in the pay-per-view market with D-Smart in 2007 with High Definition broadcasting (Koyuncu, 2017). Pay-per-view initiatives continued with examples such as Tivibu in 2010, creating a diverse market for the television audience in Turkey (Koyuncu, 2017). The leading pay-per-view system Digiturk was sold to the BeIN Media Group in 2017, yet the company continues to be the biggest paid-television platform in Turkey (AlJazeera Turk, 2017). BeIN platform also offers a streaming system for its users called BeIN connect, where users could watch the content which they are paying for, by streaming through the BeIN Connect application.

A specific example to be mentioned inside Turkish television history is the channel called CNBC-e. The channel has broadcasted between 2000 and 2015 until its shut down, which through its operation aired foreign television series with subtitles, after the daytime economy broadcasts (Hürriyet, 2015). CNBC-e channel was an important culture element for the Turkish television,

since it was the only channel broadcasted foreign shows without Turkish dubbing apart from the pay-per-view systems. Many of the popular television series in Turkey such as *How I Met Your Mother*, *The Big Bang Theory* and *Breaking Bad* were originally aired on this channel; with the original English audio and Turkish subtitles.

Video-on-Demand platforms in Turkey have been growing as well, in terms of subscribers and popularity. As previously stated in the thesis, global platforms such as Amazon Prime Video and Netflix have also been operating in Turkey where Netflix is the most popular and among others. Yet, there are also local Video-on-Demand services such as puhutv and BluTv. Puhutv is a free of charge streaming platform with advertisements, mostly include Turkish television series and movies, along with some foreign productions (puhutv, 2019). Whereas, BluTv operates as the same way with Netflix, requires a monthly payment for a database consists of variety of foreign shows and movies also; content that are specifically produced for the platform, which are called Original Programming essentially (BluTv, 2019). Both of these platforms have similar interfaces to Netflix and contain recommendation systems that generate content according to the user's interests.

Additively, regulation agency of Turkish media, RTÜK has given the liberty to control sources that are broadcasting or streaming over the Internet as well, with a set of regulations since September 2018 (NTV, 2018). By these, RTÜK could censor certain contents and elements in platforms such as

BluTV and Netflix. It is also stated that RTÜK has censored some portion of an animation content called *Over the Garden Wall* yet, Netflix Turkey has denied the censorship against the content in question by a statement; where the content has not been changed by any means and could be found in the initial state where it was purchased from the producer in the first place (NTV, 2018). Even though the RTÜK's regulation power has not been observed in the form of censorship until this point, it could still affect the experience of Turkish Netflix audience's future experience, with possible bans and censorships to selected contents.

Last phenomenon to be mentioned in this part is the illegal streaming platforms which are mostly offer foreign television series for users. Although it is difficult prove their popularity here in this part, it is predicted that majority of the Turkish audience uses these illegal sites time to time. It is also hard to mention specific names for these platforms, since they are continuously closed by copyright infringements; and appear with slightly different domain names. Basically, these sites appear in the forms of yabancidiziizle or sezonlukdiziizle; and regularly change domain names after they are shut by the copyright laws. These platforms are predicted to be one of the primary sources for users to consume content since they are free, could be accessed through any device that has an Internet connection. References will be made to these illegal sites in the research part as well, by asking the users about their channels for video consumption.

CHAPTER III

RESEARCH

3.1 Methodology & Description of the Research

The 21st Century has been heavily influenced by the technological advancements. The Internet has surrounded the World, as well as changing people's business and entertainment lives. Mobile revolution has completed the new media age, where people could stay connected with each other and to the information inside the Web by smartphones, tablets and laptops. As stated in the theoretical part, effects of the Internet and mobile devices are crucial and in order to understand the media ecosystem of 2010s, these phenomena have to be analyzed. This research focuses on the entertainment side of new media specifically, on Netflix; where millions of people are using it daily in order to watch movies, television series or documentaries. These services are using algorithmic systems that could analyze user behavior by evaluating watching history, likes, dislikes, favorite genres and other variables likes binge-watching times for specific contents

and recommend content based on these parameters. These recommendations could be similar to liked content in terms of genre, length, cast, production and it evolves based on reactions of the users. If the individual likes a specific recommended content, system continues to generate similar material; if not, switches to different genres or categories.

Recommendation systems are evolving by the input of each individual, creating a unique experience for each user. Based on these recommendations and according to the behavior of the user, user interface of each individual would be different; since different categories of material are highlighted based on behavioral analysis. By that, user experience changes accordingly too; creating a unique atmosphere for each account. This system is also being used by Netflix, in fact; whole Netflix experience is based on recommended content for each individual's likes created by the algorithmic engines. The effects of Video-on-Demand services on the industry have been given in the previous sections; how it may have become the primary source to consume content in the contemporary media age. Also, effects on the audience, such as binge-watching behavior increase over the years, is also analyzed. This research tries to analyze the changes in the audience by the Video-on-Demand services and to achieve that, interviews have been conducted with the audiences of these platforms; Netflix specifically, since it is the biggest Video-on-Demand company as of today globally. Motivations of this research are; to observe and note the behavioral changes in the audience while watching content on these platforms and, connect these changes with the theories and researches presented in the first part of the

paper. It is hypothesized that, algorithmic recommendations systems inside Video-on-Demand services are inducing changes in the audience watching behavior. Then again, technological changes in the last decades are affecting media and society directly; which have created the convergence of the Internet and traditional media elements along with emergence of smartphones and mobile devices. These hypotheses will be evaluated accordingly to the results of the research and with the theories presented in the previous part of the paper.

In order to analyze the changes in the audience of Video-on-Demand services, a qualitative research has been structured in the form of interviews as stated. The structure and execution of these interviews will be presented in this chapter in detail. Qualitative method is selected for the study over quantitative one; to gather more data from each individual; with more personal information by not only asking questions about what they are doing on Video-on-Demand platforms, also how and why these users are performing these actions while consuming content. Interviews could provide more data in an audience behavior research like this one, compared to statistical qualitative research methods. Semi-structured interview format has been selected in order not to influence the participants to give specific answers and, to record as much personal behavior as possible while conducting the interviews. To clarify, five different categories of questions have been formed; how do the audiences find content and about recommendation systems, about their behavior while watching content, about binge-watching action, regarding their social behavior around friend/family

circles including their social media actions, and lastly, about their opinions on Video-on-Demand platforms and Netflix specifically. All of these categories were brought up during each interview, but some of the questions were tailored for specific behaviors or users. As an illustration, if an individual did not perform binge-watching while consuming content, no further questions related to the subject were asked or, if an individual was not using mobile application of Netflix; opinions about application notifications was not included during the conversations. Another point to mention, is that the participants were encouraged to speak as much as possible about their behaviors, experiences and opinions regarding Netflix and Video-on-Demand services, in order to increase data collection for the research.

Certain criteria have been structured before reaching the participants of the research, since specific requirements are needed to analyze the audience's behavior towards Netflix and Video-on-Demand services. These criteria include being between the ages of 18-35, being a Turkish citizen, ability to speak English, using the Netflix platform at least once and have a general understanding of the platform and/or Video-on-Demand services or regularly using Netflix to watch content. The age group for the study has been decided based on the facts that majority of the Netflix and Video-on-Demand services have been used by young adults and teenagers, this age group has been growing in the new media age and the Internet. Specifically, this age group is called the millennials or the Generation Y; coming after the Generation X, and their lives have been influenced by the culture of new media age. Participants under the age of 18 are excluded from the research since their

opinions require permissions of their guardians and/or their actions could be effected by their parents since they are minors. Turkish citizen criterion is selected in order to decrease the limitation of the research since participants from other countries could perform different behaviors and/or have a different experience while watching content due to the fact that Netflix databases are different for each country and the research includes some questions about experiencing other Video-on-Demand platforms available in Turkey. The interviews are decided to be conducted in English for consistency and due to the fact that most of the Netflix related cultural elements are global and in English. Criterion about the Video-on-Demand services or Netflix usage is crucial, since the research has been constructed to analyze user behavior while consuming content from these streaming platforms.

Participants are found by creating a research event via the Bilkent University Administrative Information System (BAIS), with an explanatory text summarizing the research and aims, including the criteria required in order to participate in the study. From the BAIS system, e-mails have been sent to the people in the database of the Bilkent University; where members of the system forwarded these e-mails to acquaintances or mentioned in conversations. That resulted in a study group not only formed around a specific university circle; but also reached different individuals as well. Additionally, 10 GE points were given to the Bilkent University undergraduates who are taking GE 250/251 courses; as a result of participating in the study. Duration of the study is stated to be between 20-30 minutes in the mail, highlighting that it will not be longer than 45 minutes in

total. The locations for the interviews are not included in the descriptions, stated to be decided mutually with the participants in order not to limit the study in a certain place. Personal details of the researcher are included in the e-mail for participants to schedule meetings, along with the thesis supervisor's name and e-mail address. The study is stated to be proceeded between March 18 and April 14; approximately for one< month in total.

To document the data more accurately and easily, it is decided to take sound recordings during the interviews. By that, specific comments and behaviors could be included in the research directly and objectively. That meant a legal informed consent had to be prepared in order to preserve the personal information of the participants. Accordingly, an informed consent document is prepared highlighting the summary, motivations of the research; how the data will to be collected and stored, who will have the access to the raw material including the personal information, how this information will be processed and turned into a research study, risks or inconveniences, benefits, contact persons responsible for the study, and the rights of the participants during and after the study. The sound recordings have been made by the researcher, stored in his personal computer in a folder that could not be accessed via cloud services or the Internet and it has been clearly stated that even the supervisor will not have access to the personal information directly such as names, comments about their social lives or any information that could uncover their identities. It is also stated that no risks or inconveniences are foreseen during the study, with the possible benefit of learning more about Video-on-Demand services, Netflix or algorithmic

recommendation systems. All of these statements are combined inside an informed consent for the study and participants are asked to read this document and sign before starting the interviews; also, they are informed that they could ask anything they want to know or do not fully comprehend about the study. Confidentiality and personal information of the participants are aimed to be preserved on every stage of the research. The informed content documents are collected by the researcher and stored in his house inside a folder, that has no access from anyone else except him.

A total of 20 interviews have been made during the research period with the participants who have the necessary qualifications. 14 of these participants are female and 6 of them are male, with an average age of 22.3. Average duration of the interviews is 25 minutes, which meets the standards of the research. Regarding the sound recordings, separate files have been created to include opinions and/or answers about certain questions or topics in order to evaluate data accurately and efficiently. Comments or answers that are different or unique in the research are directly quoted inside those files, to include them later on in the results and discussion parts. Profiles of the participants are different from each other in terms of education levels and lines of business yet, majority of the participants were undergraduates in Ankara Universities. Other profiles could be stated as university graduates and/or newly-recruits, graduate students, employers from different fields, and a high-school student. Participants are from different majors such as law, media, economy, design, engineering, medicine or language sciences. In

other words, the study was not conducted around a specific circle; but in a diverse manner, including participants from different backgrounds.

There are certain similar behaviors are observed by the participants in the study, which are then used to form categories and sub-categories for these results. These categories are formed by analyzing specific and/or common answers or opinions to certain topics. Similarities and differences between certain topics are noted in a matrix document to gather all the data elementarily, to form certain criteria that reflect similar behaviors. These categories and criteria will be stated and analyzed in the discussion part, according to their significance to the result of the study and connections to the theories and researches. In the next section, the questions or different topics of the research that are divided into 5 parts will be presented; with the motivations to including these specific topics/questions and concise expectations from each of these topics.

The interviews are not made in a linear way for each participant to clarify, interviews are started with some basic questions about Netflix access frequency or total time period on the platform, then followed by different questions based on the answers or opinions of each individual. For example, if a participant mentioned that he/she prefers to watch recommended content on the platform while trying to find new movies/series to watch, the interviews continued with similar topics related to recommendation systems. Needless to say, all of the participants are asked all of these categories and questions; excluding the specific follow up topics which are stated earlier in this part.

Again, as mentioned, there are five categories related to different aspects of Netflix and user behavior. Each of these categories will be explained with corresponding topics in this part, with the motivations why of these are included in the research.

First of these categories is about how users are finding content to watch and their opinions about recommendation system of Netflix. Each topic in this category will be listed briefly with motivations to be included in the interviews.

- Where were you watching content before Netflix?

This question is asked in order to learn the primary sources of participants to consume/watch content before Netflix such as illegal streaming sites, cable television or other Video-on-Demand services.

- How do you find content? Do you search for it (specifically) or content finds you (watching recommended content)?

This topic aims to understand the sources/ways users discover new contents; such as by researching from IMDb or other databases for video material, by watching trailers or reading descriptions from Netflix, from social media, by conversations with their friends/family, or popular/recommended content on Netflix. Second part of the question aims to discover whether users search for a specific content or genre; or they prefer to watch recommendations based on their watching history while on Netflix.

- Do you search content on the search bar on Netflix or just scroll and find something on the homepage?

This topic is included in order to understand whether participants prefer to search content, scroll down to look at popular section, or continue scrolling to

see different content categories based on genres and recommendations according to the watching history while deciding on what to watch.

- Do you use like/dislike buttons? Are you adding content to your list?

There are options in the Netflix interface such as like/dislike or add content to watchlist, which have effects on the recommendations, since the algorithmic engines analyze to recommend content for each individual accordingly.

- What do you like/dislike most about the platform?

This question aims to understand participants' most liked and disliked features of Netflix platform. The answers that are given to this category are related to their overall experience in Netflix as well as their general opinion towards the platform.

- What do you think about the match percentage of the content?

There is a feature called match percentage appear next to each content, showing a specific percentage based on watching history, interests and previous ratings on Netflix. It is in a way, a visualization of the algorithmic engines.

- Does generated content gets relevant (better) over time? Maybe after using the like/dislike buttons?

A follow-up question about the ratings system, as well regarding the recommendations based on the watching history over time. Their opinion towards this topic is directly related to recommendation system of Netflix.

- When you decide a content is for you/not for you? After 1 episode, 3-4 or 1 season?

This question aims to find whether participants finish/continue watching a content or not, when they do not like a movie or a television series; or in the

case they are not simply interested in the genre. This behavior is also related to recommendation system since it monitors these actions by the user as well.

- What do you do when you could not find the content you are looking for? Would you consider watching recommended/similar content instead?

By this topic, it is aimed to understand whether an individual try to find a specific content elsewhere when it is not on Netflix or, they consider watching a content that is available and recommended by the system. Their statements here also affect their opinions about the recommendation service.

- What are your favorite genres in television series/movies?

This topic aims to answer whether participants have a specific taste or interest in certain genres among movies, television series and documentaries. Responses to this topic could affect their experience on Netflix since, some genres have more content on Netflix Turkey database and some do not. For example, fantasy movies like Star Wars, Harry Potter or Marvel Universe are not available in the platform, that is the case for HBO dramas as well.

Next category directly focuses on user behavior while watching content, in cases such as preferred platform to access, favorite content type or most common situations they visit the system to watch content.

- Are you watching cable television, Digiturk etc.?

This is a direct question trying to show whether Netflix users watch cable television or similar substitute like Digiturk or Tivibu on a regular basis, and if they do so; what programs/channels they prefer to watch.

- Are your viewing habits affected? Do you watch more or less content?

A two-step question aims to analyze the overall changes in participants' behavior after switching to Netflix and their time spent while watching content in general.

- Where do you watch from television, computer or mobile devices?

This topic aims to show where users prefer to access Netflix among many alternatives, such as; smartphones, laptops, tablets, Smart TVs or Apple TVs. These answers also affect other topics during the interviews also, shows their preferred behavior while watching content.

- Do you switch platforms while watching a content (from PC to mobile etc.)?

A follow-up question related to the platforms used to access Netflix, whether they switch from one platform to another e.g. from Smart TV to laptop in some situations; which this behavior could affect their experience.

- Are you using Netflix platform while you feeling down emotionally or when you are sick?

A behavioral topic aims to find whether participants are watching more content when they are bored, stressed, sick or emotionally down; compared to their regular moods.

- Do you have some kind of rituals like using Netflix on holidays, weekends, while eating, before sleep?

Another behavioral question trying to find out most preferred situation to watch content on Netflix such as while eating, before sleep, on gym, after studying/working and so on.

- Do you watch television series more or less compared to movies in Netflix platform? Which one do you prefer and did it changed before subscribing to it?

This topic is included in order to understand the changes in participants' favorite content types after switching to Netflix, if there are changes in this area needless to say.

- Do you prefer watching movies on Netflix or in cinema? (For the examples that shown on both e.g. *Roma*)

A specific question for participants who regularly watches movies. There are some cases such as *Roma*, or Turkish example, *Organize İşler: Sazan Sarmalı*, which are both shown on cinemas along with on Netflix. Their answer and the reason for it is directly related to their opinion about Netflix or Video-on-Demand services in general.

- What do you think about notifications?

A specific question trying to find opinions of participants who are regularly using their smartphones or tablets to access Netflix. Netflix application regularly sends notifications to users about new content along with reminders about their favorite series and so on.

Next category is directly related to binge-watching behavior, an action where an individual consecutively watches movies/television series; usually in a short period of time. Binge-watching action is another aspect of user

behavior on Netflix or while watching content, but as stated in the theoretical part; it is an important topic in the subject of Video-on-Demand services and also according to the researches, it has been increasing in platforms such as Netflix.

- How often do you use the Netflix platform?

Frequency of the access to the platform could be a factor on binge-watching action, as well as participants' overall behavior while consuming content.

- Are you performing binge-watching? For a specific content like a season of a television series or different content back-to-back? What about before Netflix?

These two topics are aiming to find whether participants are performing binge-watching on Netflix or not, thereto with motivations/situations if that is the case. Additionally, the follow-up question aims to find out if this behavior is changed or not, after switching to Netflix.

- Do you think you are spending too much time on Netflix (more than you supposed to)? Does it affect your school work / business life or sleep in any way?

Another part about binge-watching and time spend on Netflix platform aiming to find out whether participants are watching more content than supposed to in their opinions, also; if that have effects on their lives in any way such as on sleep, work related activities or social relations.

- Does Netflix or watching content online make you procrastinate your other works?

This topic is also related to previous question, intended to present whether individuals are procrastinating things in their lives in order to watch content and if so; how frequently.

Following category is related to social part of Netflix experience of participants, in the cases of their opinions of Netflix's social media marketing strategies and activity on social media platforms; along with account type of participants, whether they share an account or watch content together with acquaintants. Answers to these questions could also be considered as parts of participants' behavior.

- Are you using a private account or sharing with your family or friends?

Netflix users could own a private subscription with only one account, or shared subscriptions with other people that includes separate multiple accounts. Account types of participants could affect their experience since, conversations related to content with friends or family members inside these plans could happen in some situations.

- Are you using Netflix to watch content while spending time with your friends, lover or family?

A participant's experience while watching content alone or with other people would be different from each other and this topic tries to find which of these behaviors users are performing along with its reasons.

- Are you following Netflix social media accounts or accounts of content which are in Netflix platform?

Netflix is actively using social media platforms to reach people and to advertise about their content in a regular basis, which is one of the reasons

of its popularity in today's media environment. This topic aims to find whether people are following social media accounts of Netflix U.S., Netflix Turkey or content that are on Netflix with reasons to each answer.

- What do you think about Netflix's marketing videos about their content that features Turkish culture elements or celebrities? (Stranger things, La Casa de Papel, Narcos etc.)

Netflix tries to connect different cultures through its content by preparing certain promo videos about these movies/series by either implementing specific culture elements into those videos or by celebrity appearances (Acar, 2018; Gazete Duvar, 2017; NetflixTurkiye, 2018; Netflix Türkiye, 2017). This topic is included in the research to understand Turkish participants' opinions towards these videos, such as appearance of Nusret in Narcos trailers or Saadettin Teksoy on Stranger Things promos; along with their attitude regarding these content examples and how are they affected as results of these marketing efforts.

The last category is generally about Netflix and Video-on-Demand platforms, aiming to find opinions and experiences of participants on other platforms, motivations of them to switching Netflix and so on.

- How long have you been using Netflix?

Participants' total amount of subscription time on Netflix, which is a direct indication of their experience.

- How would you explain Netflix platform to a person who has never used it?

This topic intends to show each participants' overall opinion about Netflix or Video-on-Demand services in a brief statement, with possible motivations to subscribe for in the first place.

- Why/how did you start using Netflix?

A direct question for the participants which would present their motivations to subscribe to Netflix beforehand.

- Do you have some favorite series or movies that you re-watch?
(Friends, How I Met Your Mother etc.)

Certain users tend to have favorite series or movies that they like to re-watch over time such as sitcoms like Friends, How I Met Your Mother; Harry Potter or Star Wars. Due to the copyright issues, some of these contents are not available on Netflix. The question here is, if the participants do have certain favorite series/movies like these examples and there are not available on Netflix database; whether they try to find these contents from other places or, watch similar genres that are available on Netflix. Answers for this topic are also related to recommendation systems, as well as participants' overall behavior on Netflix.

- Are you using/ have used other Video-on Demand platforms that are available in Turkey? (BluTV, puhu TV, Amazon Prime etc.)

There are several Video-on-Demand services operating in Turkey such as subscription-based platforms like Blu TV, Amazon Prime and free of charge platforms like puhu Tv, Turkcell TV+ or cable television extensions like Bein Connect. In this specific topic, participants are asked whether they have used/ are using any of these platforms with motivations to do so. The

responses to this question could present users' opinions about Video-on-Demand platforms, also possible comparisons to Netflix.

- Disney and Apple are going to launch their VoD platforms and some of the content will not be available on Netflix. What do you think about that?

There are certain developments in the Video-on-Demand industry in the recent years that big companies like Apple and Disney will be launching their own services somewhere around 2019 (Hewgill, 2019). By that, some of the content on Netflix database such as Marvel super-hero series will no longer be available due to new copyright plans and, databases of current Video-on-Demand platforms are going to change according to these. In this topic, participants are asked whether they are familiar with this news and if their favorite genre moves to another platform; would they consider subscribing to that platform as a result. Following that, participants opinions about multiple subscriptions to Video-on-Demand services are asked, to understand their possible behavior due to changing content databases.

- Have you noticed the change in the User Interface of Netflix while watching content recently? Does your experience affected?

Netflix regularly updates its interface with visual and performance changes to increase user experience inside the platform and these updates tend to be more frequent in mobile platform. In the recent months, Netflix has made some visual changes in the interface of its website for computers, by adjusting the sizes of options and buttons while watching content (Gao, 2018). The question for the participants here is whether they have noticed

these changes, and if they did; whether their experiences have affected or not compared to prior.

3.2 Results & Discussion

This section will present and analyze the results of the research according to the theoretical part and research question. Assessments about these results will be given in the end as an evaluation of the project. Primarily, it is to be stated that similar behaviors are observed or stated by the participants throughout the study. In various stages, which will be analyzed in detail, participants have presented some similar patterns in terms of behavior, attitude and opinion. Based on these patterns, initial assessments have been made in order to evaluate the data that has been collected. Participants have been put in specific categories based on observed behavior and their statements. Before the analysis of each entity of the research in detail, these mentioned categories will be presented as introductory results. Distribution of these categories is the foundation of this research and has a direct effect on the results in the end, since these categories are constructed by evaluation of user behavior in the case of Video-on-Demand services and Netflix.

There are two significant main categories of users within the study. Each category has also separated into two sub-categories, again, based on their behavior and answers. It is also observed that there are other distinctive behaviors by users throughout the study. These particular patterns have no

direct influence on research hypotheses or main categories but, they reflect the Netflix user behavior and are to be mentioned in order to evaluate the data in detail. Four categories of that sort have been observed over the study and all of them will be analyzed accordingly with their significance in this section.

According to the first analysis of the results, two main categories of users have been observed inside the study: “platform-oriented” users and “content-driven” users. Categories have been named according to the main influential behavior by the users, that is to say, how they are finding/discovering content to watch. Concisely, platform-oriented users tend to discover content on platforms like Netflix; while content-driven users mainly tend to follow specific content examples and do not limit themselves into a specific platform such as Netflix. Overall, the distribution of these categories in the study are exactly the same; that is to say ten participants have been placed into each category.

Platform-oriented and content-driven users tend to exhibit different behaviors in areas such as finding content, watching habits, and attitude towards recommendation systems and Video-on-Demand platforms. These different behaviors and opinions have been formulated into criteria for these two different categories. All of the main characteristics of these two categories will be stated along with their sub-categories incipiently.

3.2.1 Audience Categories

3.2.1.1 Platform-Oriented Category

Platform-oriented users could be stated as “Netflix lovers” in broader sense. Distinctive characteristics of this group separate these users from content-driven users, which will also be presented. Preliminarily, platform-oriented users tend to find/discover content by Netflix recommendations or from descriptions/trailers on Netflix. In other words, Netflix platform and recommendation system of Netflix plays a huge role on their content discovery and watching behavior. In a similar manner, this category of users tend to consider watching similar or recommended content when the specific content they are looking for is not on the database. Likewise, majority of the platform-oriented users stated that recommended content for them got better over time by using the rating system of Netflix; like/dislike and add to list options. As a result, rather than trying to find content from other sources, platform-oriented users like recommended content on Netflix and usually rely on recommendations while trying to find movies or series to watch.

This category of users stated they have been watching more content in general after switching to Netflix, tend to have more watching rituals, and think they are spending more time than they are supposed to on Netflix and it mostly affects their sleep as a result. Furthermore, they tend to procrastinate more because of watching content instead of working or studying for a

specific task. As could be seen, platform-oriented users have a tendency to spend their free time on mostly Netflix; and this behavior affects their lives in areas such as work, sleep and social affairs.

Most important motivation for subscribing among platform-oriented users is because Netflix was popular around their social circles or on social media and/or their friends have recommended Netflix to them. Also, connected to the social part of Netflix experience, they tend to like Netflix promo videos including Turkish celebrities and Turkish culture elements. Majority of them stated promos like these videos could affect people to watch a specific content because of successful marketing and public relations strategies. Coming to the news about Video-on-Demand industry, platform-oriented users stated that they would stick to one subscription, preferably to Netflix; even though the competition in the industry will increase by companies like Disney and Apple and their favorite content could switch to one of these platforms eventually. Again, it could be seen that platform-oriented users tend to like the Netflix experience in cases of recommendations and marketing strategies; they like to spend their free time mostly on Netflix and prefer to stick with only one subscription, even though their favorite genre or content could switch to another platform.

According to their behavioral tendencies, differences are also observed among platform-oriented users. Herewith, two sub-categories are formed in order to analyze this category of users further. Formation of these categories have been made by analyzing participants' answers and opinions. Division

between these sub-categories are made by looking at user behavior in general, by specific criteria that are different from each other. Most significant of these criteria are as follows: how do they find content, do they watch content only from Netflix or also from illegal streaming platforms as well, and their total Netflix usage amount.

First group of people among platform-oriented users could be called as “softcore Netflix users”. This type of users tends to watch content outside of Netflix as well; mostly in situations when they could not find what they are looking for. Also, they do not rely on Netflix recommendations, trailers and descriptions that much and discover and decide on what to watch from sources such as IMDb, Rotten Tomatoes, Ekşisözlük, social media and other blogs. Their main motivation to use Netflix is not the recommendation system, but because Netflix is easy to use, legal and does not have advertisements while watching content; compared to illegal streaming sites. In general, softcore Netflix users group likes the convenience of Netflix; as many of the users inside this group stated they enjoy the ad-free, easy to use interface among all the things, but do not especially like the recommendations and recommended content; since they prefer to find what they are looking for. There are four participants that could be categorized as softcore Netflix users within in the study.

Second group of individuals inside platform-oriented category is named as “hardcore Netflix users” or “Netflix lovers”. Main distinctive characteristic of this group is that they tend to like recommended content and

recommendations system, and discover and find content mostly from the algorithmic engine of Netflix. Correspondingly, these individuals tend to watch content only from Netflix, even though they could not find a specific movie or a series. Compared to the softcore Netflix users, this group tend to have longer Netflix experiences as they are mostly using the platform more than two years in general; others since Netflix started operating in Turkey. Recommendation system is the most important feature for them since it generates content according to their taste in content, it saves time because they do not have to find content on their own and in general, hardcore Netflix users have older subscriptions compared to softcore Netflix users group. There are six individuals in this category based on these criteria.

Even though platform-oriented users have similarities in terms of their watching behavior and opinions, there are differences as well that created these two sub-categories. These two separate groups mostly differ from each other with their reason to use Netflix to watch content. Softcore Netflix users use Netflix because it is easy to use and ad-free, whereas hardcore Netflix user category loves the recommendation system and generated content. In general, it is observed that, softcore Netflix users have less Netflix usage time compared to hardcore Netflix users. Also, from the answers of the hardcore Netflix users, it could be said that early adapters of Netflix fall into the softcore Netflix user category and over time, they are becoming hardcore Netflix users. Almost all of the category two platform-oriented users, hardcore Netflix users, stated that they have enjoyed the easy to use, ad-free structure of Netflix in the beginning but did not only rely on Netflix to watch content

since the library is limited and they have watched content from other places as well. Yet, since most of these other sources are illegal and full of advertisements; this behavior has changed over time due to the fact that Netflix interface is so much easier and efficient. So, over time instead of going to other places to find content that are not on Netflix; they started to watch recommended content Netflix has generated for them, and to be noted, mostly liked these movies or television series. That behavior has evolved into a habit over time and these individuals have become hardcore Netflix users, as it is stated inside this study.

3.2.1.2 Content-Driven Category

In broader sense, as the name suggests, content-driven users do not limit themselves to a single platform and have specific content taste therefore; they research more before watching a movie or a television series. The most distinctive characteristic of this category is the importance of content over their watching behavior. In general, content-driven users check content ratings, plots and summaries from multiple sites such as IMDb or Rotten Tomatoes instead of relying on Netflix descriptions, trailers and percentage matches. These individuals tend to not like recommendation system as they like to select what they want to watch and if the content they are looking for is not on Netflix; they would find it elsewhere instead of watching similar/recommended content on Netflix.

Compared to platform-oriented users, content-driven individuals tend to watch more cable/traditional television, for cases such as a specific television series, football or basketball matches or news. Also, they do not have apparent watching rituals compared to other group, as they prefer to watch content according to their free-time or mood in general; but not in certain situations. Most of these individuals' content preference have also changed after switching to Netflix, as they prefer to watch less movies compared to television series or documentaries; as the common reason stated is that the movie database is smaller compared to series and documentaries.

Content-driven individuals tend to check Netflix notifications on mobile platforms and when they are on the website more than platform-oriented users in general, to learn more about new content added to the Netflix library. Majority of users inside this category have shared accounts with their friends, rather than shared accounts with their families or private accounts; but prefer to watch content alone instead of watching with other people. Most stated answer for this behavior is that they like specific genres and content types which could not appeal to their friends or families so, they like to watch content alone if possible; even though they are sharing accounts with their friends.

Main motivation for subscribing among content-driven users is because of a specific content, mostly series that is on Netflix. Almost all of content-driven users started their subscriptions in order to watch a Netflix Original Programming content, other factors such as easy-to-use interface and

advertisement-free structure come after this reason. In parallel with their main behavior, content-driven users consider subscribing to other Video-on-Demand platforms such as Apple or Disney, if their favorite series or genres move to another platform. Furthermore, most of these individuals stated that the interface or structure of platforms do not affect their opinions to subscribe or not; but the content databases do. In other words, their main preference is the content library and in order to watch more content in a legal way, these users stated they could consider subscribing to multiple platforms in some cases; cancelling their Netflix subscriptions for these new Video-on-Demand platforms if the databases are bigger.

Similar to the platform-oriented users, content-driven individuals also possess different behaviors and opinions. For this reason, two sub-categories have created to analyze this group of users in a more accurate way. These individuals are distributed into two groups according to their perception of Netflix database, their tendency to use other sources to watch content other than Netflix, if they are willing to pay or not for a Video-on-Demand service, time that they are spending to consume content, and according to their perception of piracy for video content in general.

Subcategories of content-driven users is more visible compared to platform-oriented users since more distinctions are available. First of these categories is the “occasional watchers” group, who like the ad-free structure of Netflix, its video quality, options for different audio and subtitle languages, which are not available in most illegal alternatives. These individuals do not consume

that much content and/or have the free time to do so, that is why even though they like the convenience of Netflix; they do not want to pay for these advantages. Throughout their experience, most of these individuals have stated that have not watched that much content in general so, paying for a service they do not use frequently does not make that much sense in general. For these reasons, even though they prefer to watch content on Netflix; it is not a frequent action in general. Important note to mention here is that, there are lots of similarities between this group and softcore Netflix watchers group since they mostly like the same things in general about the platform. These groups differ from each other by other motivations and behaviors, such as finding/discovering content, and relying on a single platform to watch content, in this case Netflix. There are five users inside this category, so the distribution between these sub-categories is the same.

Second group of the content-driven users is almost the opposite of other groups inside the study in many ways. This category is named as “hardcore content seekers” or “content pirates” as the most important factor for them is the content itself. These individuals tend to not like recommendations at all, think the Netflix database or any legal streaming service database for that matter is not big enough for subscribing, almost always have specific content examples on their minds and make more research compared to other category of users before deciding what to watch. In parallel with these behaviors, hardcore content seekers do not want to pay for a Video-on-Demand service since they could find the content they are looking for from other sources such as illegal streaming or Torrent sites, and do not care

about legality in the context of movies and television series that much. Their main aim is to find and watch what they are looking for therefore, the platform or source does not matter for them. Because of these reasons and motivations, they are less annoyed by advertisements in these illegal sites; since the most important thing is to consume content at all cost, even though the process of doing it is not convenient. In almost all cases, if the content they are looking for is not on Netflix; they would find it elsewhere. In fact, some of these individuals have only tried Netflix for small periods of time, mostly for the trial period, and cancelled their subscriptions because they state they could find these movies and series on Netflix from other sources.

As stated, even though platform-oriented and content-driven users are different from each other, there are similarities between them. Occasional watchers and softcore Netflix users exhibit the most similar behaviors and attitudes towards Netflix and Video-on-Demand services. It is also stated that, new adopters of Netflix tend to be inside occasional watchers and in over time; they could become hardcore Netflix users. There are fluidities these three categories since individuals could adopt new habits over time by using Netflix and their preferences could change because of the easy-to-use and efficient characteristic of recommendations system, which generates content based on ratings, watching history and interests that could save time while discovering new content. That is to say, hardcore content seekers or content pirates are the most static group in terms of fluidity and behavioral change since their main aim is to find all of the content they are looking for whatever the platform is and without a fee. There are multiple participants in

the study that started Netflix because it was easy to use without advertisements but the database was small in their opinion and they continued to watch movies and series from other sources. However, over time amount of time outside of Netflix has decreased due to the inconvenience of these illegal platforms and easy-to-use interface of Netflix. In parallel with that, many participants stated that they prefer recommended content category after some time when they have experienced it generates relevant content for their interests and it gets better over time with their ratings and watching history. To summarize, most of the participants in the study stated they started using Netflix because it was popular or to watch a specific content from there, liked the convenience over time and it has become their primary source to watch content and ultimately; they started to enjoy the recommendation system as it saves time and generates accurate content towards their interests.

3.2.1.3 Other Categories

As stated in the beginning, there are other similar patterns and behaviors of participants have observed that are not directly affecting the hypotheses; but have indirect effects on them. These patterns are either motivations for subscribing to Netflix or behaviors that could affect the Netflix experience in a positive way. There are four categories of that sort inside the study, which will be explained in the following section.

3.2.1.3.1. Using Netflix for Improving Foreign Languages

A category of users that like Netflix platform because of its multiple audio and subtitle options, mostly for English. These users aim to develop their foreign languages, especially English, by watching series in original audio or subtitle options. They perceive Netflix as an educational platform, not a total “waste of time” contrary to other users which like Netflix because it is popular. Or, in general, always prefer watching with English subtitles. There are six participants in this group, four of them belong to platform-oriented category, and two of them are content-driven. In other words, using Netflix for language improving seems to be a higher motivation among platform-oriented users. Another important distinction inside this group is the distribution of platform-oriented users. Three of the four participants in this group belong to the hardcore Netflix users group, making only one user to belong softcore Netflix user category. It could be said that it is an important factor of becoming a Netflix lover in Turkey; especially among the legal alternatives Netflix offers more audio and subtitle options with the larger content database.

3.2.1.3.2. VPN Users

A category of people who use VPN services to usually reach the United States or Canada databases for more movies, or series. Netflix also adds content more often to these database, so the libraries of these countries are

really diverse. People who think that Netflix Turkey's database is very limited and state that is one of the biggest disadvantages in their opinion, tend to perform this behavior for a better experience. This action used to be easier, it was working with almost every VPN service but Netflix has blocked many of them. According to personal research, it now works only from Opera Browser's VPN settings from the computer. Three participants in this group, and two platform-oriented and only one is in the content-driven category. It was expected that content-driven users to be higher in this criterion but; it could be said that this behavior requires some knowledge in terms of Netflix usage, maybe more than usual. Also, changing locations via DNS or VPN need more knowledge in terms of technology and computers, when participants are told how to do it, they said they will try to use this method. Furthermore, there are no certain distinctions in distribution of participants from a particular sub-category.

3.2.1.3.3 Different Platform Users or "Tech-heads"

Another category is the people who are using different platforms to access Netflix compared to the majority; via Apple TVs, Smart TV or PlayStations. These people tend to have more knowledge in technology and tech-related news, frequently follow developments in Video-on-Demand and technology. Since these mediums are not common in Turkish society (mostly because they are expensive and for most people smartphones, computers or tablets are enough), the share of this group in general should be limited; but there

are at eight users who could be placed in this category. In addition, people who prefer watching Netflix from Apple TVs, Smart TVs or PlayStations tend to experience Netflix from these platforms primarily; which means that they experience Netflix in a fixed-state, compared to mobile platforms and laptops. It could be stated that they see Netflix as a direct substitute for television, not for the linear content that televisions have; but for the fixed-state of technology.

As stated, there are eight participants in this category, six of them are platform-oriented, and two of them are inside content-driven category. This behavior is higher among the platform-oriented users; which could be the case that they are more familiar with Netflix and created their own experience by using these different platforms to reach Netflix, contrary to using a computer or smartphone, which are more popular options. Four of the platform-oriented users are hardcore Netflix users and two of them belong to the softcore Netflix users group, which is expected since the hardcore users have more familiarity of the platform. Content-driven users in this group belong to different sub-categories, so no obvious pattern is observed among them.

3.2.1.3.4. Mobile Application Lovers

This category of participants loves the download option in the smartphone or tablet application of Netflix, which gives the liberty to download some content

and watch them later without an Internet connection or downloading from Wi-Fi connections in order not to use their mobile internet plans for consuming content. There are two distinctive patterns observed inside this category so, two sub-categories have formed for analysis. First group of people are almost always using mobile Netflix application to download content, and in second category where participants are using these options for special occasions like before holidays, travelling on planes and so on. The first category in this group usually have limited access to Wi-Fi connection compared to other participants, because they are living in dormitories or not have a stable access to a Wi-Fi connection.

For both categories in total, there are eight participants inside this group, five of them belong to content-driven category and three of them to platform-oriented one. It is higher among the content-driven users, it could be said that content-driven users like the download option more than streaming over the Internet; which could be interpreted as a habit, since they are tend to be less familiar with the Netflix platform and/or using other illegal options more than the platform-oriented users. Four out of five content-driven users in this group belong to occasional watchers, compared to only one hardcore content seeker sub-category; which is a big distinction. This could be interpreted as occasional watchers are tend to like the Netflix platform more than the hardcore content seekers, who tend not to like the platform overall. All of the platform-oriented users belong to the hardcore Netflix user category, it could be said that it is an important factor in their Netflix experience overall; which according to the interviews, it is.

People that are using offline mode almost always in this group consist of four users, three content-oriented and one platform-oriented; as stated it is higher among the content-oriented users. All of the content-driven users belong to occasional watcher sub-category, and one platform-oriented user is from the hardcore Netflix user sub-group. People that are using this feature for occasional reasons such as travelling or during holidays, commuting and so on. consists of four users, two of them are platform-oriented, and two from content-driven category so; there is no obvious pattern. The distribution of content-oriented users is the same as well, meaning two of those users belongs to separate sub-categories. However, both of the participants under the platform-oriented group belong to hardcore Netflix users; probably because of the stated reasons above.

As the categories and patterns are covered above, next part of the research will present the results for each step of the interviews by relating them to the points stated in the theoretical part along with the hypotheses of the thesis. In a similar way to the methodological part of the research, results will be presented five separate categories. General evaluations of results will be included at the end of each category respectively.

3.2.2 Interview Categories

3.2.2.1 Finding Content/Recommendation System

First question in this category is the preferred platform(s) before Netflix for consuming content. According to the multiple answers given by the participants, illegal streaming sites is become the most common one in fact; all of the participants stated they have either frequently used these sites. Following that, YouTube is the second most common with four times, followed by torrent site downloads with three times. Two of the participants stated they have been watching content from DVDs as well, one of them answered by renting movies from Apple iTunes Store and finally, one participants stated television for watching content before Netflix. As could be seen, users have been watching content other than television even before Netflix in almost all cases; by either downloading illegally or streaming from illegal and/or legal platforms. That is to say, it is a result of the new media era where almost all forms of video content could be found over the Internet; legally or illegally. Again, that is the effect of media and technology revolution that have been happening over the last decades over the audience and Netflix is the ultimate product of it in the form of a Video-on-Demand streaming platform.

Second question is about how people are finding content, that includes how do they discover new content to watch also; whether they search for a content or prefer recommendations in general. Majority of the participants stated they are deciding on content to watch from critic sites such as IMDb, Rotten Tomatoes, and forums like Ekşisözlük or Reddit, and from social media, or from their friends during conversations. Netflix trailers, descriptions

and recommendations are important sources as well for finding content according to the users. In addition, some participants stated they are usually Googling names for television series or movies to watch, which they used to perform this behavior more before switching to Netflix while watching content from illegal sources. As could be seen, the Internet plays a huge role in the contemporary entertainment world as majority of the participants of the study discover new content over the Internet, search them through search engines and ultimately; watch recommendations that are generated by the recommendation systems. This behavior could be related to Query culture phenomenon, where people around the world rely on search engine results for finding information and knowledge. That is the case for content as well, but recommendations systems inside Video-on-Demand services have also been changing how people discover and watch content.

Next question is also about audience's behavior while finding content. They are asked if they are using search bar on Netflix or scroll down to look at different content categories or not. The search bar is mostly used by content-driven users, but majority of the participants stated they are frequently scrolling to see different categories of content; especially the recommendations generated by them based on their watching history. This behavior could also be linked with the Query culture theory, along with the importance of recommendations for users; by the algorithms that Netflix uses.

Recommendations generated by Netflix's algorithmic engine principally relies on user input, in this case, the rating system. Participants are asked if they are using like/dislike options along with add to the list feature. In parallel with the previous finding, majority of the participants stated that they are frequently using these options; hoping that these inputs affect the content generated for them. In fact, these options are more important to some users as participant #17 stated that: "I hope they are looking at these because it is important for me since you are the participant here; you pay the money and have to say something to them. I even e-mailed them for airing Sense8's final episode (after it got cancelled)." As it may be seen, Netflix users want to think they are also participating while consuming content in Video-on-Demand services; which was not the case before these platforms or the Internet. Cable television content that people have been watching since their first emergence are not media that could make the audience feel like a participatory factor since there is no instant user input. By the help of the technological advancements and the Internet, that has been made possible for the audience; and that is the case for Video-on-Demand services.

Participants are then asked what do they like and dislike most about the platform. Respectively, most common answers are easy to use interface, ad-free structure, video quality, option for offline downloads, different subtitle and audio settings and in general convenience. For the negative side, most of the participants stated they did not like advertisement-like automatic trailers and limited content for the database. The convenience of Netflix could be seen from an answer of participant #7 as: "When you buy a DVD, you

spend more time in order to start watching. But on Netflix, you can open the app and start watching faster.” A similar description has been made by participant #14: “It is way easy to use. You can download, with really good quality, it doesn’t take much space as illegal copies that you download from the Internet.” As it may be seen, participants like the convenience of Netflix and state it by comparing their Netflix experience to previous sources of content consuming. According to these statements, participants find Netflix more convenient than traditional entertainment sources such as cable television and DVDs; also from recent sources of content consuming such as illegal streaming sites.

Next question is about the match percentage option, that is the visualization of the algorithmic engine inside Netflix. Almost half of the participants find the option useful or accurate, while the other half find it not accurate at all times since sometimes they have liked content with lower percentages as well. Since the algorithmic engine observes watching history for generating content, sometimes it could recommend genres that a user have watched; but not interested in the genre normally: “When I like How to Get Away with Murder, it means I like drama content; but not all of them” (Participant #11). Yet, since the recommendation could also be rated with options; it is meant to be adjusted by user input and therefore it could generate more relevant content for each user. In general, considerable number of participants have stated they are regularly checking these percentages before deciding on something to watch; even though the numbers are not always consistent.

Next question is about their perception of generated content and whether it gets better over time by using the rating system in their opinion. There are again mixed answers, but who like and watch recommended content stated that it has become more accurate and relevant over time. “Yes, for example, when you finish watching a movie, there is like/dislike option. If I like it system recommends similar movies, and if I don’t like; usually see other stuff instead” (Participant # 12). Some of the participants also stated that they did not like the recommendations at first but after disliking and liking particular movies or series; it has become more relevant and they prefer to watch recommendations now.

Another question is about their decisions over content that they started watching. Participants are asked when do they decide that a movie or generally a television series is for them or not for them. Majority of the participants stated that they usually stop watching if they do not like the beginnings of movies or first couple of episodes of television series. If that is the case, Netflix recommends different content for them to watch instead and majority of the participants stated that they are just clicking other movies or television series from the recommended category on Netflix homepage and continue watching something else. Another thing to mention is that, Netflix also categorizes the recently unfinished content on the homepage and some participants stated they are finding this option to be useful since when they get bored, they could click on an unfinished movie and television series and continue watching. Again, it is a feature that users do not have to find these unfinished contents on their own which is convenience and ultimately; an

option that is made possible by the Video-on-Demand services after the Internet.

Since the Netflix library does not include all of the movies and television series over the Internet due to the copyright issues; the database is somehow limited, and that creates some problems for the users. Study participants are asked what would they do when they could not find the specific content they have been looking for in parallel with this problem. As stated in the previous parts, platform-oriented users tend to watch recommendations or similar content instead of trying to find it somewhere else; which is the common case for content-driven users. Yet, by these occasions, users could also discover new content and end up liking them as well: "I have found the Altered Carbon through the recommendations, I haven't heard of it anywhere. I watched it, I liked it" (Participant #14). As could be seen, recommendations of Netflix have become a source of discovering content for users as well, which is an important part of Video-on-Demand services like Netflix since their databases are limited and offering similar genres of content for users could change their minds when thinking about something else to watch.

Last question within this category was about the participants' favorite genres among movies and television series. Even though there were variety of different answers, there were certain statements which are important for the study. In fact, one of the participants have stated that she had discovered the psychological drama genre from Netflix recommendations, which ended up

becoming her favorite genre over time and she was not aware of it before switching to Netflix. Some participants have also stated that they were not interested in a specific genre, but mostly prefer watching Netflix Originals or recommendations while on the platform. As it may be seen, the recommendations have also an effect on users' favorite content types after all.

3.2.2.2 Behavior

First question inside this category aims to find whether participants watch cable television, Digiturk, D-Smart or Tivibu on a regular basis. Seventeen of the participants have stated that they were not watching cable television or a substitute on a regular basis or not at all for years. Only three participants have stated they are watching television on a regular basis. These individuals either track some television series on the television or watch channels such as FX or TLC time to time. The name of an old television channel CNBC-e was mentioned couple of times by participants in the subject of television: "I just loved CNBC-e. I used to watch series before it was shut, then I started pirating them online. Now, I use Netflix" (Participant #14), "Before Netflix, we used to watch television, CNBC-e to watch series" (Participant #10). CNBC-e was a broadcast television channel that aired foreign television series with subtitles and that was very popular in Turkey until its closure. As it may be seen, after that event; users went online to watch series and eventually become Netflix subscribers to watch content.

Another participant, #11, stated that she used to watch Digiturk until recently: “But these days especially after it has been taken over by Bein Sports, the content has changed significantly and not that much content comes to Digiturk anymore.” Furthermore, she stated that was the reason for her to switch to Netflix in the first place. Other than these examples, two participants stated that they are watching football or basketball matches time to time and one participant stated that she watches news time to time on television. As it may be seen, cable television or contemporary substitutes are not popular especially among the younger generation and they prefer the convenience of the Internet: “Old habits. The new generation, us, we just watch things from our computers; it is much more convenient” (Participant #12). Watching television is perceived as an old habit and younger generation tend to watch content over the Internet.

Next question is about participants’ changing viewing habits in terms of amount of content they are watching after switching to Netflix. Apart from two users that stated they have either watching the same amount or less, all other participants stated that they have been watching more content in general after Netflix. “After Netflix, everything has become so much easier, I started to watch more series, documentaries in general” (Participant #13). This increase in content consuming is explained as it is easier compared to illegal alternatives without the advertisements by the participants in general. Automatic starting of next episodes and options to skip intros or credits also have effects on this increase as one participants states Netflix interface makes you watch more and more almost “forces you to watch more” by its

convenience (Participant #2). As could be seen, majority of the users have experienced changes in their behavior with Netflix, in this case they are watching more content in general.

In the next question, participants are asked which platforms are they using to access Netflix. Even though, smartphones and laptops are the most common answers; users are also using Smart TVs, PlayStations, Apple TVs, and tablets to watch Netflix. Especially, participants prefer using smartphones to access Netflix since it gives the option to download content for offline usage. In general, contributors of the study are using multiple platforms to access Netflix depending on their situation or mood; which is the liberty of platform based services. Users have been given the liberty to choose the platform they like to access, and preferred platforms could change according to situations such as while travelling, on bed, or at school.

Next question is also linked to the preferred platform question as well where participants are asked if they are switching platforms while watching content such as from smartphone to laptops or to Smart TVs and so on. As stated previously, some participants are using the offline mode in some cases such as travelling, or switch platforms in order to watch content from a bigger screen in their home such as Smart TVs. Some users are also browse content from one platform and watch it from a separate one: "Because it is easier to search from the phone app compared to computer" (Participant #16). Again, it could be seen that users are actively using alternative

methods to access Netflix, which is made possible by the Internet and technological developments especially in the mobile devices.

Another subject in this category is about participants' behaviors in situations such as they are bored, sick, emotionally down or stressed. They are asked if they are watching Netflix content more than usual in those situations. Since dealing with these circumstances changes from one person to another, there are mixed answers for this subject. Some of the participants stated that they prefer doing other things in those situations such as listening to music, reading books, playing games or going out to meet with their friends. "Netflix is not something that I do for to kill time, but to enjoy myself" (Participant #14). Yet, more than half of the participants stated that they are watching Netflix in those situations. "When I am in a bad mood, I get under my blanket and open my laptop. That is my whole day." Similar statement is being given by participant #6 as such: "Yes. For example, while I am just sitting and doing nothing; I usually login and watch whatever is available and that time." In general, it could be said that majority of the participants tend to watch more content when they are feeling down or stressed. That could be evaluated as an escapism behavior by Netflix users, in the age of new media.

Next question is about watching rituals of participants. Apart from three individuals, all other users stated have at least one watching ritual. Rituals among the participants according to the commonness are as follows, while eating, before sleep, before/after studying, while traveling or commuting on a

bus. Participants tend to watch Netflix especially while eating according to the interviews: “Usually I try to eat something when I watch some stuff, and try to finish my meal along with Netflix; not to watch too much” (Participant #6). Another user, participant #11, states the same situation with the reason as well: “I definitely watch something while eating because it equals the time balance (you can do two things at a time).” As it may be seen, Netflix users tend to have watching rituals in certain situations. This is made possible due to the fact that Netflix could be accessed in multiple platforms including mobile ones and do not require a fixed state in order to watch content. With the technological possibilities, audience of Video-on-Demand services are adopting more watching rituals since the devices that are used to access Netflix are portable; which was not the case in the television era and early days of computers.

Next section inside this category is about the content types preferred by Netflix users. They have been asked if they were watching more or less of television series, movies and documentaries. Apart from four users, all other participants have stated that they were watching more television series compared to movies on Netflix. Majority of those have previously preferred watching series over movies but four participants among those have stated that they are watching significantly less movies after switching to Netflix, mostly due to the fact that the movie database is smaller compared to television series. In fact, one participant stated that he had only watched a couple of movies over the last six months, compared to hundreds of television series episodes. Also, there was another significant change in

consumption of documentaries among users. Ten of them stated that they were regularly watching documentaries as well and six of those participants stated that they have either never watched documentaries before Netflix or rarely preferred watching them. Those participants have stated that they started watching documentaries mostly by Netflix's recommendations, liked what they have watched, and continued watching over time. Again, it is visible that Netflix as a Video-on-Demand service has been changing audience's watching habits for preferred content type; especially with recommendation systems.

For the next question, participants were asked whether they preferred watching movies on Netflix or in theaters for the cases that shown on both platforms. Seven of the participants stated it differed from example to example or had no opinion about the subject, nine of them stated they preferred watching them on Netflix, and four of them stated that they would prefer watching movies of that sort in theaters. Reasons for preferring theaters over Netflix according to these users are that some movies have to be experienced in a big screen without distractions: "Movies like Roma, Dunkirk needs to be experienced in a proper theater for the sound design and visuals. But for movies like, any Marvel movie, any action movie, I can watch them anywhere. That doesn't matter" (Participant #14). Majority of the participants prefer Netflix over theaters as stated, and most common reasons for this are the convenience of their homes, it takes less time to watch since they do not have to find tickets for their free-time and so on. "It gives both different tastes but I definitely prefer to watch it on Netflix because I don't like

spending time for finding a suitable time for the movie” (Participant #11).

Once again, the effect of Video-on-Demand services could be observed in other areas, in this case movies and theaters. Users like the convenience of Netflix while watching movies that are also shown on theatres, but there are also users that prefer watching movies in theaters; depending on its genre or type pointedly.

For the last question for this category, participants were asked what they were thinking about Netflix notifications. Six of the participants stated that they like being notified about new content on a regular basis, six of them remarked that they do not like these notifications or any notification for that matter, and eight of them had no opinion of the subject at the time of the interviews. Even though the distribution of users for this subject are almost equal, users that like the notifications stated they like being notified since sometimes they could forget to check new content on Netflix and since it is provided for them; it is convenient. Features like notifications are made possible in platforms such as Netflix by the evolution of the Internet, and especially works in an effective way on mobile platforms such as smartphones and tablets.

3.2.2.3 Binge-Watching

This category is directly about binge-watching behavior among the participants. First question in this section is about the frequency of access to

Netflix by the users. According to the results, thirteen participants have been accessing Netflix on a daily basis, four of them are accessing it three to four times per week, and three of them access Netflix only once or twice over a week. As could be seen, majority of the users in the study are accessing Netflix every day, at least once. That behavior could be considered as a habit in fact, it could be said that they have replaced watching television with Netflix over time; since majority of the participants stated that they do not own a cable plan and use Netflix as a television substitute instead.

Next question is about binge-watching particularly on Netflix and before Netflix as well. First of all, seventeen participants have stated that they are either binge-watching content on a regular basis or sometimes, depending on their free-time. In other words, only three participants stated that they are not binge-watching at all, on Netflix or before subscribing as well. Among the binge-watchers however, ten of them stated that their binge-watching behavior has increased as they switched to Netflix, only seven of them said it has not changed at all or decreased after Netflix. Most important factors in this increase according to the participants are the advertisement-free and easy to use structure of Netflix and the interface itself which encourages binge-watching after all: "You don't have to click for the next episode, it just starts again. You may say okay, let's just see another episode and go to bed; it starts again when it ends" (Participant #17). The automatic start of next episodes especially has an effect on binge-watching according to the users in general. In some cases, continuous binge-watching behaviors caused some participants to feel anti-social, even "feel separated from outer world"

(Participant #4). This kind of immersion is made possible by the user interface of Netflix, to encourage users for continue watching, even when they feel they have been watching more than they supposed to in some situations. Moreover, binge-watching is not a new behavior unique to Netflix, but it has increased significantly according to the results.

In next section inside the binge-watching category, participants are asked whether they think they are spending too much time on Netflix. And if they think they do, they are asked which aspects of their lives are mostly affected. Twelve of the participants stated that they think they were spending more time than they supposed to on some occasions or in general, and eight of them replied that they were not spending too much time watching content on Netflix. Among the first category, most common aspects stated as affected are sleep cycles, school or work life, and social life; with ten, five and four times during the interviews respectively. Some of the participants' statements are as follows considering the subject: "For example, if I start a new series which I really like, I watch about 10 episodes so it affects all of my responsibilities, I don't want to study, I don't want to go out; I just want to watch more" (Participant #16), "It affected my studies last semester, now I try to restrict it. It is bad, but it is fun" (Participant #12). It could be seen that, Netflix usage has effects on audience's lives, mostly in the case of sleep as they continue watching rather than sleep.

This topic is also related to previous question, intended to present whether individuals are procrastinating things in their lives in order to watch content

and if so; how frequently. According to the results, eleven of the participants stated that they are procrastinating things in their lives because of watching content, nine of them remarked that they are not procrastinating at all or watching content is not the only reason to procrastinate things. As participant #12 explains watching content from Netflix increases procrastination: “I tend to do homework at the last day or hour, push it as much as I can and Netflix is an important factor.” The role of binge-watching and the encouraging interface for this behavior of Netflix increases the procrastination according to the results of the study: “One episode generally becomes ten in my case” (Participant #14). As stated, Netflix as an excuse for procrastination is an important factor; but it is not the only reason among the participants.

3.2.2.4 Social Part of Netflix Experience

This category mostly focuses on the social part of Netflix experience as stated, trying to find relations of users’ social behaviors on Netflix. First topic is about their accounts on Netflix, whether they are using a private or a shared subscription with their families or friends. Apart from two users, all other participants have been sharing subscriptions with their families and/or friends; with separate accounts for each user inside their plan. In other words, majority of the participants have been using Netflix along with other users; which could be said that it is a social behavior for them.

A follow-up question is asked to the participants that whether they prefer watching content on Netflix alone or together with their friends or families. Eleven of the participants stated they are watching Netflix either with friends or families, and nine of them remarked that they prefer to watch alone. Even though majority of the users tend to share subscription of Netflix plans, almost half of them prefer to watch alone; rather than with other people. Main reason for this behavior is that most of the users have different tastes in terms of content compared to their social environments. In the cable television era, television was the gathering point of families and friends but now on the Video-on-Demand services; audience also has the liberty to watch content alone. That said, there are people that enjoy watching content with other people, and the interface of Netflix is the most important factor: “Especially after the Netflix’s last option to share movies or series with other people on other social media platforms” (Participant #11). It means, Netflix’s option for sharing content with other people have motivated users to watch content together, as a group; which could be considered as a behavioral change.

Next topic is about social media accounts of Netflix and contents that are on Netflix. To start with, only six individuals stated that they are following either Netflix Turkey or the United States accounts from at least one social media platform. So, majority of the individuals in the study are not following or checking these accounts at all. Most common reason for this behavior is stated during the interview #13 as so: “No, because it pops up everywhere. I don’t need to follow Netflix on Instagram because while I am watching my

friends' stories, the advertisements pop up all the time." So, even though people are not following these accounts, they are exposed to them as advertisements. Another participant, #11, gives her opinion about the subject as: "Since U.S. has more content options, it looked more fun compared to Turkey page. But in Turkey account we just see Hakan Muhafız (The Protector) or the upcoming new Netflix series so; I am not checking it anymore." So according to this user, the United States account is more appealing as it does not include local content promotions such as Hakan Muhafız, and that could be explained with the globalization characteristic of Netflix; where in this case she prefers to see content not related to Turkey, but contents that have global characteristics. For the next part of this topic, twelve participants stated that they are either following accounts of shows on Netflix, or accounts of actors/actresses starring in them for learning news or watching related videos. In the end, all of these findings could be related to eventization phenomenon as well; since by combining its content and elements with social media, Netflix gathers attentions of users all around the world, even in the cases that particular users get annoyed from those advertisements on social media.

The last subject inside this category is about the promo videos of Netflix including Turkish celebrities or Turkish culture elements (Acar, 2018; Gazete Duvar, 2017; NetflixTurkiye, 2018; Netflix Türkiye, 2017). Participants are asked about their opinions about these videos that are made by Netflix, for Turkish audiences. Respectively, eight participants have stated that do not like these videos and/or have negative attitudes towards them, seven of them

are not interested or had no opinion, and five of them stated they like these videos and have positive attitudes towards them. As stated, there are mixed opinions about these marketing videos. Some users think that these videos are unnecessary or even repellent: “They are trying to attract people but they should leave cultures on themselves. It is really unnecessary. Why would I see Esra Erol on an American television series? If I want to watch Esra Erol, I would watch Esra Erol. I want to watch foreign series to learn about different cultures so, seeing Turkish culture things in these videos are really unnecessary” (Participant #5), “I find them really cheesy and I don’t like the content” (Participant #13). Yet, there are participants think that by these videos Netflix could reach more people in Turkey: “Making sponsorships with celebrities or the advertisements with know people Turkey is a good way of public relations. Because you may not consider watching La Casa de Papel but celebrities, you can definitely consider watching the series by these celebrity videos. That is the case for our society, I guess” (Participant #11), “They know about us and they care about us. It is good to know that they know we are here, we watch their platform and we pay for it” (Participant #12). Behavior of the users that oppose to these videos could be explained by the globalization phenomenon, since they like to see global elements on Netflix rather than local ones. In a way, users that find these videos useful are acting in parallel with the eventization phenomenon, since by making these promo videos; Netflix gathers attention over social media and potential audiences for its platform. In fact, these videos also work as a marketing campaign even though people do not like it, since they tend to talk about it over the social media and during social conversations.

3.2.2.5 Platform and Video-on-Demand

Last category for the interviews is mostly about the Netflix platform and Video-on-Demand services in general. For the first question, participants are asked for how long they have been using Netflix. Seven participants stated they have been using it for less than a year, six of them have been using it for one to three years, and seven of them stated they have been using for more than three years. Even though the distribution of the users is almost the same for these different time periods, almost one third of the participants have been using Netflix since it started operating in Turkey. Answers for this question are directly related to Netflix experience of users since as the amount of time increases; behavioral changes tend to increase as well among those users, which is the case that is observed during the study.

For the next point in this category, users of Netflix are asked to describe Netflix platform or Video-on-Demand services for people who have never used it before. Majority of the participants underlined the most important features of Netflix for them easy-to-use interface, ad-free structure, or the liberty to watch whatever they like to watch. Some of these statements are summaries of Netflix or Video-on-Demand services with distinctive and unique characteristics. “It is like other illegal websites but it gives recommendations that are really good compared to other sources” (Participant #4), “It can offer you shows that you have never heard before. It

is like another social media platform” (Participant #10), ““It is the easiest way to watch anything online” (Participant #13). As could be seen, even in this case people are referring the recommendation system for a reason for subscribing among many advantages. Participant #15 even summarizes it by simply saying: “It is like Spotify’s video service”, relating it to another subscription based streaming service; that also happens to have an algorithmic recommendation engine for suggestions.

The next question for the participants aims to find the motivation for them to subscribe Netflix in the first place. Most common reason for subscribing among the users either because it was popular around them or it was recommended from their friends, followed by they were tired of the advertisements on the illegal sites and lastly, for specific series that are aired on Netflix. Popularity of Netflix is the leading motivation for individuals, mostly by its global success around the world. One user, participant #17, even stated it meant “English access to the world” at the time of subscription. Again, the importance of globalization phenomenon affects the behavior of users in the case of Netflix.

Next point in this category is about the favorite content of users that they have been re-watching over time. Majority of the participants have named such series or movies that they like to re-watch even before Netflix. Some of the content examples they have given are not available in the database so, they are asked if they would try to find these movies/series elsewhere outside Netflix. Half of the participants stated they would try to find them if

they really like to see a particular show or a movie but prefer things that are on Netflix, similar to the other half who prefer to watch other favorite contents available on Netflix. Participant #5 explains his attitude in this subject as this: “If I pay money to Netflix, I want to use it. If I want to use other sites, there is no point in paying for it. I want use English subtitles and enjoy its video quality.” Once again for the majority of the users, the convenience of Netflix is more important than the content itself; without the advertisements and with its easy to use structure.

Next question is about other Video-on-Demand services operating in Turkey such as Blu TV, puhu TV or Amazon Prime, and twelve of the participants stated they have either used at least one of them or still using one more on a regular basis. all of the users of these other platforms stated they have subscribed to these services because of a specific content, and majority of them cancelled their subscription after watching these contents. Primary reason for this behavior according to the interviews that these platforms’ databases are not big as Netflix in general: “There are not just enough television shows and the ones on platform are not good as the ones on Netflix” (Participant #14) But in general, majority of the users have experienced these other platforms, also think that Netflix provides a better experience compared to them.

Following point in this category is about launching of Disney and Apple’s Video-on-Demand services and users’ opinions towards these upcoming services (Hewgill, 2019). Half of the participants have stated they were willing

to pay for multiple subscriptions if their favorite content/genre switches to another platform, six of them could only consider paying for one plan, and four of them were not interested in these services at all; even that they could affect Netflix's database. Some users such as participant #3 are more optimistic about these news inside Video-on-Demand services as:

"Competition makes it perfect" where stating that de-monopolization inside the industry will be beneficial for the audience since the competition increase, quality of the content has to increase as well; where platforms like Netflix will try harder to hold on to their customers. Some participants are thinking in a different way and it would affect the audience in a negative way since the content libraries will decrease over time: "It will definitely create some problems. For example, 10-15 years ago; cable television was a huge event and everybody could say that "I have a cable television, I could watch lots of different content" but nowadays, it is the case for Netflix. As Apple, Marvel or Disney keep up with Netflix by coming up with new services, people will feel like they have to choose between these platforms. And Netflix will not be the first one" (Participant #11). As it may be seen, there are mixed opinions about these new services and their possible effects on the industry and Netflix, as results of de-monopolization and differentiation.

For the last question, participants are asked whether they have noticed some recent changes in the Netflix interface; as some of the buttons are resized and replaced which are the visible changes to a user of the platform (Gao, 2018). Only six of the participants have noticed the changes, yet majority of them stated their experience have not affected that much because of these

changes. Yet, one of the interviewees, #11, has stated that it affected her experience in a positive way: “One of my friend is studying computer science and she said that it is working faster and in a better way; the problems and bugs are decreased. And I was really surprised that the loading times got faster.” So, in a way, changes in the user interface resulted as an improvement in her experience; which is the main aim in the relation of user interface and user experience phenomena.

As could be seen in multiple categories and points, the effects of Video-on-Demand services on the audience are visible in the contemporary entertainment era. Majority of these changes and the changes even before Video-on-Demand services, are the results of technological developments in computer sciences; especially by the Internet. The Internet has been changing the media culture of yesterday and today, since its emergence and global proliferation in the 1990s. Developments in the computational devices, particularly in mobile technologies such as smartphones have speeded up the changes in the world both in work related areas and entertainment. Internet connectivity in those devices have brought up new possibilities to the entertainment industry as well. Streaming platforms like Video-on-Demand services have also evolved around these changes happening over the last decade, slowly affecting the user behavior and habits as well. Inside these Video-on-Demand platforms like Netflix, older computational engines that were used in the early computers have been implemented; as algorithmic engines. These engines make the recommendation systems in these platforms which analyze and evaluate user behavior, and generate

recommendations based on previous likes and preferences. Among the changes happening inside the audience behavior, recommendations systems have a significant effect as shown by this research study as well. That is to say, Video-on-Demand services would continue to change the audience's behavior and habits over time; by their one of the most important characteristic, being the recommendation systems.

But there are certain limitations of this research as a result of certain variables and factors. First of all, the research corresponds to a small portion of the Turkish audience, focusing on users that are living in Ankara and populously from middle or high socio-economic classes. Accuracy and variety of the data could be improved by reaching individuals from different locations and sections of the society. The research by a majority, incorporate younger Netflix users who are mostly undergraduates or newly graduated individuals. That said, working with a relatively younger audience provided benefits as well; since these individuals tend to be more involved with emergent media trends and the technology. Although the ratio of female and male participants was not equal in the study yet, no significant differences have been observed between genders according to the patterns.

Also, Video-on-Demand platforms are still in the way of developing in Turkey; where further studies and researches could correspond to a larger portion of the society. That is the case for the culture around Video-on-Demand services as well, with an increase in the subscriber numbers; attitude and perception of Netflix and its content could change over time. Another factor

could be affecting the further data in the subject is the pricing of the platform where a potential increase in the platform could result as a decline in the subscriber numbers; that could affect the accuracy and profundity of the results. Expected entrance of big companies such as Disney and Apple could affect the results in the future researches, both in the context of Video-on-Demand services and Netflix; where subscribers of the platform could consider switching to these ones.

Arguably the substantial limitation of this study is due to the fact that it focuses on the Turkish audience for the analyzing behavioral changes by the Video-on-Demand services and recommendation services. Yet, since Netflix platform is operational in a global scale and majority of the countries without strict Internet restrictions have Video-on-Demand services, locality of the research in this context is not considered to be a limitation. It is also stated that Video-on-Demand services such as Netflix are global phenomenon in the contemporary media ecosystem, and should be evaluated as such in terms of its effects in further researches.

CHAPTER IV

CONCLUSION

Changes in the media based communications have been continuing to happen in the 21st Century as well, following the technological advancements. These changes in the media have effects on the society or media audiences and the culture respectively. Through the research in this thesis, it has shown once more, where the audiences have depended on television medium firstly, then the source for video content has become the Internet with illegal streaming sites, Torrents and so on. With Video-on-Demand services, mediatization process have continued, changing the behaviors of the audiences, with the assistance of eventization processes such as integration of social media sites for promotions and advertisements. Video-on-Demand services have substantial importance in the contemporary media ecosystem and, in the popular culture that has been evolving around it.

Popularity of platforms such as Netflix has been increasing with by products of digital media era, like social media. Subscribers of Video-on-Demand

services are increasing globally each year, where cable/traditional television watching over the world continues decreasing. The proliferation of the Internet and mobile devices has started a new era in the entertainment industry which has changed how content is produced, distributed by the companies; also found and consumed by the audience. That is the case for television series and movies as well, where Video-on-Demand services have been changing the audience's watching habits with their innovational and easy to use characteristics. One of the most influential characteristics of streaming platforms such as Netflix, is the recommendation systems that analyze and evaluate user behavior for tailored content generation. Accordingly, this thesis aims to find the relation of recommendations systems' effects on the audience behavior. This hypothesis is also supported with another one, postulating the technological advancements such as creation of the Internet and mobile devices have been changing the media ecosystem, along with its culture and society; which are closely linked.

For responding to these hypotheses, a theoretical background is provided in the thesis presenting the historical steps of the technological developments, creation of the Internet society, evolution of Video-on-Demand services with characteristics, and more importantly; analysis of the algorithmic recommendation systems. Studies examining the effects of Video-on-Demand services on the audience are also included, with the case of binge-watching behavior. This section of the thesis is followed by a research part, where a study is conducted with Netflix users in Turkey in order to present the watching behavior of users; along with probable changes in them as well.

By the detailed analyses of the research results, similar and different patterns have been observed among the participants; where categories have been formed according to their attitudes, behaviors, and opinions in the context of watching content and Video-on-Demand services. Results are presented two main categories of users who are classified platform-oriented and content-driven. Platform-oriented users tend to rely on the Netflix platform more than the other category, where they discover and watch content almost exclusively on Netflix, find recommended content interesting and mostly watch recommendations on Netflix, have more watching rituals in different situations such as consuming content before sleep, while eating, think they are spending more time than they supposed to, which has effects on their lives; mostly in the case of sleep. In general, platform-oriented users are enjoying the Netflix experience with all its features, especially the recommendations part, principally with longer subscription times as well compared content-driven users. On the other side of the argument, content-oriented users tend to follow the content in their minds more than anything, usually discover content outside of Netflix, do not like recommendations that much, try to find a content elsewhere instead of watching a similar one when it is not on the platform, have less specific watching rituals, think the content database is not diverse enough for their taste, and subscribed to Netflix in order to watch a specific content in the first place. Broadly, they are following the content of their choice rather than generated recommendations while on the platform.

Other significant patterns are also observed and presented in four different categories, where users benefit from Netflix platforms in different ways; all are made possible by the characteristics of Video-on-Demand platforms along with the Internet and mobile devices. Effects of the Internet and digital media could be observed in almost all steps, where all participants have stated they have been watching content primarily from illegal video streaming sites; instead of television or other traditional sources such as from physical copies like DVDs. But with Netflix, their behavior in the way of finding content are changed. Briefly, Netflix and recommendations system have caused changes in patterns and behaviors in the audience, or created new ones altogether.

Behavioral changes observed in the study are either happened by the effects of the Video-on-Demand services (in this case by Netflix), and/or with the algorithmic recommendation systems. Concisely, these behavioral changes by the recommendation system in the audience could be listed as; changes in the preferred content type, amount of time spent watching content, preferred or favorite genre, how content is discovered and found. Results have shown that participants tend to prefer television series or documentaries more after switching to Netflix, watch more content in general more frequently compared to before, watching recommendation categories rather than previous favorite genres, discovering and deciding on content to watch from Netflix trailers, descriptions, recommendations or by checking the percentage matches of content rather than checking databases such as IMDb respectively. Effects of Netflix or Video-on-Demand on the behavior are

could be stated as preferred platform to consume content, adopting watching rituals and increase in binge-watching after switching to the platform, and preferring to watch content alone rather than watching it with other people. These changes are direct results of the benefits which are made possible by the Internet and mobile devices, since the user could switch between platforms according to his/her mood or situation, without being in a fixed state in from of a static screen; which was the case for traditional television experience.

There are certain limitations for this research as stated. Several of these limitations could be listed as; the geographical factors since the study conducted in Ankara, Turkey, majority of the participants are younger and represent a small portion of the Turkish society, Video-on-Demand platforms in Turkey are relatively new formations in Turkey and majority of the public have not experienced these services. Even though this research is conducted in Turkey, Video-on-Demand services and its video content are global phenomena consequently, these effects should be observable in different countries as well. As stated earlier in the thesis, there were available studies upon the subject of Video-on-Demand services and watching behaviors such as binge-watching but, this research has approached the matter from a different perspective, from the relation of behavioral changes in the audience and recommendation systems inside Video-on-Demand services.

Further studies could be made in this subject focusing on analyses of categories of users which are found in the research, possible future changes in the audience caused by Video-on-Demand services or recommendation systems, or possible effects of the recommendation systems over the content itself. As the Video-on-Demand industry is growing in subscription numbers around the world, the changes are projected to continue; especially with entrance of media conglomerates such as Disney and Apple.

As could be seen, the effects of Video-on-Demand services and algorithmic recommendation systems on the audience's watching behaviors are present and observable. The rise of technological changes and the Internet of things have created a new branch in the media ecosystem where the audience is liberated from all restrains; and gained the liberty to watch whatever they want, whenever they want with Video-on-Demand platforms. These have resulted as watching habit and behavior changes in the audience, where recommendation systems have the most significant effect. The two main categories of the research platform-oriented and content-driven users are mainly divided by their perception and attitude towards finding and watching content. According to the interviews, majority of the platform-oriented users used to perform similar behaviors as the content-oriented users; suggesting that switching to Netflix has changed their watching behaviors in a different direction over time, especially by the recommendation systems. In parallel with these results, it could be stated that algorithmic recommendation systems are in fact causing behavioral changes in the audience of Video-on-Demand platforms. Additionally, effects of the Internet and mobile devices

are key elements in the way of these changes since these elements are the key components of current digital media ecosystem. Herewith, the hypotheses projected for this thesis are supported with the results of the research and the theoretical part.



REFERENCES

- About Netflix. (2019). *Netflix Media Center*. Retrieved from <https://media.netflix.com/en/about-netflix>
- Acar, B. [Netflix Türkiye'nin Esra Erol'lu Black Mirror Reklamı]. (2018, January 14). [Video file]. Retrieved from <https://www.youtube.com/watch?v=fChX9iB14C0>
- Ahmed, M., Imtiaz, M. T., & Khan, R. (2018, January). Movie recommendation system using clustering and pattern recognition network. In *2018 IEEE 8th Annual Computing and Communication Workshop and Conference (CCWC)* (pp. 143-147). IEEE. Retrieved from DOI: 10.1109/CCWC.2018.8301695
- algorithm. 2019. In *Merriam-Webster.com*. Retrieved from <https://www.merriam-webster.com/dictionary/algorithm>
- Amazon Has More Than 100 Million Prime Subscribers, Jeff Bezos Discloses. (2018, April 18). *Variety*. Retrieved from <https://variety.com/2018/digital/news/amazon-prime-100-million-subscribers-jeff-bezos-1202757832/>
- Amazon Prime. (2019). *Prime Membership*. Retrieved from

<https://www.amazon.com/amazonprime? encoding=UTF8&%2AVersion%2A=1&%2Aentries%2A=0>

Amazon Prime Has More Than 100 Million U.S. Subscribers. (2019, January 17). *Fortune*. Retrieved from <http://fortune.com/2019/01/17/amazon-prime-subscribers/>

Angel, D. P., & Engstrom, J. (1995). Manufacturing systems and technological change: The US personal computer industry. *Economic Geography*, 71(1), 79-102. Retrieved from <https://www.tandfonline.com/doi/citedby/10.2307/144436?scroll=top&needAccess=true>

Bayus, B. L. (1993). High-definition television: assessing demand forecasts for a next generation consumer durable. *Management Science*, 39(11), 1-15. <https://doi.org/10.1287/mnsc.39.11.1319>

Bolter, J., Grusin, R. (1999). *Remediation: Understanding New Media*. Massachusetts, MA: MIT Press.

Bratton, B. H. (2015). *The stack: on software and sovereignty*. Cambridge, Massachusetts: MIT Press.

Castillo, A., Vander Meer, D., & Castellanos, A. (2018). ExUP recommendations: Inferring user's product metadata preferences from single-criterion rating systems. *Decision Support Systems*, 108, 69-78. Retrieved from <https://doi.org/10.1016/j.dss.2018.02.006>

CNBC-e bugün kapanıyor. (2015, November 5). *Hürriyet*. Retrieved from <http://www.hurriyet.com.tr/ekonomi/cnbc-e-bugun-kapaniyor-40010193>

computer. 2018. In *Merriam-Webster.com*.

Retrieved from <https://www.merriam-webster.com/dictionary/computer>

- Cunningham, S., & Craig, D. (2016). Online entertainment: A new wave of media globalization?. *International Journal of Communication*, 10, 5409-5425. Retrieved from <https://eprints.qut.edu.au/102431/>
- Driessens, O., Bolin, G., Hepp, A., & Hjarvard, S. (2017). *Dynamics Of Mediatization: Institutional Change and Everyday Transformations in a Digital Age*. Cham, Switzerland: Palgrave Macmillan.
- Fernández-Manzano, E. P., Neira, E., & Clares-Gavilán, J. (2016). Data management in audiovisual business: Netflix as a case study. *El profesional de la información (EPI)*, 25(4), 568-576. Retrieved from <http://dx.doi.org/10.3145/epi.2016.jul.06>
- Fiyatlandırma. (2019). *Netflix Türkiye*. Retrieved from <https://www.netflix.com/signup>
- Galloway, A. R. (2011). WHAT IS NEW MEDIA? TEN YEARS AFTER" THE LANGUAGE OF NEW MEDIA". *Criticism*, 53(3), 377-384. Retrieved from <https://www.jstor.org/stable/23133906>
- Gao, R. (2018, May 29). Netflix finally redesigns its player UI with larger controls, +/- 10s, and 'Next Episode' button. *Android Police*. Retrieved from <https://www.androidpolice.com/2018/05/29/netflix-finally-redesigns-player-ui-larger-controls-next-episode-button/>
- Gazete Duvar. [Nusret Narcos'ta tuz serpti!]. (2017, September 1). [Video file]. Retrieved from <https://www.youtube.com/watch?v=8f3Jd-wg1Hs>
- Giddens, A. (1975). *Capitalism and modern social theory: an analysis of the writings of Marx, Durkheim and Max Weber*. Cambridge: Cambridge University Press, c1975.

- Global SVOD subscriptions to reach 777 million by 2023. (2018, September, 25). *Rapid TV News*. Retrieved from <https://www.rapidtvnews.com/2018092553607/global-svod-subscriptions-to-reach-777-million-by-2023.html>
- Gomez-Uribe, C. A., & Hunt, N. (2016). The Netflix recommender system: Algorithms, business value, and innovation. *ACM Transactions on Management Information Systems (TMIS)*, 6(4), 13. Retrieved from <http://dx.doi.org/10.1145/284394>
- Greenfield, A. (2017). *Radical technologies: The design of everyday life*. Verso Books.
- Gül, A. A. (2011). Monopolization of media ownership as a challenge to the Turkish television broadcasting system and the European Union. *Ankara Avrupa Çalışmaları Dergisi*, 10(2), 27-46. Retrieved from <http://dergiler.ankara.edu.tr/dergiler/16/1616/17397.pdf>
- Haigh, T., Russell, A. L., & Dutton, W. H. (2015). Histories of the Internet: Introducing a Special Issue of Information & Culture. *Information & Culture*, 50(2), 143-159. Retrieved from DOI: 10.7560/IC50201
- Hallinan, B., & Striphas, T. (2016). Recommended for you: The Netflix Prize and the production of algorithmic culture. *New Media and Society*, 18(1), 117-137. Retrieved from <https://doi.org/10.1177/1461444814538646>
- Hasan, M. R., Jha, A. K., & Liu, Y. (2018). Excessive use of online video streaming services: Impact of recommender system use, psychological factors, and motives. *Computers in Human Behavior*, 80, 220-228. Retrieved from <https://doi.org/10.1016/j.chb.2017.11.020>

- He, C., Parra, D., & Verbert, K. (2016). Interactive recommender systems: A survey of the state of the art and future research challenges and opportunities. *Expert Systems with Applications*, 56, 9-27. Retrieved from <https://doi.org/10.1016/j.eswa.2016.02.013>
- Hepp, A. (2012). Mediatization and the 'molding force' of the media. *Communications*, 37(1), pp. 1-28. Retrieved from doi:10.1515/commun-2012-0001
- Hepp, A., & Krotz, F. (2008). Media events, globalization and cultural change: An introduction to the special issue. *Communications*, 33(3), 265-272. Retrieved from DOI: 10.1515/comm.2008.017
- Hewgill, C. (2019, April 12). Disney, Netflix, Amazon: The battle for streaming survival. *BBC News*. Retrieved from <https://www.bbc.com/news/newsbeat-47692925>
- Hwang, J. S., Cheon, Y., & Kwak, K. T. (2017). Specificity and Commitment: UX approach to Netflix. *인터넷정보학회논문지*, 18(6), 127-136. Retrieved from <http://www.papersearch.net/thesis/article.asp?key=3568331>
- Ippolita. (2013). *The dark side of Google*. Institute of Network Cultures.
- Jannach, D., Resnick, P., Tuzhilin, A., & Zanker, M. (2016). Recommender systems—beyond matrix completion. *Communications of the ACM*, 59(11), 94-102. Retrieved from DOI:10.1145/2891406
- Jenkins, H. (2006). *Convergence Culture: Where Old and New Media Collide*. New York & London, NY, LDN: New York University Press.
- Jenks, C. (Ed.) (1998). *Core sociological dichotomies*. London: SAGE Publications Ltd. Retrieved from doi: 10.4135/9781446222041

- Jenner, M. (2016). Is this TVIV? On Netflix, TVIII and binge-watching. *New media & society*, 18(2), 257-273. Retrieved from <https://doi.org/10.1177/1461444814541523>
- Jones, S., Cronin, J., & Piacentini, M. G. (2018). Mapping the extended frontiers of escapism: binge-watching and hyperdiegetic exploration. *Journal of Marketing Management*, 34(5-6), 497-508. Retrieved from <https://doi.org/10.1080/0267257X.2018.1477818>
- Kaya, R., & Çakmur, B. (2010). Politics and the mass media in Turkey. *Turkish Studies*, 11(4), 521-537. Retrieved from <https://doi.org/10.1080/14683849.2010.540112>
- Knight, S. (2013). Finding Knowledge: What Is It To 'Know' When We Search?. In R. König, M. Rasch (Eds.), *Society of the query reader: reflections on web search*, (pp. 9-15). Amsterdam: Institute of Network Cultures.
- Kovacs, G. (2015, May). An Analysis of Strategies by Netflix in the Television Market. Aarhus, AAR: Department of Business Administration Aarhus University. Retrieved from http://pure.au.dk/portal/files/86448002/Thesis_GaborKovacs_201208049.pdf
- Koyuncu, E. (2017). Tv Yayıncılığı Alanındaki Dijital Tv Platformları Sosyal Paylaşım Ağlarını Neden Kullanırlar? *Trakya University Journal of Social Science*, 19(1), 315–335. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=123901435&site=eds-live>
- König, R., & Rasch, M. (2013). Reflect and Act! Introduction to the Society of

- the Query Reader. In R. König, M. Rasch (Eds.), *Society of the query reader: reflections on web search*, (pp. 9-15). Amsterdam: Institute of Network Cultures.
- Kraft, C. (2012). *User Experience Innovation. [electronic resource] : User Centered Design That Works*. Berkeley, CA : Apress, 2012.
- Krotz, F., & Hepp, A. (Eds.) (2014). *Mediatized Worlds: Culture and Society in a Media Age*. [Basingstoke]: Palgrave Macmillan.
- Kress, G. (2003). *Literacy in the new media age*. Psychology Press.
- Kücklich, J., & Fellow, M. C. (2004). Play and playability as key concepts in new media studies. *STeM Centre, Dublin City University*. Retrieved from <https://pdfs.semanticscholar.org/9ee4/25c40d353f61f7a0bc8832dbc696d26497d5.pdf>
- Leung, A., Spyker, A., & Bozarth, T. (2017). Titus: Introducing Containers to the Netflix Cloud. *Queue*, 15(5), 30. Retrieved from DOI: 10.1145/3152529
- Lig TV, beIN SPORTS oldu. (2017, January 12). *Al Jazeera Turk*. Retrieved from <http://www.aljazeera.com.tr/haber/lig-tv-bein-sports-oldu>
- Liu, A. (2014). JavaScript and the Netflix User Interface. *Communications of the ACM*, 57(11), 53-59. Retrieved from doi: [10.1145/2669482](https://doi.org/10.1145/2669482)
- Maasø, A. (2016). Music streaming, festivals, and the eventization of music. *Popular Music and Society*, 1-22. Retrieved from <https://doi.org/10.1080/03007766.2016.1231001>
- Magoun, A. B. (2007). *Television: the life story of a technology*. Greenwood Publishing Group.

- Manovich, L. (2001). *The language of new media*. MIT press.
- Matrix, S. (2014). The Netflix effect: Teens, binge watching, and on-demand digital media trends. *Jeunesse: Young People, Texts, Cultures*, 6(1), 119-138. Retrieved from DOI: [10.1353/jeu.2014.0002](https://doi.org/10.1353/jeu.2014.0002)
- Merikivi, J., Zhang, L., Salovaara, A., & Mantymaki, M. (2018). On the way to understanding binge watching behavior: the over-estimated role of involvement. *Electronic Markets*, 28(1), 111-122. Retrieved from <https://doi.org/10.1007/s12525-017-0271-4>
- Most Valuable Companies in the World – 2019. (2019, January 13). *FXSSI*. Retrieved from <https://fxssi.com/top-10-most-valuable-companies-in-the-world>
- Mwinyi, I. H., Narman, H. S., Fang, K. C., & Yoo, W. S. (2018, April). Predictive self-learning content recommendation system for multimedia contents. In 2018 *Wireless Telecommunications Symposium (WTS)* (pp. 1-6). IEEE. Retrieved from DOI: 10.1109/WTS.2018.8363949
- netflixturkiye. (2018, July, 2). Lanet olası seslendirme ve alt yazı seçenekleri #SadeceNetflixte dostum! [Twitter Post]. Retrieved from <https://twitter.com/netflixturkiye/status/1013836328096686081>
- Netflix Türkiye. [Stranger Things 2 | Sadettin Teksoy Hawkins'te]. (2017, October 27). [Video file]. Retrieved from <https://www.youtube.com/watch?v=Hn8uUVekres>
- Netflix Türkiye'den RTÜK sansürü açıklaması. (2018, October, 1). *NTV*.

Retrieved from https://www.ntv.com.tr/galeri/sanat/netflix-turkiyeden-rtuk-sansuru-aciklamasi,wrTlwsV6X0SieQvlov2Tig/B30cKBOk6EiXP_W9KYeC3Q

Panda, S., & Pandey, S. C. (2017). Binge watching and college students: motivations and outcomes. *Young Consumers*, 18(4), 425-438.

Retrieved from <https://doi.org/10.1108/YC-07-2017-00707>

Patel, N. (2013, September). How Netflix Uses Analytics to Select Movies, Create Content, and Make Multimillion Dollar Decisions. *Neil Patel Blog*. Retrieved from <https://neilpatel.com/blog/how-netflix-uses-analytics/>

Peil, C., Röser, J. (2014). The Meaning of Home in the Context of Digitization, Mobilization and Mediatization. In F. Krotz, A. Hepp (Eds.) *Mediatized Worlds: Culture and Society in a Media Age*, (pp. 233-252). [Basingstoke]: Palgrave Macmillan.

Peters, J. J. (2000). DVB - A history of television. *European Broadcasting Union*.

Petzold, C. (2008). *The annotated Turing: a guided tour through Alan Turing's historic paper on computability and the Turing machine*. Wiley Publishing.

Pfadenhauer, M. (2010). The eventization of faith as a marketing strategy: World Youth Day as an innovative response of the Catholic Church to pluralization. *International Journal of Nonprofit and Voluntary Sector Marketing*, 15(4), 382-394. Retrieved from <https://doi.org/10.1002/nvsm.396>

Pittman, M., & Sheehan, K. (2015). Sprinting a media marathon: Uses and

- gratifications of binge-watching television through Netflix. *First Monday*, 20(10). Retrieved from <https://firstmonday.org/article/view/6138/4999>
- Pricing. (2019). Prime Video. Retrieved from <https://www.amazon.com/gp/video/getstarted>
- Pricing. (2019). *Netflix*. Retrieved from <https://www.netflix.com/signup>
- Prime Video. (2019). *Amazon*. Retrieved from <https://www.primevideo.com/>
- Ratings & Recommendations. (2019). Netflix. Retrieved from <https://help.netflix.com/en/node/9898>
- Rojek, C. (1997). 'Leisure' in the writings of Walter Benjamin. *Leisure studies*, 16(3), 155-171. Retrieved from <https://doi.org/10.1080/026143697375377>
- Russell, S. J., & Norvig, P. (2016). *Artificial intelligence: a modern approach*. Malaysia; Pearson Education Limited.
- Scardamaglia, A. (2013). Keywords, Trademarks, and Search Engine Liability. In R. König, M. Rasch (Eds.), *Society of the query reader: reflections on web search*, (pp. 163-179). Amsterdam: Institute of Network Cultures.
- Schneider, L. (2018, February, 18). Overview of Amazon.com's History and Workplace Culture. *The Balance Careers*. Retrieved from <https://www.thebalancecareers.com/amazon-com-company-research-2071316>
- Shim, H., & Kim, K. J. (2018). An exploration of the motivations for binge-

watching and the role of individual differences. *Computers in Human Behavior*, 82, 94-100. Retrieved from

<https://doi.org/10.1016/j.chb.2017.12.032>

Singh, N., Bartikowski, B. P., Dwivedi, Y. K., & Williams, M. D. (2009). Global megatrends and the web: Convergence of globalization, networks and innovation. *ACM SIGMIS Database: the DATABASE for Advances in Information Systems*, 40(4), 14-27. Retrieved from

<https://dl.acm.org/citation.cfm?id=1644956>

Sign-up. *puhutv*. Retrieved from <https://puhutv.com/>

Sign-up. *Blutv*. Retrieved from <https://www.blutv.com.tr/>

Srnicek, N. (2016). *Platform Capitalism*. Cambridge, UK: John Wiley & Sons.

Srnicek, N. (2017). The Challenges of Platform Capitalism: Understanding the Logic of a New Business Model. *Juncture*, 23(4), 254-257.

Retrieved from <https://doi.org/10.1111/newe.12023>

Sundar, S. S., & Limperos, A. M. (2013). Uses and grats 2.0: New gratifications for new media. *Journal of Broadcasting & Electronic Media*, 57(4), 504-525. Retrieved from

<https://doi.org/10.1080/08838151.2013.845827>

Tullis, T., & Albert, B. (2013). *Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics*. Amsterdam: Morgan Kaufmann.

Turner, P. (2017). *A Psychology of User Experience. [electronic resource]: Involvement, Affect and Aesthetics*. Cham: Springer International Publishing: Imprint: Springer, 2017.

user interface. 2019. In *Merriam-Webster.com*.

Retrieved from <https://www.merriam-webster.com/dictionary/user%20interface>

Vandertop, C. (2016). The colonies in concrete: Walter Benjamin, urban form and the dream worlds of empire. *Interventions*, 18(5), 709-729.

Retrieved

from <https://doi.org/10.1080/1369801X.2015.1131183>

Walton-Pattison, E., Dombrowski, S., & Presseau, J. (2018). 'Just one more episode': Frequency and *theoretical correlates of television binge watching*. *Journal of Health Psychology*, 23(1), 17-24. Retrieved from <https://doi.org/10.1177/1359105316643379>

Wheeler, K. S. (2015). The relationships between television viewing behaviors, attachment, loneliness, depression, and psychological well-being. *Georgia Southern University Honors Program Theses*. 98. Retrieved from <https://digitalcommons.georgiasouthern.edu/honors-theses/98/>

Why Go is so much harder for AI to beat than chess. (2016, March 10). *Business Insider*. Retrieved from <https://www.businessinsider.com/why-google-ai-game-go-is-harder-than-chess-2016-3>

Williams, R. (1974). *Television: Technology and Cultural Form*. New York, NY: Schocken Books.

Wilson, C. (2014). *User Interface Inspection Methods: A User-Centered Design Method*. Waltham, MA: Morgan Kaufmann.

LIST OF TABLES

Table 1: Research Patterns Among Participants

	Platform-Oriented Users		Content-Driven Users	
	Softcore Netflix Users	Hardcore Netflix Users	Occasional Watchers	Hardcore Content Seekers
Total number of participants for the categories	4	6	5	5
Watching content from illegal streaming sites before Netflix	4	6	5	5
Watching content by torrent downloads	1	1	1	0
Watching content from YouTube	1	0	1	1
Watching content from iTunes rentals or DVDs	0	2	0	0
Watching content from television or Digiturk etc.	0	0	1	0
Discovering content from sites like IMDb, Rotten Tomatoes	3	3	3	4
Discovering content from Netflix recommendations	4	6	3	1
Discovering content from Netflix trailers or descriptions	2	4	1	1

Table 1: Research Patterns Among Participants (cont'd)

	Platform-Oriented Users		Content-Driven Users	
	Softcore Netflix Users	Hardcore Netflix Users	Occasional Watchers	Hardcore Content Seekers
Scrolling down on the Netflix homepage to find content	3	4	3	4
Using the search bar on the Netflix to find content	1	5	1	3
Using the like/dislike buttons for the content	3	6	4	2
Using the add to the list option for the content	3	5	4	3
Mostly like the convenience and easy-to-use interface of Netflix	2	4	4	2
Mostly like the ad-free & legal structure of Netflix	2	3	3	1
Mostly like recommendations Netflix generates	2	4	1	0
Mostly dislike that Turkish database of Netflix is limited	1	4	4	4
Find match percentage accurate	2	4	1	2
Find match percentage not accurate	2	2	2	3
Generated content gets better over time after using rating options	3	4	1	2

Table 1: Research Patterns Among Participants (cont'd)

	Platform-Oriented Users		Content-Driven Users	
	Softcore Netflix Users	Hardcore Netflix Users	Occasional Watchers	Hardcore Content Seekers
Generated content does not get better over time after using rating options	1	1	3	2
Watching recommendations when not finding a specific content	2	5	3	0
Finding the specific content from other places instead of watching recommendations	1	1	2	4
Not watching television or Digiturk etc. at all	3	5	2	4
Watching only news or sports events	1	1	1	0
Watching television regularly once or twice a week	0	0	2	1
Watching more content in general after Netflix	3	6	4	3
Watching less or same content in general after Netflix	1	0	1	2
Using smartphone to access Netflix	2	2	4	3
Using computer to access Netflix	2	4	2	3
Using other platforms to access Netflix	1	2	1	1

Table 1: Research Patterns Among Participants (cont'd)

	Platform-Oriented Users		Content-Driven Users	
	Softcore Netflix Users	Hardcore Netflix Users	Occasional Watchers	Hardcore Content Seekers
Switching platforms while watching content	2	4	3	2
Not switching platforms while watching content	4	2	2	3
Watching more Netflix when sick, bored or depressed	2	5	3	3
Watching rituals for Netflix	4	6	3	4
Watching more television series after Netflix	4	4	4	5
Watching more documentaries after Netflix	2	2	3	3
Watching less movies after Netflix	1	2	3	2
Prefer watching movies on cinemas rather than Netflix	1	1	1	1
Prefer watching movies on Netflix rather than cinemas	1	3	3	3
Positive attitude against notifications	1	1	2	1
Negative attitude against notifications	1	2	2	1
Accessing Netflix every day	2	4	4	2
Accessing Netflix 3-4 times a week	1	2	0	2
Accessing Netflix 1-2 times a week	1	0	1	1
Performing binge-watching	3	6	5	4

Table 1: Research Patterns Among Participants (cont'd)

	Platform-Oriented Users		Content-Driven Users	
	Softcore Netflix Users	Hardcore Netflix Users	Occasional Watchers	Hardcore Content Seekers
Increase in binge-watching	1	4	4	1
Spending more time than supposed to on Netflix	3	4	4	2
Negative effect on sleep	3	3	3	0
Procrastination of tasks because of Netflix	4	3	0	2
Using a private Netflix account	0	1	1	0
Sharing Netflix account with families	1	5	2	3
Sharing Netflix account with friends	2	2	2	5
Prefer watching with family	0	2	2	0
Prefer watching with friends	3	4	2	0
Prefer watching Netflix alone	2	0	1	5
Positive attitude against Netflix Turkey promos	0	2	4	1
Negative or neutral attitude against Netflix Turkey promos	4	4	1	4
Using Netflix more than 3 years	1	2	1	2
Using Netflix for 1-2 years	2	2	2	0

Table 1: Research Patterns Among Participants (cont'd)

	Platform-Oriented Users		Content-Driven Users	
	Softcore Netflix Users	Hardcore Netflix Users	Occasional Watchers	Hardcore Content Seekers
Using Netflix for less than 1 year	1	2	2	3
Subscribed because of a specific content	0	0	1	2
Subscribed because it was popular or recommended by friends	3	4	2	3
Subscribed because bored from illegal sources' ads	1	2	2	0
Experienced or been using BluTV or puhu TV platforms	1	4	3	3
Not used BluTV or puhu TV platforms	3	2	2	2
Consider subscribing multiple platforms such as both Apple/Disney platforms and Netflix	1	4	4	3
Only one subscription for a VoD service Netflix or Apple/Disney	3	2	1	2
Using Netflix for improving foreign languages	1	3	1	1
VPN users reaching other Netflix databases	1	1	1	0

Table 1: Research Patterns Among Participants (cont'd)

	Platform-Oriented Users		Content-Driven Users	
	Softcore Netflix Users	Hardcore Netflix Users	Occasional Watchers	Hardcore Content Seekers
Using offline download options almost always	0	1	3	0
Using offline download options on special occasions such as vacations	0	2	1	1