Bibliometric Analysis on the Research Trend of Over the Top Platforms—Focusing on Social Science Research on Netflix from 2001 to 2020

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This study examined trends in Netflix research in the social sciences over the past two decades through bibliometric analysis. Using the Scopus database, we extracted 269 articles and analyzed the topics that received the most attention in Netflix research through keyword co-occurrence network analysis. The analysis revealed that the most frequently co-occurring keywords were "Netflix," "television," "streaming," "recommendation system," and "SVOD." We also identified influential social science journals and research articles related to Netflix. Based on these analyses, this study provides comprehensive insights into the progress and intellectual structure of research on over-the-top (OTT) platforms. We expect that this will enhance our understanding of the overall development of research on OTT platforms and provide useful guidance for future researchers in this field.

Keywords: OTT, Netflix, bibliometric analysis, keyword co-occurrence network, Scopus

The 2020 COVID-19 pandemic had a major impact on industries around the world, but it was a boon for the over-the-top (OTT) market. Subscribers to streaming services, particularly Netflix, continued to grow, and the time spent on OTT platforms increased significantly. According to Netflix's (2020) quarterly earnings report, the company added 37 million users, marking its biggest year ever in terms of paid membership growth. While Netflix continues to dominate the competition, other industry players, such as Disney+, have also made significant progress, achieving some of their 2024 goals just 14 months after launch (Patel, 2021).

The growing interest in OTT platforms has inevitably led to academic interest in the field. Research has expanded beyond simple quantitative growth to explore a range of topics, especially in the social sciences. Since the 2010s, OTT has become a major player in transforming the media industry, a trend that

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is likely to continue (Shattuc, 2020). Both OTT-related industries and the broadcasting industry are evolving, necessitating more research.

However, a review of the existing literature reveals a notable lack of social science research on OTT. For example, a search of the Scopus database using the keyword "Netflix" yielded 1,578 articles, of which only 391 were in the social sciences, compared with 1,267 in computer science and engineering. This disparity indicates a significant research gap, particularly in understanding the social and cultural implications of OTT. Therefore, it is clear that there is a need for more research in the social sciences related to OTT. An analysis of existing research could be instrumental in guiding future studies. In this regard, bibliometric analysis proves to be particularly beneficial for new researchers in the field as it helps to quickly identify key concepts and references covered in previous studies (Zupic & Čater, 2015). It also assists current researchers in bibliometric evaluation and journal selection. However, previous research on the social science aspects of OTTs, including Netflix, has not made extensive use of bibliometric analysis. This study aims to fill this gap by using bibliometric analysis to explore trends in social science OTT research over the past two decades, with a particular focus on Netflix. As mentioned earlier, the success of Netflix has played a pivotal role in how OTTs have transformed the media market. It is difficult to discuss the OTT market without mentioning Netflix (Shattuc, 2020). While various OTT services have established themselves as global platforms, Netflix was the first to achieve global success (Park, 2017; Shattuc, 2020). OTT has now become a mainstream media format used globally, and it has brought new changes to the entire media domain, from the program production environment to global distribution to individual viewing behavior, which has led to research in various countries. Although research on domestic OTT has been conducted to some extent, Netflix is a frequently discussed topic in OTT research due to its status (Kim, Kim, & Nam, 2016; Park, 2017; Wayne & Castro, 2020). Therefore, in this study, we will conduct a bibliometric analysis focusing on Netflix, a topic that has been addressed in many countries and articles.

This study uses bibliometric analysis to explore research trends related to Netflix. Using VOSViewer software (Van Eck & Waltman, 2010) and the Scopus database, we primarily focus on identifying keyword co-occurrence, citation, and co-citation patterns to discover influential journals and articles in Netflix research. The results will not only show the current research trends related to Netflix but also provide valuable insights for scholars in this field. The article is organized as follows: The next section reviews prior research related to OTT platforms, with a focus on Netflix, and introduces the basic concepts of bibliometrics. This is followed by a description of the methodology used in this study, including the analysis tools and bibliographic databases. The results of the keyword co-occurrence network, citation, and co-citation analyses are presented after this section. The last section discusses the findings and concludes the article.

Literature Review

Previous Research on OTT

Over-the-top media services, as defined by the U.S. Federal Communications Commission (FCC, 2013), refer to video content delivered over the Internet. A review of the literature reveals a lack of a clear and consistent definition for these Internet media services due to the wide variety of definitions in the field. This has led to different research approaches in different disciplines.

According to the FCC, OTT services, which originated from television set-top boxes distributed over Internet protocol networks, were initially provided by online video distributors to deliver video content to individuals or organizations (Kim, Kim, Hwang, Kim, & Kim, 2017). Park (2018) initially described OTT services as parallel to professional players, such as Netflix, that provide video content alongside traditional television providers. Over-the-top video services, exemplified by companies like Netflix, use Internet infrastructure that is independent of broadband connections. The study also differentiated OTT video services based on the variety of devices (computers, tablets, smartphones, etc.) and broadband connections used. These services, which include both communications and video content, are provided to viewers by third parties via Internet access.

Netflix emerged as the first OTT platform to achieve global prominence (Shattuc, 2020). By 2020, Netflix surpassed 200 million subscribers and continues to grow (Todd, 2021). Starting as a digital video disc (DVD)-by-mail business in 1997, Netflix expanded into online streaming in 2007 and has since moved into producing original content. The success of its first original series, *House of Cards* (David et al., 2013–2018), marked Netflix's transition into a global company (Jaworski, 2021). By 2020, Netflix's spending on content production reached $12.5 billion, surpassing the annual revenue of many Fortune 500 companies. A professional team's evaluation of Netflix's original content from 2018 to 2019 revealed significant progress and areas for improvement (Shacknai, 2021). Now a global media platform, Netflix is investing in quality content globally as a key strategy for future growth (Jaworski, 2021). Despite Netflix's significant growth, the OTT market is becoming increasingly competitive. For example, Disney+ attracted 87 million users in its first year, and other services such as Discovery, Apple TV+, Warner Media's HBO Max, and NBCUniversal's Peacock have further increased competition.

Although various platforms have been studied, Netflix is generally recognized as the most representative OTT platform. It transformed from a DVD rental company to an OTT streaming media company in 2007 (Voigt, Buliga, & Michl, 2017) and expanded globally to 130 countries by 2016. By 2017, the number of Netflix subscribers surpassed the total number of cable television users in the United States (Product Habits, 2018).

Social science research on OTT spans two main perspectives. From a telecommunications perspective, scholars such as C. M. Chen (2019), Stork, Esselaar, and Chair (2017), and Wellmann (2019) have examined the dynamics between telecom and OTT service providers. Kim and colleagues (2016) examined competition in the Korean OTT market, and Y. N. K. Chen (2019) conducted a niche analysis comparing OTT and traditional television in Taiwan. From a consumer perspective, researchers have focused on user experiences and habits. Villagra and Cavalli (2016) analyzed user experiences using economic variables. Studies by García-Orta, Garcia-Prieto, and Suarez-Romero (2019), Fernández-Manzano and González-Vasco (2018), and Fudurić, Malthouse, and Lee (2020) have explored consumer habits, privacy awareness, and online video consumption patterns, often using big data for analysis. Cross-national comparisons of OTT consumer behavior have also been conducted (Kim et al., 2017; Messuti, 2017; Park, 2017, 2019; Steemers, 2016; Wayne & Castro, 2020).

In addition, OTT research has been conducted in different regions. Artero (2010) focused on the business models of YouTube and Hulu in the United States. Adhikari and colleagues (2014) compared the

content distribution networks of Netflix and Hulu. In Germany, Mikos (2016) analyzed user preferences for platforms such as Netflix and Amazon Prime. Wayne and Castro (2020) used a cross-national comparative study to compare how Netflix entered national pay television markets in Israel and Spain. Kim and colleagues (2016) contrasted OTT with traditional television in South Korea, focusing on local platforms such as POOQ and TVING. Wang and Lobato (2019) examined Chinese video streaming services in a global context.

Bibliometric Analysis

Bibliometric analysis is an important quantitative research method that provides a macro-level overview of published research in a given field. This approach helps researchers systematically understand the research landscape, including historical trends and potential future directions (Zupic & Čater, 2015). To conduct bibliometric analysis, researchers commonly use statistical databases such as Web of Science, Scopus, and Google Scholar. In addition, analytical tools such as VOSViewer, Bibexcel software, CitNet Explorer, CiteSpace, and HistCite are used for in-depth analysis (Donthu, Kumar, Mukherjee, Pandey, & Lim, 2021).

This method includes various indicators such as co-occurrence, co-authorship, citation analysis, and bibliographic coupling. These indicators are crucial in measuring the quantity and quality of publications, authors, keywords, journals, cited documents, institutions, and countries. They provide a holistic view of the research landscape in a given field.

One of the primary techniques in bibliometric analysis is keyword co-occurrence analysis. This approach examines the frequency of author keywords in published articles by tracking the occurrence of these keywords, index keywords, and other relevant terms in titles, abstracts, and indexes within a literature database. This form of analysis uses common keyword data to construct a co-occurrence network. This network maps how often certain concepts appear together in scientific articles (Zupic & Čater, 2015). The structure of the network is represented by an $N \times N$ matrix, where keywords serve as nodes and N represents the total number of keywords. Each matrix element, S_{ij}, reflects the co-occurrence frequency of two keywords. For example, if keywords i and j co-occur three times, the value of S_{ij} is three (Seok, Joo, & Nam, 2020).

The centrality of nodes in a keyword co-occurrence network is indicative of research hot topics (Su & Lee, 2010). Various metrics such as closeness centrality, betweenness centrality, and eigenvector centrality are used to assess the influence of nodes within this network (Lee & Kwon, 2020). These metrics are critical for identifying key concept keywords, research focus areas, and potential future research trends (Zupic & Čater, 2015).

Citation analysis is another critical aspect of bibliometric analysis, focusing on the frequency with which documents are cited by other publications. Frequently cited articles are considered influential and worthy of attention by researchers as they contribute significantly to the development of their respective fields. Benckendorff and Zehrer (2013) emphasized that citation analysis is based on the assumption that authors cite articles that they consider important for their research. Thus, frequently cited articles are likely to be more influential and useful to researchers than less cited ones (Leydesdorff, 1998).

Co-citation analysis, on the other hand, examines citations received by two documents from a third document. This analysis is important for revealing social networks among publications and identifying influential journals and authors. Strong co-citation relationships, where two articles share several similar references, highlight their importance in the research field. Co-citation network analysis is used to decipher the relationship between publications and references, thereby representing the intellectual structure of a research field (Leung, Sun, & Bai, 2017). When two articles share numerous similar references, they are considered to have a strong co-citation relationship (Small, 1973). Essentially, co-citation analysis can determine which cited journals or articles have more influence in a research field.

In the context of OTT platforms, particularly in Netflix research, there is a notable lack of studies employing bibliometric analysis. Consequently, this study aims to bridge this gap by using keyword co-occurrence to identify research focuses and co-citation analysis to pinpoint influential journals and authors. Additionally, social network analysis is applied to comprehensively explore these research focuses. This study represents a pioneering effort in using bibliometric methods to analyze Netflix-related research, striving to provide a more thorough and scientific understanding of the evolving research trends surrounding Netflix. Therefore, the following research questions are addressed in this study:

RQ1:   *What were the research trends related to Netflix over the 20-year period from 2001 to 2020, and what topics attracted the most interest from researchers?*

RQ2:   *What were the most commonly used author keywords in Netflix articles over this 20-year period, and what relationships exist among them?*

RQ3:   *Which journals and research articles related to Netflix in the social sciences have been the most influential?*

Method

This study uses bibliometric techniques and network analysis based on bibliographic records from the Scopus database. The extensive bibliographic details of each article were meticulously recorded and analyzed. These details include the number of authors, their names, affiliations, the number of references each article contains, and the forms of those references. This granular approach to data collection was critical to achieving our goal: To explore and describe the research trends and relationships among different research topics related to Netflix in the social sciences over a span of two decades, from 2001 to 2020.

To conduct this analysis effectively, research data were meticulously extracted from the Scopus database to ensure the inclusion of all relevant publications within our specified time frame. The extraction process was tailored to capture a comprehensive data set that reflected the breadth and depth of research on Netflix within the social sciences.

Once extracted, the data underwent a thorough analysis using two advanced software tools, VOSViewer and UCINET (Borgatti, Everett, & Freeman, 2002). The use of these tools facilitated the following two-step process: First, using VOSViewer, the study engaged in a sophisticated visualization and mapping

process. This step involved the creation of detailed maps of keyword co-occurrences and citation networks. These maps provided a visual representation of the connections and clusters within the research landscape, highlighting the most influential topics, articles, and authors in Netflix-related social science research. The second step involved an in-depth network analysis using the UCINET software. This phase focused on dissecting the structural patterns within the research network. By looking at aspects such as centrality measures, this phase was crucial for understanding the relationships and hierarchies within the research community as well as identifying key influencers and key research articles.

By integrating these two steps, the study aims to provide a comprehensive and nuanced understanding of the evolution and current state of Netflix-related research in the social sciences. The results are expected to shed light on emerging trends, dominant themes, and potential gaps in the existing literature.

Database

For this study, the Scopus database was selected for data collection, preferred over the Web of Science due to its broader coverage and more effective subject categorization capabilities. This choice allowed a more precise definition of the research scope. Google Scholar, on the other hand, was excluded from consideration primarily because it occasionally includes proceedings and documents that have not been formally published, which could potentially introduce unverified or preliminary results into the research data set.

The focus of this study was strictly on articles within the social sciences, intentionally excluding disciplines such as computer science, engineering, and mathematics. While there is a substantial body of research in these fields, a focused examination of the social sciences was deemed critical to gaining insight specifically into Netflix's impact and presence in this particular field.

Data Collection

All bibliographic data for Netflix-related articles published between 2001 and 2020 were meticulously collected from the Scopus database. The research, predominantly carried out in mid-2021, was aimed at identifying articles where "Netflix" was a primary keyword, deliberately excluding any publications from 2021 onward. The initial search in Scopus, spanning the years 2001 to 2020, yielded 1,573 papers across a variety of disciplines. To refine this selection, only documents classified as "articles" were considered, thereby omitting conference papers, books, reviews, and other nonrelevant materials. A significant discovery from the Scopus search was an article by Figallo and Rhine (2001) initially deemed relevant due to the mention of Netflix. However, the actual content in the published offline version diverged from the Scopus abstract, resulting in its exclusion from the analysis. Following this thorough selection process, 269 articles, ranging from the years 2002 to 2020, were included in the final analysis. Notably, despite the launch of Netflix's online streaming service in 2007, earlier studies such as Crawford (2002) and Scott (2006) were also included. These studies are pertinent for their examination of changes in the video or film industry due to new distribution methods.

Additionally, a comprehensive file containing all the references cited in these articles was compiled. VOSViewer was used to map keyword co-occurrences, producing a detailed network visualization. Among

the 1,022 author keywords extracted from the 269 publications, 149 keywords (14.6%) appeared twice, and only 63 keywords (6.16%) appeared more than three times. However, challenges arose with inconsistencies in singular and plural forms, uppercase and lowercase usage, and abbreviations during the keyword merging process. Diverse expressions used by different authors, such as "SVOD" or "subscription video-on-demand" and "recommender system" or "recommendation system," necessitated careful refinement and merging of similar keywords to enhance data consistency. Examples of merged keywords include algorithm/algorithms, audience/audiences, binge watching/binge-watching, globalization/globalisation, platform/platforms, recommendation systems/recommender system/recommender systems, series/serial, subscription video-on-demand (SVOD), television serials/television series/tv series, and video on demand (VOD). A total of 136 keywords that appeared more than twice were selected for social network analysis using UCINET software.

Data Analysis

The analysis employed two primary methods: Bibliographic analysis and social network analysis. In the bibliographic analysis, network visualizations constructed using VOSViewer were instrumental in examining keyword co-occurrences, citations, and co-citations. This approach facilitated a comprehensive understanding of influential journals and articles within the field. The social network analysis component measured centrality, betweenness, and eigenvector scores, comparing them against the frequency of keyword co-occurrences. This dual-method approach provided a robust framework for analyzing and interpreting the complex relationships and trends within the collected data.

Results

Overall, the results offer an insightful overview of publication trends, key research topics, influential journals, and significant articles in the field of Netflix research within the social sciences. These findings illuminate the evolution and current state of research on Netflix, highlighting critical focus areas and contributions within this domain. The analysis provides a detailed perspective on the characteristics of Netflix research in social sciences over the past two decades.

Publication Trend Analysis

Figure 1 illustrates the yearly publication trends related to Netflix in the social sciences, based on data from the Scopus database. The first article focusing on Netflix in the social sciences, titled "Revenge of the Indies: Looking for the Next Netflix" (Crawford, 2002), was published in 2002. This remained the solitary article on the subject for that year. Before 2014, the annual number of published articles rarely exceeded 10. However, a significant increase in publications was observed from 2014 onward, with 15 articles in 2014, which escalated to 34 articles in 2018 and reached 65 in 2019. This steep rise in recent years reflects an escalating interest in and focus on Netflix research. The globalization of Netflix has made research on the platform a global phenomenon, exploring diverse topics across various regions. For instance, in 2018, five articles examined Netflix's marketing strategy in Spain, while others delved into its global competition in countries like Australia and Mexico.
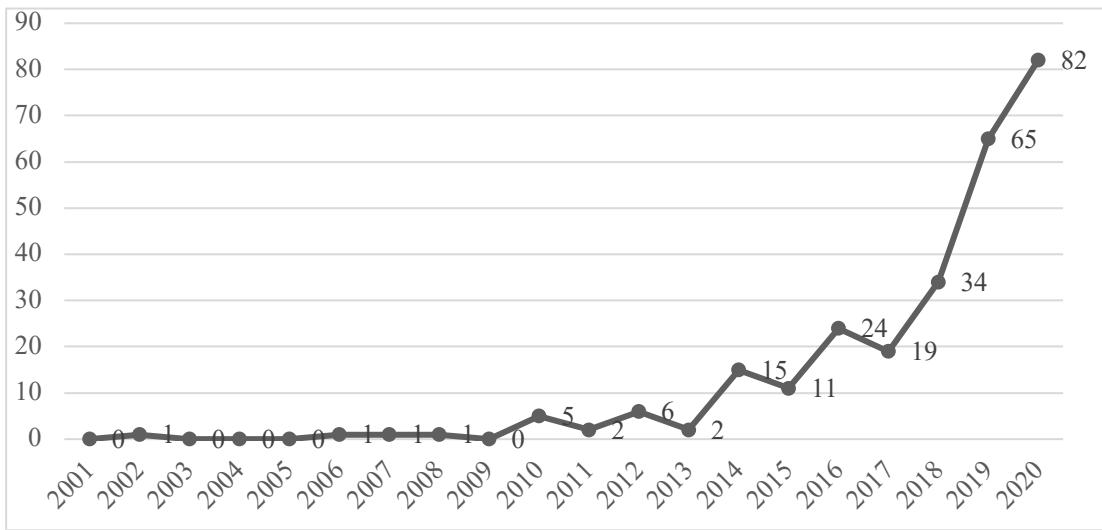
Figure 1. Yearly publication trends on Netflix research from 2001 to 2020.

Keyword Co-Occurrence Analysis

The VOSViewer software was employed to analyze 1,022 keywords extracted from the articles, focusing on the 149 keywords that co-occurred more than twice. This led to the creation of a bibliographic network visualization (Figure 2). The top 20 co-occurring keywords, each with a frequency above five, are listed in Table 1, including terms like Netflix, television, streaming, recommender system, SVOD, VOD, media, audience, *Orange is the New Black* (OITNB; Taylor et al., 2013–2019), platform, television series, and algorithm. Degree centrality analysis was conducted to further explore the collaboration networks among these keywords.

Table 1. Co-Occurrence Network Centrality With the Highest Frequency Keywords in Netflix Research.

Rank	Keyword	Freq.	Keyword	Degree
1	Netflix	84	Netflix	75
2	television	22	television	21
3	streaming	19	streaming	18
4	recommender system	12	SVOD	11
5	SVOD	11	VOD	9.5
6	VOD	10	recommender system	9
7	media	9	OITNB	8
8	audience	8	audience	7
9	OITNB	8	media	7
10	platform	8	algorithm	6
11	television series	8	binge watching	6

12	algorithm	7	platform	6
13	binge watching	7	social media	6
14	big data	6	television series	6
15	film	6	twitter	6
16	social media	6	big data	5
17	twitter	6	digital platforms	5
18	collaborative filtering	5	film	5
19	digital platforms	5	series	5
20	series	5	collaborative filtering	4
Rank	Keyword	Betweenness	Keyword	Eigenvector
1	Netflix	6116.43	Netflix	0.64
2	television	1106.22	streaming	0.32
3	recommender system	801.51	television	0.26
4	streaming	640.61	SVOD	0.24
5	series	339.68	twitter	0.13
6	VOD	252.28	digital platforms	0.11
7	media	196.22	media	0.11
8	platform	164.46	VOD	0.11
9	audience	158.61	algorithm	0.11
10	OITNB	157.10	television drama	0.11
11	social media	127.48	global television	0.10
12	co-production	123.88	globalization	0.10
13	television series	109.25	social media	0.09
14	copyright	105.63	branding	0.09
15	twitter	97.05	horror	0.08
16	politics	92.62	spotify	0.08
17	film	92.14	television series	0.08
18	SVOD	86.78	china	0.08
19	ratings	86.78	censorship	0.08
20	internet	77.20	audience	0.08
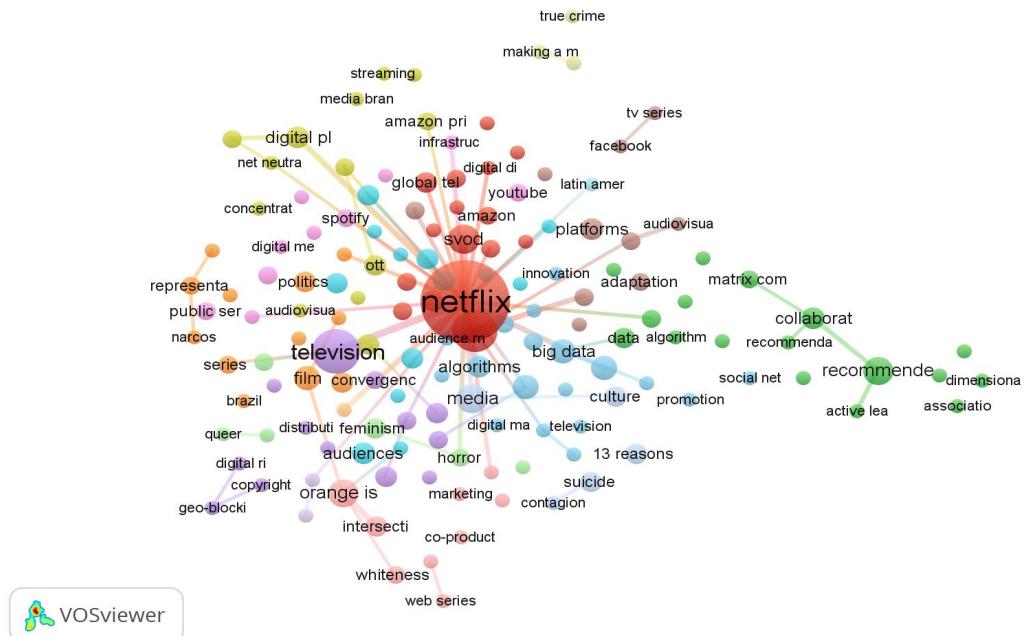
Figure 2. Keyword co-occurrence network in Netflix research.

The analysis of citation sources revealed that 165 journals published a total of 269 articles on Netflix research in the social sciences from 2001 to 2020. This produced a data set of 11,547 cited references from 6,947 sources. Table 2 presents the top eight sources, highlighting the journals with the most publications on Netflix research. *Television & New Media* emerged as the most influential journal, featuring 18 published articles and 79 citations by other articles in the Scopus database. It was followed by *Media Culture and Society* with nine articles and 51 citations and *Critical Studies in Television* with seven articles and six citations. Notably, *Profesional de la Informacion* ranked fourth with six articles but exhibited a higher average citation per article (9.16) compared with the top-ranked journal (4.38). Among these articles, one discussing changes in the television industry since the advent of VOD received very few citations, while the rest, focusing on strategies or case studies of Netflix's success, were highly cited.

The co-citation analysis, based on the methodology described by Small (1973), showed that the 269 articles collectively cited other articles 6,947 times. Table 3 displays the ranking of sources by co-citation frequency, with *Television and New Media* being the most co-cited journal, receiving 64 citations, followed by *Variety* with 63 and *New Media and Society* with 55. Figure 3 depicts the journal co-citation network, divided into three distinct clusters. These clusters represent different source types, such as newspapers, magazines, and books, and demonstrate more diversity than journals alone. Two primary clusters stand out: One mainly consisting of journals and the other comprising magazines and newspapers. In this network, larger nodes indicate stronger co-citation relationships, suggesting these items are frequently cited together in subsequent literature.

Table 2. Influential Journals With the Most Articles Related to Netflix.

Rank	Articles' Source	No. of Articles	No. of Citations by Other Articles
1	*Television & New Media*	18	79
2	*Media, Culture & Society*	9	51
3	*Critical Studies in Television*	7	6
4	*Profesional de la Informacion*	6	55
5	*Journal of Media Business Studies*	6	10
6	*EContent*	6	5
7	*Media International Australia*	5	18
8	*Convergence*	5	9

Table 3. The Most Frequently Cited Journals.

Rank	Cited Source	No. of Co-Citations in the Journal
1	*Television & New Media*	64
2	*Variety*	63
3	*New Media & Society*	55
4	*The Guardian*	50
5	*Media, Culture & Society*	46
6	*The New York Times*	44
7	*Profesional de la Informacion*	35
8	*The Hollywood Reporter*	34
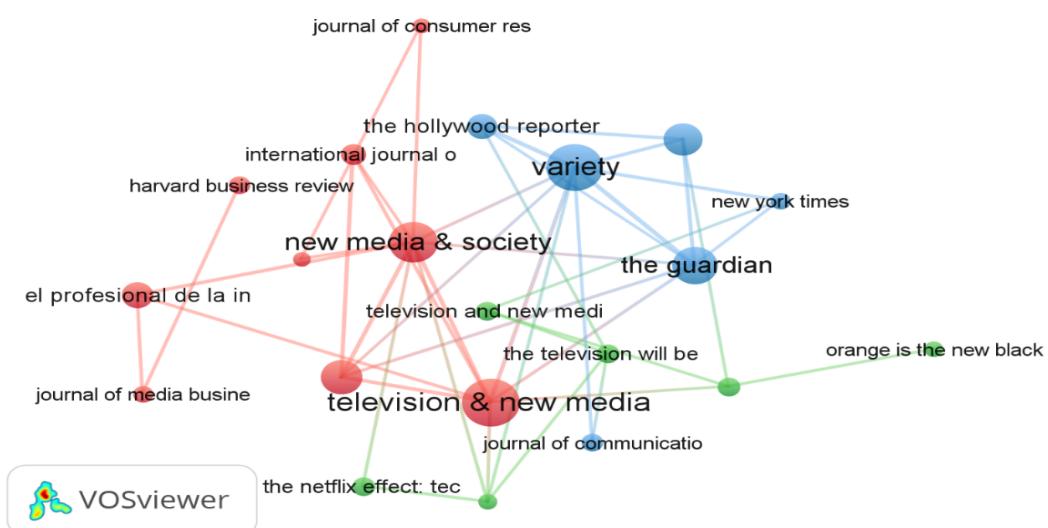
Figure 3. Co-citation network of journals.

Influential Articles

Table 4 lists the 13 most cited articles related to Netflix in the field of social sciences. There is a noticeable gap in citation counts between ranks, with four papers having more than 100 citations. The most cited article, "The Singular Value Decomposition (SVD) and Collaborative Filtering" by Candès and Tao (2010), achieved an exceptionally high citation rate of 1,154. This article addressed the matrix completion problem and its application in collaborative filtering, relevant to Netflix's recommendation system. Other highly cited articles focused on topics such as recommender systems, collaborative filtering, and algorithm culture. Moreover, Table 5 showcases the most cited references, including books like *Netflix Nations: The Geography of Digital Distribution* by Lobato (2019), *Convergence Culture: Where Old and New Media Collide* by Jenkins (2006), and *Portals: A Treatise on Internet-Distributed Television* by Lotz (2017). Notably, certain articles like "'Is this TVIV?': On Netflix, TVIII, and Binge-Watching" (Jenner, 2016) and "Recommended for You: The Netflix Prize and the Production of Algorithmic Culture" (Hallinan & Striphas, 2016) featured in both the lists of most cited articles and most cited references. Other articles concerning recommender systems and collaborative filtering also made substantial contributions to the field.

Table 4. Ranking of Published Articles That Are Cited the Most.

Rank	Author	Document	Cit.
1	Candès and Tao (2010)	"The Power of Convex Relaxation: Near-Optimal Matrix Completion."	1154
2	Campos, Díez, and Cantador (2014)	"Time-Aware Recommender Systems: A Comprehensive Survey and Analysis of Existing Evaluation Protocols."	211
3	Hallinan and Striphas (2016)	"Recommended for You: The Netflix Prize and the Production of Algorithmic Culture."	144
4	Bobadilla, Ortega, and Hernando (2012)	"A Collaborative Filtering Similarity Measure Based on Singularities."	116
5	Jenner (2016)	"Is This TVIV? On Netflix, TVIII and Binge-Watching."	83
6	Wjst (2010)	"Caught You: Threats to Confidentiality Due To the Public Release of Large-Scale Genetic Data Sets."	29
7	Mikos (2016)	"Digital Media Platforms and the Use of TV Content: Binge Watching and Video-on-Demand in Germany."	25
8	Zhao, Pan, and Yang (2017)	"A Unified Framework of Active Transfer Learning for Cross-System Recommendation."	24
9	Izquierdo Castillo (2012).	"Distribución Online de Contenidos Audiovisuales: Análisis de 3 Modelos de Negocio."	22
10	Lobato (2018).	"Rethinking International TV Flows Research in the Age of Netflix."	21

11	Javari, Gharibshah, and Jalili (2014)	"Recommender Systems Based on Collaborative Filtering and Resource Allocation."	21
12	Wayne (2018)	"Netflix, Amazon, and Branded Television Content in Subscription Video on-Demand Portals."	19
13	Mısır and Sebag (2017)	"Alors: An Algorithm Recommender System."	19

Table 5. Ranking of the Most Cited References.

Rank	Cited Reference	Cit.
1	Jenner (2016)	5
2	Lobato (2019)	5
3	Hallinan and Striphas (2016)	4
4	Jenkins (2006)	4
5	Koren, Bell, and Volinsky (2009)	4
6	Lotz (2017)	4
7	Phorasim and Yu (2017)	4

Discussion and Conclusion

The bibliometric analysis of 269 scholarly articles about Netflix, sourced from the social sciences within the Scopus database for the period between 2001 and 2020, unveiled significant insights. Excluding the mistakenly included Figallo and Rhine (2001) article from the database, the earliest reference to Netflix is found in Crawford's (2002) article. This article, while not primarily addressing OTT media services, suggests that Netflix's model as a new type of DVD rental service could potentially support the promotion of independent films.

Two main points emerge from this analysis: First, there was a slight but notable increase in publications starting in 2014, when the number of articles exceeded 10 for the first time. This growth coincides with Netflix's foray into original programming, marked in particular by the success of *House of Cards* (David et al., 2013–2018). This suggests a direct correlation between Netflix's strategic business decisions and academic interest, highlighting how innovations in content delivery can spur academic research. Second, after 2014, the study observed fluctuations in the number of publications until 2018, followed by a significant increase to 34 articles. This increase is consistent with Netflix's aggressive global expansion, offering services in more than 130 countries. In addition, the surpassing of cable TV subscribers in the United States in 2016–2017 contributed to this trend. The focus on Spain in 2018, with six articles examining Netflix's market strategy there, suggests a growing academic interest in understanding Netflix's global impact. These findings suggest that Netflix's expansion strategies, and the resulting market dynamics, have become critical areas of scholarly focus.

The keyword co-occurrence analysis, which identified 149 keywords that appeared more than once among 1,022 keywords, highlights several aspects of Netflix's success and operational strategy. Spanning television, streaming, digital platforms, binge-watching, and more, these keywords reflect Netflix's multifaceted influence. The evolution of research from an initial focus on user-generated content and DVD rental systems to studies of recommendation systems and binge-watching indicates a shift in research attention to technological innovation and its impact on changing viewing habits. The high number of references to *OITNB* (Taylor et al., 2013–2019) in the research articles demonstrates the social and cultural impact of Netflix's original content. *Orange is the New Black* centered on a female protagonist, featured characters from diverse racial, gender identity, and socioeconomic backgrounds, and addressed social issues such as racism, lesbian, gay, bisexual, transgender, and queer rights, and the problems of the prison system through the lives of women in prison. This diversity and unconventional content would have been difficult to achieve on traditional television, such as terrestrial or cable. In addition, Netflix chose to release OITNB in multiple episodes at once. This "binge-watchable" approach allowed viewers to watch multiple episodes at once, increasing the addictive nature of the series, and it is likely that it was chosen as a primary study for this reason. Additionally, the prominence of keywords such as "global television" and "globalization" in the eigenvector analysis demonstrates the impact of Netflix's global expansion. This suggests that Netflix's international influence has become an important area of research, especially for studies that examine global media competition and cultural transmission.

The source of the citation and co-citation analyses, which includes 165 journals and 269 articles, demonstrates the diversity and breadth of Netflix-related research. The prominence of journals such as *Television & New Media* and *Media Culture and Society* in both publications and citations illustrates their influential role in framing the discourse around Netflix. This is further evidenced by the focus on specific Netflix series in these journals, indicating a scholarly interest in analyzing contemporary social phenomena through the lens of popular media.

The research topics in these journals, which focus on Netflix's success strategies and original content, reflect a qualitative focus, likely due to the limited availability of raw data from OTT platforms. This suggests a need for more diverse research methodologies in future studies. Furthermore, the reliance on news and journal references for the most recent data points to the rapid evolution of the OTT field and the need for timely information.

Examining the most cited articles related to Netflix in the social sciences provides important insights into the focus of the academic community and the evolution of research topics over time. The disparity in citation counts among the top 13 articles, particularly with four articles having more than 100 citations, underscores the varying levels of influence and relevance these articles have had within the academic discourse. The article by Candès and Tao (2010) stands out as the most influential, with an exceptionally high citation rate of 1,154. Its focus on the matrix completion problem and its application to collaborative filtering is directly relevant to the Netflix recommendation system. The significant impact of this article indicates the high level of academic interest and importance placed on the development and understanding of algorithmic recommendation systems, which are central to the user experience on platforms like Netflix. Other highly cited articles focusing on recommender systems, collaborative filtering, and algorithm culture reflect the academic community's interest in the technological aspects that drive user engagement and

content personalization on digital platforms. These topics are critical to understanding the intersection of technology, viewer behavior, and content strategy in the digital age, especially as they relate to OTT platforms such as Netflix. The presence of works such as the study on Netflix, TVIII, and binge-watching (Jenner, 2016) and the study on the Netflix Prize (Hallinan & Striphas, 2016) in both the most cited articles and the most cited reference lists underlines the importance of these studies in shaping the discourse around the cultural and technological impacts of Netflix. In addition, the inclusion of books such as *Netflix Nations* (Lobato, 2019), *Convergence Culture* (Jenkins, 2006), and *Portals* (Lotz, 2017) points to the broader cultural and societal implications of Netflix's distribution model and content strategy. These works provide a contextual backdrop to the more technologically focused articles, underscoring Netflix's multifaceted impact on the media landscape. The high citation rates of these articles suggest a growing scholarly interest in understanding not only the technological underpinnings of platforms like Netflix but also their cultural, sociological, and economic implications. This suggests a need for continued research that spans multiple disciplines and integrates technological aspects with cultural and social analyses.

The prominence of these topics in the most cited literature suggests that future research could benefit from a multidisciplinary approach that combines insights from technology, media studies, sociology, and cultural studies. This holistic perspective would allow for a more comprehensive understanding of the impact of digital streaming platforms such as Netflix on society, culture, and technology. In summary, this analysis highlights the diverse research interests within the social sciences related to Netflix, including content analysis, technological aspects, and business management strategies. It provides a comprehensive view of the intellectual structures and progress within this research area, highlighting key areas of interest and development.

However, this study is not without its limitations. The focus on the social sciences and the exclusive use of Scopus as a data source may have narrowed the scope of the research. Future studies should consider a broader range of disciplines and databases to capture a more comprehensive view of Netflix-related research. In addition, the reliance on bibliometric analysis and specific software such as VOSViewer and UCINET may not fully represent the intricacies of Netflix research. Future studies should aim to integrate multiple methods and tools for a more nuanced analysis. Finally, the lack of coauthorship analysis in this study points to a potential area for future research. The isolated nature of the network visualization suggests limited connections among authors, even within institutions. Future research should encourage scholarly collaboration across authors, institutions, and countries to build a more connected and robust research framework.

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