

The Douban online social media barometer and the Chinese reception of Korean popular culture flows¹

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Abstract:

Since its launch in 2005, the Chinese online social networking site Douban has become a key platform for creating and sharing user-generated content on a rising tide of global popular culture. Such content and its corresponding user data has become so prolific that Western media outlets are now using Douban a key barometer for gauging representative opinions and attitudes towards foreign content in China. However, a full range of tools for harvesting and analyzing Chinese-language datasets has yet to be explored in English. This article attempts to fill this gap by investigating the applicability of an analytical framework that can be used to study Chinese audiences' response to a range of films through analysing comments on Douban. As a case study, the authors apply this framework to a representative sample of major Korean films made by a group of female writer-directors. Given that Korean cinema is increasingly popular with Chinese movie audiences, this study aims to test a "proof of concept" that can be applied more broadly to Korean and other country's films. In turn, it is hoped that the framework developed here will be used to investigate much larger datasets across a greater range of popular culture materials originating outside China – materials that are making transnational connections with the world's largest media audience.

Keywords: Douban; big social media data; user-generated content; Chinese audiences; Korean cinema; women filmmakers, transnational audiences; digital research methods

Introduction

Since its launch in 2005, the Chinese interest-oriented online social networking site Douban (www.douban.com) has become one of China's most popular commercial platforms for

facilitating user-generated content (UGC) – specifically, responses to and reviews of films, television programs, books, music, radio podcasts, and cultural events. Around 270 million visitors each month reportedly access this online social network (OSN) to create and/or share information, recommendations, and ratings with both dedicated followers and casual users (Zhang 2015). Audiences interested in an increasingly broad array of domestic and transnational films and other forms of popular culture have become the largest cohort inhabiting this hybridized Amazon-IMDb-Facebook Web 2.0 site. They are Douban’s ‘digital natives’, a label that describes mainstream Chinese movie fans in their twenties and thirties who are heavy users of Web 2.0 applications.² Their numbers are expanding in tandem with the proliferation of Chinese cinema, which itself is experiencing unrivalled privatization, professionalization, and transnationalization in and beyond China’s borders (Yecies 2014). Moreover, Douban has become a significant new cultural and demographic barometer by which Western critics are gauging the audience reception of these cultural contents.³

For some time now, millions of Chinese have been consuming a seemingly endless range of films easily obtained both via unauthorized peer-to-peer file sharing networks and legitimate commercial online video-on-demand sites, such as Sohu, Youku, Sina, Tencent, iQiyi, and LeTV. They are also enjoying an increasing number of domestic, international, and transnational films on a rapidly expanding number of domestic multiplex screens – estimated at 28,000 and rising. Across these multiple outlets, a large range of Korean films – part of the bigger ‘Korean Wave’ of popular culture (aka *Hallyu*) sweeping across Asia and beyond – are modifying the tastes and consumption patterns of Chinese audiences in dynamic but uneven ways.

Initially driven by the export and popularization of television dramas (K-dramas) and Korean popular music (K-pop), and then by a range of film genres featuring universal themes and fresh aesthetic styles, the Korean Wave continues to make widening ripples in China and beyond (see Yecies and Shim 2016). Since the early 2000s, but increasingly since 2009, a range of Chinese–Korean transnational film collaborations has been attracting audiences across online, mobile, and multiplex screens. To meet the needs of these various exhibition outlets, Chinese firms have been recruiting well-known Korean directors such as Hur Jin-ho, Ahn Byeong-ki, and Heo In-moo; these three filmmakers have been responsible for the romantic dramas *A Good Rain Knows* (2009) and *Dangerous Liaisons* (2012); the Korean horror remake *Bunshinsaba* (2012) and its 2013 and 2014 sequels; and the romantic comedy *The Wedding Bible* (forthcoming), respectively. These seasoned directors join a long list of Korean actors who have appeared in Chinese films over the past two decades. Recent examples include: Jung Woo-sung in *Reign of Assassins* (2010); Kim Hee-sun in *The Warring States* (2011); Kwon Sang-woo in *CZ12* (2012); Song Hye-kyo in *The Grandmaster* (2013), *The Crossing* (2014) and *The Crossing 2* (2015). In addition, K-pop boy band Super Junior singer and actor Choi Si Won played a major role in *Dragon Blade* (2015). Each of these performers capitalized on their popularity as *Hallyu* stars in China.

With this transnational background in mind, which is a major terrain in itself across both practical and political contexts, in this article we investigate the online reception of a

small subset of Korean films made by five female writer–directors who are among the most prominent women working in the Korean film industry today. Unknown to many Chinese and global Korean cinema fans who are familiar with films made by a canon of male directors, many critically acclaimed Korean films are being produced by a growing number of both independent and commercial female writer–directors. To shed light on this unheralded group of filmmakers and their contribution to Korean cinema’s popularity in China, this study employs an efficient data collection method and analytical tool for understanding how five of their films – Lee Jeong Hyang’s *The Way Home* (2002), Hong Ji-young’s *The Naked Kitchen* (2009), Byun Young Joo’s *Helpless* (2012), Roh Deok’s *Very Ordinary Couple* (aka *Temperature of Love*, 2013), and Bang Eun Jin’s *Way Back Home* (2013) – are connecting with Douban’s ‘digital natives’, avid cinephiles who represent the largest media audience in the world.

First, we introduce this outstanding set of Korean women writer–directors whose five feature films studied here have attracted more short user comments on Douban’s film pages (<http://movie.douban.com>) than any other of their kind. Next, we outline the methods we used to collect and analyze the primary data. Finally, case studies of these five films (discussed in chronological order) are presented to assess the degree of awareness of these particular films and filmmakers by Douban users. It is hoped that these case studies will help us understand how geographically dispersed Chinese-speaking movie fans on Douban are expanding awareness of these Korean women writer–directors, thus adding depth and complexity to this cinematic component of the Korean Wave.⁴

With each new posting on Douban, the searchable library of UGC expands, enabling other users (followers) to vote on a particular user’s comment and leave additional comments of their own. Thus audiences continue to generate and follow conversations about films long after they are accessed from illicit file-sharing networks and commercial online platforms, or, in a much smaller number of cases, screened in commercial cinemas. Korean films such as *Dancing Princess* (2005), *200 Pounds Beauty* (2006), *Cyrano Agency* (2010), *Blind* (2011), *Architecture 101* (2012), and *Marriage Blue* (2013) have proved so popular in China that they are now being remade as local films.

As a concept, word-of-mouth (WOM) is a powerful communication tool and social networking channel for spreading awareness of a product or service in both the offline and online worlds. WOM appears to be most efficacious when consumers actively create and/or distribute information about or recommendations of products or services to other consumers (Kimmel and Kitchen 2014). This process creates a sense of grassroots legitimacy, as the message is ostensibly initiated by a member of one’s own peer or interest group rather than by the producer of the product or service concerned. With the proliferation of the Internet and mobile media, scholars have increasingly sought to investigate how electronic word-of-mouth or online commentary (hereafter eWOM) has become a key strategic tool to develop and strengthen the trust placed by consumers in products, brands, and services. At the same time, via online platforms and mobile applications social media networks such as Douban have radically changed the ways in

which information is shared and spread beyond traditional offline WOM – i.e., face-to-face conversations (Laroche 2005). This tool has also given rise to the creation of new communities that make play of their power to motivate the decisions and actions of members who actively seek and accept advice online (Toder-Alon et. al 2014).

In this study we analyse the eWOM relating to a range of films made by some of Korea's most eminent female filmmakers by thousands of Chinese fans who utilize the popular Douban OSN. Douban users post short comments – currently a maximum of 140 Chinese characters, the equivalent of around 500 characters in English – to share information and opinions about films accessed in cinemas, and across video on demand (VOD) platforms, DVD shops and illegal kiosks, as well as illicit peer file-sharing networks. In contrast to other relationship-based social networking sites, such as Weibo, RenRen, Pengyou and Wechat, which function in part to strengthen existing offline ties, interest-based social networking sites privilege the formation of new ties among strangers who share common interests (Zhang and Wang 2010). In the progressively globalizing world, this type of audience participation is part of a “transnational spectrum” (Athique 2016: 172-73) that is evolving through the shared connections between diverse Douban users and fans.

Korean Women Filmmakers in China's Online Social Mediasphere

Among film fans active on Douban, the five most popular Korean female writer-directors in terms of the number of online comments on their films are Lee Jeong Hyang, Hong Ji-young, Byun Young Joo, Roh Deok, and Bang Eun Jin. Their considered views of Korean society, and life in general, are reflected in the stories – both original and adapted from existing sources – that they write for the screen.

Lee Jeong-hyang is the writer-director of *The Way Home* (2002), *Art Museum by the Zoo* (1998), and *A Reason to Live* (2011). Lee made her feature debut as a writer-director with *Art Museum by the Zoo* (1998), a semi-autobiographical drama that was the fifth most attended Korean film in 1998. It portrays the awkward relationship between two strangers who wind up living together, reflecting on the meaning of life. The film, which Lee began writing in 1995 at a time when government censorship was in full swing, is considered by local and foreign critics alike as a post-censorship (i.e., post-1996) Korean cinema classic (Paquet 1998; Sung 2011). Lee's second feature, *The Way Home* (2002), which is discussed in this study, was a box office hit, earning her the status of Korean cinema's “most commercially successful” female director at the time (Paquet 2002). The film's audiences of nearly 1.6 million in Seoul pushed it to the number one spot for the year, surpassing admissions for Hollywood blockbusters *Minority Report* (2002), *The Lord of the Rings: The Fellowship of the Ring* (2001), and *Spider-Man* (2002) (*Korean Cinema 2002* 2003: 216). The film explores the relationship between a seven-year-old boy from Seoul and his mute elderly grandmother who lives in the countryside, underscoring the social and cultural divide between the generations as well as between urban and rural communities. Her third feature, *A Reason to Live* (2011), focuses on the pain and suffering of a family dealing with the loss of a loved one. It questions the role of religion in people's lives as a source of

strength in times of emotional vulnerability.

Hong Ji-young made her debut as a feature film writer–director with *The Naked Kitchen* (2009, aka *Kitchen*), a light-hearted commentary on adultery. The film came to the attention of European audiences at the 2010 Berlin International Film Festival when it screened in the late-night “culinary cinema” section. According to *Variety*, Hong’s “handsomely shot romantic dramedy” is reminiscent of Korean cinema’s “metaphysical” films of the 1990s, a genre associated with well-known male directors such as Bae Chang-ho and Lee Myung-se (Elley 2010). The film offers a light-hearted caricature of a married woman who becomes involved in a *ménage à trois*. In taking this approach, director Hong Ji-young suggests a liberal alternative to the general view of adultery, which before early 2015 was a punishable crime in Korea. After *The Naked Kitchen*, Hong directed *Secret Recipe*, one of four horror omnibus films (all directed by women) in *Horror Stories* (2012). Her latest directorial project is the light-hearted romantic drama *Marriage Blue* (2013) – starring 2PM Kpop idol Ok Taecyeon – which follows a series of events preceding the weddings of four couples. At the time of writing, it is expected to be remade as a television drama series in China by Taihe Films.

The third woman director in our study, Byun Young-joo, is a key member of the first generation of female directors who have emerged since the 1990s. The sex trade in Asia and “sex tourism” in the famous Korean honeymoon destination, Jeju Island, was the topic of her first documentary, *Women Being in Asia* (1993). She is best known for her critically acclaimed and award-winning documentary trilogy *The Murmuring* (1995), *Habitual Sadness* (1997), and *My Own Breathing* (1999), which together uncover the oppression of women who were forced to become “comfort women” (i.e. sex slaves) for the use of troops by the Japanese colonial authorities during World War II.

Byun’s use of film to give a voice to the hidden and unknown stories of Asian women, as well as her focus on human rights, has made her an iconic mentor for both male and female filmmakers in Korea and beyond. Her first feature, *Ardor* (2002), was an erotic drama following the sexual re-awakening of a middle-aged woman, Mi-heun (played by Kim Yun-jin of *Lost* and *Shiri* fame). Byun’s second feature, *Flying Boys* (2004), a romantic coming-of-age story about a high school boy who has a crush on a neighborhood girl, questioned gender roles, sexuality and class distinction in Korean society.

Byun Young-joo’s latest writer–director project, *Helpless*, which is analysed below, is a psychological mystery–thriller based on the 1992 crime novel by Japanese author Miyuki Miyabe, *All She Was Worth*. It is a noir story of a woman who mysteriously disappears and the detectives and family members who attempt to find her. During the investigation, the woman’s financial problems are uncovered, and a picture of her monstrous transformation emerges. In Byun’s adaptation, the female protagonist’s dark trajectory, which includes murder and identity theft, is linked to the larger economic woes of Korean society resulting from the 1997 Asian economic crisis and the global economic crisis of the 2000s.

Our fourth subject is Roh Deok, who worked as a script assistant on Jang Joon-Hwan’s *Save the Green Planet!* (2003), going on to direct *The Secret Within Her Mask* (2005),

a short award-winning film about a girl who wears a mask to hide her embarrassing facial hair. In 2013 her feature debut, *Very Ordinary Couple*, won the Best Feature award in the Asian New Talent competition at the 16th Shanghai International Film Festival. This romantic drama, which is investigated in detail shortly, focuses on a secret workplace relationship between a feuding couple who attempt to save face in the eyes of their friends and colleagues. Roh's creative inclusion of documentary-type footage of the workplace de-romanticizes the love story while spotlighting the stormy relationship between the couple. Kim Min-hee, the heroine of Byun Young-joo's *Helpless*, portrays a woman in a constant state of oscillation between loving and leaving her male partner. Roh's latest writer-director project, *The Exclusive: Beat the Devil's Tattoo* (2015, aka *Journalist*), is a well-written thriller/black comedy about a journalist's investigation of a serial killer gone wrong.

The final writer-director in our study is Bang Eun Jin. Bang began her career in the mid-1990s as a theater performer and then as an actress, starring in several highly acclaimed films including Park Chul-soo's art-house mystery-thriller *301/302* (1995), Kim Ki-duk's moody *Address Unknown* (2000), Kim In-sik's homoerotic *Road Movie* (2002), and Hong Ji-Young's *Naked Kitchen* (2009). She debuted as a writer-director with *Princess Aurora* (2005), a crime drama about a female serial killer who seeks revenge for the murder of her child. Bang's subsequent feature films include *Perfect Number* (2012) and *Way Back Home* (2013), which is analysed below. In *Way Back Home*, Bang (and her co-authors) adapted a true story about a working-class housewife named Song Jeong-yeon who is accused of trafficking drugs through Paris Orly Airport and imprisoned for two years by the French authorities. The drama follows her protracted struggle to maintain her innocence and dignity. Bang shot the film on location at a women's prison in the Dominican Republic, utilizing a group of non-professional actors in supporting roles, including prison guards and prisoners serving jail time. Although Bang was nudged toward directing after being considered "too old" for most acting roles, her extensive experience as an actor has given her films a distinctive edge.

These five female writer-directors and their filmographies showcase the diversity of contemporary Korean cinema through the multiplicity of perspectives that they bring to the screen. Each has contributed in her own special way to the expansion and changing face of Korean cinema, not only at home, but also among their numerous Chinese fans, including those who use Douban.

Douban's Invigoration of Korean Cinema in China

Since its inception in 2005, Douban has become one of China's biggest online social media platforms for facilitating user-generated interactions and reviews of creative content. Every day, the online and mobile social media scene in China expands at unprecedented rates. In 2015, the number of registered users on Douban has surpassed the 100 million mark, equating to around 18.5 percent of China's total Internet population of 649 million (Carsten 2015). At least one-third of these Internet users are actively engaging with one or more

domestic social media platform, with nearly half this figure active on a daily basis (CCNIC 2014). Openness and sharing are among the salient characteristics of this digital generation. In this fast-changing environment, Douban – where 92.5 percent of users are aged between 18 and 35 – is a key online platform, offering users a space to broadcast their views to a potentially vast number of attentive listeners (Yu et. al 2011). In the 2010s, among China's digital natives, eWOM has become a critical element in the film exhibition mix, creating a new and ever-changing synergy of the power of social media. In particular, it is impacting on the sharing of information about Korean films and other *Hallyu* content in critical ways.

Douban is a major magnet for the new wave of film fans who are generating vast quantities of participatory and collaborative eWOM about the subject. Like Twitter, Douban is a “follower network”, meaning that users can share information and spread messages and ratings of media texts among geographically dispersed followers and/or follow others doing the same (Zhao et. al 2011). As with the Internet Movie Database (IMDb), Douban users are able to rate a film from one to five stars. As we have seen, it is also an “interest-oriented” social networking service (SNS), as opposed to a “relationship-oriented” site (Zhang and Wang 2010). Depending on the level of trust among followers, members' user-generated reviews enable users to judge the quality and rating of particular media or products.

However, at face value, the rating system used by Chinese film fans on Douban is in itself insufficient for measuring audience reactions to the films being reviewed. Thus one needs to seek alternative ways of measuring audience opinions of a film, and the possibilities for automating this analytical process. As discussed below, a method has been developed and employed to analyze users' opinions of films on Douban – an approach that reveals the nuanced patterns and trends in the reception of Korean cinema among the digital natives inhabiting one of China's most popular online social media platforms. It is this approach – along with the development of multiple Chinese-language analytical dictionaries – that makes this study particularly innovative in the English-speaking domain.

Research Methodology and the SMART Data Analysis Platform

The primary dataset for our study comprised the short comments that users posted on the topic pages dedicated to five specific feature films. These movies were selected for their significant place in the oeuvre of Korean writer-directors and also because they attracted the largest number of comments by Chinese film fans in comparison to similar films.

The general platform for mining and processing social media data of this type consists of three basic stages: harvesting, analyzing, and visualizing data. We gave particular attention to category identification and sentiment analysis of all “good quality” user comments – defined as a small but meaningful dataset that has been standardized or “cleaned” prior to analysis.⁵ Category identification is used to discover the topics broached in a user's comment, while sentiment analysis (aka opinion mining) uses a combination of machine learning and natural language processing techniques for collecting and distinguishing positive and negative opinions and attitudes from a given source.

This project utilizes the expertise of a team of IT specialists from the SMART

Infrastructure Facility at the University of Wollongong, a national center for infrastructure solutions. The SMART (standing for Simulation, Modeling, Analysis, Research and Teaching) team employs advanced IT skills to develop efficient techniques for investigating big data. The translation of harvested comments and keywords in the dataset was conducted by two project team members who are bilingual in English and Chinese and also familiar with the language conventions used in the dataset. While the Douban dataset for these five Korean films is not exactly 'big data', the complex systems and analysis techniques employed in this exploratory study constitute a working prototype for analyzing case studies involving the much larger volumes, variety, and velocities typically associated with sources of big data.

In the first stage of the study, the UGC and its associated data was harvested from the Douban website via its publicly available application programming interface (API), which enables the data to be extracted and then saved. The six main classes of data, which link a single user to a specific comment on a particular film (which also has a unique ID), are: film title, film rating, raw short comment, comment timestamp, number of user votes (akin to "likes") on a comment, and the author/registered user's profile (including ID and geographic location). Registered users can make only one comment per film. The initial data harvesting process in the present study occurred in April 2014, and new UGC was collected in September 2015 after the researchers noticed a sizeable jump in the number of comments.

Second, analytics are used to process and interpret the data extracted using sophisticated algorithms, such as machine learning techniques to assist with opinion mining. Additionally, natural language processing techniques are also employed, which involve the programming of a computer and/or an application to process and understand human language, thus enabling evaluations and predictions to be made.

The approach taken in the present study extends the work explored in the 2011 special issue of *Participations* on social media research and online analysis.⁶ It also attempts to build on the topics and methods engaged in more recent studies, including research on Twitter (Harrington, Highfield, and Bruns 2013); IMDb user comments and demographics (Boyle 2014); analysis of fan comments on the Turkish-based Sinemalar IMDb-like website (Anaz 2014); the conceptualisation of UGC (Matikainen 2015); and rigorous reflection on social media and audience research methods (Procter, Voss, and Lvov 2015), while extending the research on cinema audiences, box office statistics, and film texts more broadly in Srinivas (1998), Shim (2006), Kim and Wang (2012), and Athique (2014) to name only a few. Given the rising interest in social media and its place across interdisciplinary fields, the authors hope that the present article will present a turning point – not only in terms of a geographically dispersed Asian audience that is becoming increasingly important in global audience research, but with respect to new methodological concerns that will underpin future research initiatives.

In the analytics phase of our project, the complete sentences in a comment are divided into smaller syntactical and semantic components. This process, using the word segmentation approach, enables the investigator to generate lists of keywords and to document their appearance frequency. This segmentation strategy was conducted by

implementing a primary dictionary that takes account of the specific language habits of Chinese users. A major difference between English- and Chinese-based language processing is the way that such segments are indicated. For instance, in English a space is usually used to separate words. However, Chinese has a significantly different structure in which word division is either non-existent or different. Thus, any procedure adopted for segmenting Chinese words must consider the specific language habits of Chinese users. Therefore, a primary ‘dictionary’ is required to perform this segmentation function; devising such tools is one of the major innovations to result from the methodology adopted by the authors.

Based on separated keywords, category identification and sentiment analysis is conducted. In this way, we are able to interpret the collected comments by identifying and extracting subjective information from the source material and mining it further for positive and negative terms associated with the segmented words. To help us generate meaning from the trends found in the results, the study focuses on clusters of keywords that fall under four conventional aspects of film criticism and analysis: director/directing, actor/main character, story, and genre (see **Table 1**). To assist us further, we also designed four sub-dictionaries, in addition to the primary dictionary, to match related categories. These sub-dictionaries are manually generated, based on the most frequently used keywords.

Table 1: Example of a Basic Keyword Feature List in categories for *Way Back Home* (2013).

	Director	Actor/Main Characters	Story	Genre
<i>Way Back Home</i> (2013)	导演 (Director)	女主角 /女主 (Lead actress)	韩国 (Korea) 法国 (France) 故事 (Story)	类型 (Genre)
	女导演 (Female Director)	男主角/男主 (Lead actor)	马提尼克 (Martinique) 叙事 (Narrative)	剧情 (Drama)
	方银振 (Bang Eun-jin)	全度妍 (Jeon Do-yeon)	剧本 (Script) 预告 (Trailer) 海报 (Poster)	家庭 (Family)
	嫌疑人 X 的献身 (Perfect Number)	宋静妍 (Song Jeong-yeon)	法/法律 (Law) 走私 (Smuggle)	犯罪 (Crime)
	视线 1318 (If You Were Me 4)	记忆中的风琴 (The Harmonium in My Memory)	女 (Female) 男 (Male) 海关 (Customs)	喜欢 (Like)
	奥罗拉公主 (Princess Aurora)	密阳 (Secret Sunshine)	坐牢 (Imprisonment) 牢 (Prison) 犯人 (Inmate)	不喜欢 (Do not like)
	风格 (Style)	你是我的命运 (You are My Sunshine)	狱警 (Prison guard) 可卡因 (Cocaine)	真实的故事 (True story)
	喜欢 (Like)	高地战 (The Front Line)	毒品 (Drugs) 毒品贩子 (Drug mule)	写实 (non-fiction/real)
	不喜欢 (Do not like)	高修 (Go Soo) 金宗裴 (Kim Kong-bae)	丈夫 (Husband) 女儿 (Daughter)	
	女 (Female/woman)	恋慕 (Awaiting)	家庭主妇 (Housewife) 老婆 (Wife)	
	女演员 (Actress)	喜欢 (Like) 不喜欢 (Do not like)	家庭 (Family) 忠诚 (Loyalty) 腐败 (Corruption)	
		最佳女演员 (Best Actress)	拼命 (Desperation) 骗 (Deception/lie)	
		戛纳 (Cannes) 表演 (Acting)	真实的故事 (True story) 写实 (non-fiction/real)	
		好 (Good) 不好 (Bad)	韩国政府 (Korean government) 警方 (Police)	
			飞机 (Flight/airplane) 机场 (Airport)	

After completing the computer-based analysis, all of the raw user comments were imported into Microsoft Excel and a manual analysis was conducted on the categories modelled. This extra step enabled the authors to verify the computer program’s accuracy (see **Table 2**) in classifying each raw comment and determining its “sentiment” based on keywords associated with one or more of the four film categories listed above. The raw comments were segmented in Excel by entering keywords in the “filter” function. To check the accuracy of the sentiment analysis, twenty-five random comments coded according to each keyword were analysed beyond the simple binary of positive or negative. This step opened the data to a more in-depth analysis of the factors contributing to the sentiment observed. Ensuring the coding accuracy of the machine learning framework, which provides

only one sentiment per sentence, was thus possible for comments containing multiple sentences with competing sentiments across the four different categories.

Table 2: Accuracy of sentiment analysis for user-generated comments linked to each film.

Film	Positive	Negative
<i>The Way Home</i>	96%	86%
<i>Very Ordinary Couple</i>	90%	26%
<i>Helpless</i>	88%	22%
<i>Naked Kitchen</i>	64%	76%
<i>Way Back Home</i>	90%	47%
Average	85.6%	51.4%

The performance of the proposed processing work in terms of accuracy of sentiment classification (for both positive and negative sentiment) of short comments, compared with a test set of sentiment data as classified by a person, is listed in **Table 2**. Despite its relative efficacy, the preliminary framework used in the present study, which builds upon the explorative work of Yang and Yecies (2016), has limitations regarding its ability to classify the sentiment in some Chinese-language comments because of the polysemic nature of many Chinese words. Hence, context is everything, and the machine learning framework still has difficulty discerning context on its own. Thus, at least at this point in time, partial manual analysis is needed to elicit the nuanced meanings of such datasets. Updating the dictionary of feature keywords after amalgamating the machine learning and manual results enables the researchers continually to improve the framework's accuracy and efficiency. This issue demonstrates the challenges inherent in using machine learning with data involving a language other than English.

Findings and Analysis of Results

Each of the four sub-dictionaries (director, actor/main character, story, and genre) was implemented to elicit specific information about a particular aspect of each film. Not only was each dictionary used for word segmentation, but they also functioned as sorting mechanisms through which to identify and categorize various user opinions. In adopting this approach in the proposed framework, our analysis of the dataset constitutes a major advance on previous studies, which rely either on data available in English-language sources (which present fewer problems than a Chinese-language dataset) or are restricted to a single, and thus limited, dictionary of Mandarin terms.⁷ An example of the word segmentation applied to one comment relating to *Way Back Home* appears in **Table 3** below. (Note that the results obtained from the application of these four sub-dictionaries vary from film to film.)

Importantly, the keywords in the sub-dictionaries are clustered based on their semantic categories by using dependency analysis technology. To achieve this, the modifiers and relevant target keywords are clustered together as a unit group, thereby revealing syntactical structures among particular words. Visualizing our approach to this detailed task of word segmentation and the clustering process used to analyze a given comment is a job for a subsequent publication. Suffice it to say that the same procedure is used to conduct the analysis for the comments in **Table 3**, as well as for the total of 18,180 “good quality” comments in the dataset.

Table 3: An example of the application of the four sub-dictionaries used for word segmentation to larger syntactic units in *Way Back Home*.

Director	看的时候觉得有些地方好细腻啊,一看果然是女导演 While watching the film I felt that some parts were done quite exquisitely – as expected it was a female director.
Actor/Main Characters	全度妍还是黄皮肤人里最好的演员 Jeon Do-yeon is still the best Asian actress.
Story	虽然真实故事改编的惨案一般都很容易博得高分, 在情感表达和故事曲折上达到了高度统一, 包括主角表演的各个方面都非常真实。 Although it's easy for films that are based on true stories to gain high marks, the emotional expression of this film, the plot twist and turns as well as the performances by the actors kept the film authentic.
Genre	韩国这类型的片子看多了就变得挑剔了, 挺感人的 I have become more critical after watching such genres in South Korean films; it's quite impressive.

At the dependency analysis stage, our model revealed hidden relationships among key words that would be ineffective to investigate using manual analysis. The dependency analysis process has enabled us to identify how individual and groups of users describe specific terms. We were then able to “mine” the sentiment or opinions extracted from the Douban users’ comments. The findings discussed below are derived from particular keywords present in the dataset that corresponds to each of the five films studied.

Table 4: Ratings and percentage of comments for each film category.

Film Title	Number of comments (as of April 2014)	Number of comments (as of Sept 2015)	Total number of ‘good quality’ comments (as of Sept 2015)	Director		Actor/ Character		Story		Genre	
				Avg Rating	%	Avg Rating	%	Avg Rating	%	Avg Rating	%
<i>The Way Home</i> (2002)	9813	12,217	7700	3.97	1%	4.27	40%	4.28	41%	3.76	11%
<i>The Naked Kitchen</i> (2009)	2083	2214	1440	3.16	2%	3.13	26%	2.97	30%	3.0	11%
<i>Helpless</i> (2012)	1592	1972	1320	3.13	2%	3.25	35%	3.26	59%	3.28	21%
<i>Very Ordinary Couple</i> (2013)	3827	5434	3680	3.57	2%	3.34	15%	3.53	58%	3.51	12%
<i>Way Back Home</i> (2013)	13	6369	4040	4.04	3%	4.04	22%	4.12	34%	3.89	5%

Source: Data harvested from Douban’s open API and computed by analysing the frequency of keywords.

The ratings given in **Table 4** above are averaged users' ratings for a film with a comment containing keywords belonging to one of the four categories. For example, if a user mentioned the director and gave the film a rating of three stars, then this user's figure is included in the calculation of average ratings for each category. Since the comments allowed on Douban are restricted to 140 Chinese characters, users normally comment on the specific part of the film which had the biggest positive or negative impact on them. Given the small distribution between these figures, ratings alone tell us very little about audience sentiment. However, **Table 4** does demonstrate the gradually increasing interest in these representative Korean films among the Douban community. Having said this, a number of comments were removed during the automated data-cleaning process because they were either cursory, generated by fake users or were deemed to be commercial advertisements based on the repetition of content. Further comments were disregarded because their authors failed to give the film a rating, an essential variable in our analysis. The remaining comments fit what we call 'good quality data'. In all, the computer-based framework achieved 100% accuracy in terms of sorting comments and sentences into each of these four categories.

Recognizing additional patterns involving the timestamp of the UGC is possible by incorporating other external factors such as the various release dates of the film across peer-to-peer networks, DVD shops, multiplexes, and commercial VOD platforms. Also, media attention given to particular stars who have appeared in subsequent films (as well as controversies involving them) can lead to spikes in the volume of comments on the original film under investigation. We now turn to more specific details concerning each film in order to make sense of the patterns and trends uncovered beyond the average number of ratings displayed above.

Of the five films analyzed here, *The Way Home*, a story about a boy and his grandmother, attracted the largest number of user comments, and the film had the highest rating for its actors/main characters as well as for the story. Although very few users acknowledged director Lee's name or gender, those that did emphasized Lee's realistic style and her considered approach to portraying emotion. However, around one-third of the comments mentioned "Korea" when discussing the film, the actors or the story, revealing an awareness of Korean society and an interest in discussing it. For 1,131 users, the film reminded them of their own childhood and their relationship with their grandparents; more than one-third mentioned how much they missed their own grandmother/grandparents. They were also struck by the similarities of the landscape in Korea and China, as well as by the depiction of family relationships in both countries. Overall, audiences expressed positive sentiments towards the film, appreciating the director's development of an emotional story and the acting skills of the child actor and grandmother, who was described as 'very Chinese'. Thus, the cultural proximity between Korea and China played a key role in the film's positive reception, and it was seen as a welcome alternative to high-concept Hollywood action blockbusters and Chinese historical epics. Sample comments include:

ID 277317226 (1 August 2010): 想起了年老的外婆，哭了 Makes me remember my elderly grandmother, and makes me cry.

ID 433833759 (24 September 2011): 韩国的农村跟中国差不多.....献给所有的外婆 The countryside in South Korea is similar to the countryside in China... Dedicate this to all grandmothers.

ID 852949905 (24 March 2015): 小小俞承豪的片子 那时才那么小,开始的时候熊孩子太可恶,妈妈也很不负责任,把外婆扔在那么远的地方,很久不去看。赶牛挺有趣的, 其实现在的熊孩子比片子里的强不到哪去。 The film features Yoo Seung-ho, who was so young at the time. At the start the child is very hateful. The mother is also very irresponsible by leaving the grandmother in such a far away place, and has not visited her in a long time. Cow herding is quite interesting. Actually kids today are not much better than the kids in the film.

ID 393110826 (1 November 2011): 让我想起了爷爷奶奶, 那些似曾相识的场景, 如果时光能倒流, 我会对他们更好! The film reminds me of my grandparents, the scenes in the film are very familiar. If I could turn back time I would treat them better!

Although *The Way Home* was originally released in Korea in 2002, Douban users began posting comments about this drama in 2005, when the site was launched (see **Figure 1**). The number of comments began increasing dramatically in 2010, reaching a peak in early 2012. Yoo Seung-ho, who was a child actor when the film was released, became a popular teen star through his roles in the K-dramas *The Great Queen Seondeok* (2009), *Master of Study* (2010), and *Missing You* (2012), and the feature film *Blind* (2011). Before 2009, Yoo's name had not figured in any user comments. A total of 1,348 comments were made about *The Way Home*'s heart-warming story during Yoo's later period, suggesting that Chinese audiences are following developments on the Korean entertainment scene.

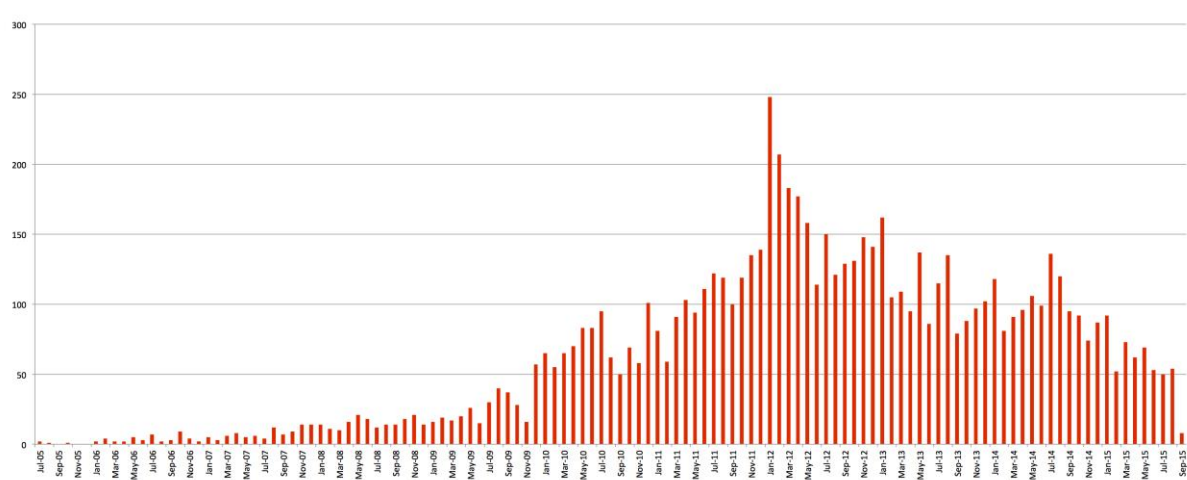


Figure 1: Number of comments over time for *The Way Home*.

User sentiment on the next film, *The Naked Kitchen*, featuring two men and a woman involved in a *ménage à trois*, was also generally positive; many users guessed the director was a woman because of the story's reflection of the development of feminism in Korea. In

particular, the modern setting created a favourable impression (even among those who didn't like the film) and, as one might expect, actress Shin Min-a and former male model and K-drama star Ju Ji-hoon (*Princess Hours* (2006)) were popular features discussed. In terms of the story or plot, around 12% of users commented on the ethics of a woman having an affair; two-thirds found the whole concept offensive, while the remainder interpreted its treatment in the film as refreshing and pioneering, and they appreciated the way in which the story was told sensitively and without recourse to sex scenes. A major point of contention was the ending, which confused and/or angered nearly a third of all users, who singled out the final scene in which Shin Min-ah's character elects to remain single rather than choose between her husband and her lover. Some of the more colourful comments include:

ID 196599839 (30 December 2009): 推荐的理由只是因为这部电影思想很先锋~~呵呵, 女导演就是想得不一样.....足见韩国女性思想上的长足进步啊~~呵呵 The only reason why I recommend this film is because the plot is one of the first. The female director thinks differently. This shows great progress in South Korean women's ideology.

ID 340035461 (11 July 2011): 真是太不现实的纯美片了。。难道这就是传说中的最完美的三角关系? 坑爹! It is really an unrealistic pure and simple film. Is this the legendary perfect love triangle? So dishonest!

ID 763573064 (6 January 2014): 1.画面优美。2.剧情扯淡。3.申敏儿是个非典型韩国美女, 化了妆的写真照很漂亮, 很有feel。4.关于三人行, 男人会有被两个女人疼爱的幻想。女人也有。突然觉得挺可怕的。因为我没有。还是觉得一对一好。不用扯什么一个用来恋爱, 一个用来过日子。。。看不起这种不负责任的解释! 1. The scenes are shot beautifully; 2. The plot is nonsensical; 3. Shin Min-ah is not a typical Korean beauty, but she looks very beautiful in the photo after dressing up; 4. In relation to the love triangle, men have the fantasy of being loved by two women. Women also have this fantasy. I suddenly think this is quite scary. Although I don't have (such a fantasy), I still have a good feeling. I think it's better to have only one lover at a time. Don't need to use one person for love, and another to spend your life with. I despise such an irresponsible explanation.

Nonetheless, users on both sides of the debate were critical of the female protagonist's involvement in the affair, showing gender bias. Another 15% of comments seemed open-minded about the complexities of love and optimistic about the possibility of achieving harmony in a *ménage à trois*; ignoring the negative dimensions of the extramarital entanglement, this group revealed their liberal attitudes to relationships, loyalty, and love.

Of all the films in the study, Byun Young-joo's *Helpless* attracted the largest proportion of users who commented explicitly on the psychological mystery-thriller story line, which captivated them in ways not commonly encountered in Chinese films. A majority (84%) of these comments received one or more votes, showing that followers liked the point(s) being made. *Helpless* also scored the lowest rating for director among all five films; fewer than two percent of users mentioned Byun by her name or job description, and none acknowledged her gender. It is also worth mentioning that half of the users who referred to the film's title wondered why it had been renamed "Train" in Mandarin, while also

pondering its differences from the original book. Among users who commented on the actors/main characters, 20% mentioned Kim Min-hee, and 44% of these focused on her looks and her off-screen relationship with another *Hallyu* star Jo In-sung. A random sample of comments includes:

ID 555338527 (12 July 2012): 傻逼韩影，整个影片就像导演一直吊着根胡萝卜在观众面前，跑啊跑，跑了115分钟，跑累了，啪，把胡萝卜往旁边一扔，说，完事儿了。This is a very stupid Korean film. For the whole movie the director is hanging a carrot in front of the audience. Running and running with the carrot for 115 minutes. After tiring from running, she throws the carrot away and says that the story is over.

ID 594419244 (22 October 2012): 导演是真正的没读懂宫部美雪 她的女主角不该是冷血的 The director does not understand what Miyabe Miyuki is trying to convey. The heroine should not be cold-blooded.

ID 538352330 (7 October 2013) 金敏喜让人惊艳，不甚出众的五官，但一颦一笑却如此生动，仿若精灵。Kim Min-hee is unexpectedly beautiful. Her features are not very outstanding, but her facial expression and smile is very lively; she has elf-like features.

ID 863577861 (17 November 2014): 既不悬疑 也不恐怖 男猪爱的又冤又辛苦. It is neither suspenseful nor scary, and the male lead's love is misunderstood and tiring.

Although Roh's award for Best Feature in the Asian New Talent competition at the 16th Shanghai International Film Festival would have helped promote this film to Chinese audiences, commentators gave *Very Ordinary Couple* average ratings in all of the topic categories explored in this study. Praise for the realistic portrayal of a relationship, including the themes of love and breaking up, was the single most common comment that users made on the film, directed at both the director and the actors, giving a quarter of users an opportunity to reflect on their own relationships. However, as with the other films in the study, while Roh's name as director was scarcely mentioned by users, she was acknowledged as a woman director by a small cohort who were impressed by her ability to capture the characters' emotions while also portraying a strong female protagonist. Here are two examples of user comments:

ID 699582586 (4 July 2013): 看电影的时候我就在想，这一定是个女导演，在把人与人细微的感情变化和关系发展表现得如此自然而又不刻意，相当细腻。While watching the film I was thinking the director must be female. She creates subtle emotional changes and develops relationships between two people delicately and naturally without being too deliberate.

ID 736102454 (16 October 2013): 这部电影告诉我们，谈恋爱要么就别分手，要么分手了就不要再回头 The movie tells us that if you love someone then don't break up. If you break up, then don't look back.

ID 790779085 (30 March 2014): 喜欢这类型的片子，和六年之痒属于一类型，故事平淡却特别真实，看着看着不由得就对号入座了，结尾依旧是开放式的，感觉这样的结尾会让人回味很久，悬着心，喜欢。I like this film. It is similar to *The Seven Year Itch* (1955). It is an ordinary story, but it is quite realistic. After watching it, one realises

both films are similar. The ending was also open to the audience. I feel that such an ending leaves the audience in suspense and keeps them thinking. I like it.

ID 841831719 (1 September 2014): 像是可以凝聚剧情为拍拖之事，分久必合，合久必分...除了煽情部分外，故事有太多笑点，很逗，从主角们到配角，一个个很有娱乐天赋，顺便不忘黑下银行，导演的拍摄方式也很有趣，不过后面剧情却稍显拖沓。It seems like a film about dating and separation, and then getting back together and breaking up again. Apart from the intimate scenes, there are a lot of humorous and very amusing points. From the main actors to the supporting cast, they are all born entertainers. The director's technique is very interesting, except towards the end the film which dragged a little.

Bang's *Way Back Home*, a true story about a woman imprisoned for drug trafficking, attracted the second-largest number of user comments and was rated highest of all five films, giving us an insight into the tastes and interests of this Douban cohort. The film also gained the highest rating for director, and the 11% of users who focused on this aspect knew that Bang was a woman, and less than half of them (4%) were surprised that a female director was able to manage this type of genre. A majority of this group praised her ability to elicit a range of emotions through the film, as well as her courage in taking on a story of this kind, which they generally believed could not be made (or shown) in China due to censorship constraints. A total of 137 users mentioned that the media can be a tool for achieving justice and telling the truth, while another 228 users extended the conversation with comments that compared censorship in China and Korea, making the obvious point that lead actress Jeon Do-yeon would have had a tougher time if she was from China – similar to the harsh treatment (a ban lasting several years) that Chinese actress Tang Wei received from the government after her sexually provocative role in Ang Lee's *Lust, Caution* (2007). Sample comments include:

ID 809068772 (21 May 2014): 韩国的年轻女导演还能驾驭这样的题材完全出乎我的意料。I'm surprised a young South Korean female director is able to manage this kind of subject matter.

ID 810531830 (26 May 2014): 看的时候觉得有些地方好细腻啊,一看果然是女导演。While watching the film I felt that some parts were done quite exquisitely, and as expected, it was a female director.

ID 808034101 (18 May 2014): 男人的天真与无知造成了家庭的悲剧，既然是真实案件改编，那这就值得我们男人们反思了，别TM傻乎乎的，被人卖了还帮着数钱！A man's innocence and ignorance causes a family tragedy. Since it's inspired by true events, it is thus worthwhile to use this film as a reflection for other men. Don't be so stupid: when you are cheated by others why do you continue to help them count your money?

ID 740972926 (23 November 2014) 中国电影的路不会比女主角回家的路好走的。The Chinese film industry still has far to go, and it is not going to be any easier compared to the female lead's journey home in the film.

ID 811742389 (31 May 2014): 中国永远不会有这类型的电影 There will never be this kind of film made in China.

In all, Jeon was mentioned in 65% of the total comments on *Way Back Home*, and 98% of these focused on her performance and physical appearance – with overwhelmingly positive responses. This reaction is partly explained by the fame that Jeon earned after winning the Best Actress award in 2007 (for her role in *Secret Sunshine*) at the Cannes Film Festival. As **Figure 2** shows, there was a sudden jump in comments posted in May 2014, the date when Jeon was invited to join the main competition jury at Cannes. Comments fell away gradually over the next fifteen months, interrupted by a spike in December 2014 corresponding to the media attention given to her next film, *The Shameless* (2015). Jeon Do-yeon's performance in *Way Back Home* brought tears to the eyes of at least 361 commentators, who had no qualms about discussing their emotional viewing experience.

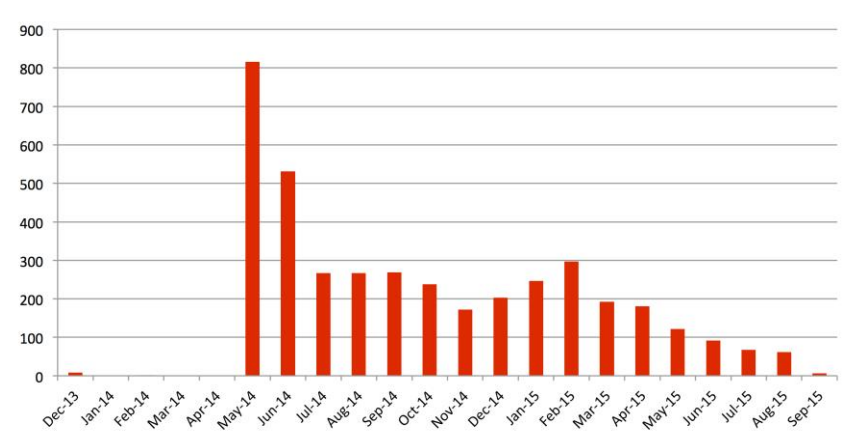


Figure 2: Number of comments over time for *Way Back Home*.

Taking all five films into account, the four sub-dictionary attributes were ranked in order of frequency of comments: story, actor/main characters, and genre, with director trailing the list. Perhaps surprisingly, as displayed in the bubble chart below in **Figure 3**, Douban audiences had very little to say about Korea as the nation of origin of each film, as well as its status as the chief location featured in the story. In other words, the story was more important than the place where the film was made. However, the results reflect the importance of using known actors, suggesting that the inclusion of celebrity Ju Ji-hoon in *The Naked Kitchen*, for example, was a primary driver for users watching the film. As we have seen, very few comments acknowledged that each film was written and directed by a woman, indicating that the filmmaker's gender has yet to generate its own share of attention among this small but representative group of Chinese movie fans.

In any case, as hypothesized, our findings indicate that eWOM relating to *The Way Home*, *The Naked Kitchen*, *Helpless*, *Very Ordinary Couple*, and *Way Back Home* traversed the pathways created by registered users in ways that corresponded to each film's release history. **Figures 1** and **2** illustrate the unfolding of these trends over time for each film, as reflected in the changing volume of user comments. The chronological patterns revealed by this eWOM were consistent across the cities and provinces where users were located – a trend reflected in the various dictionaries used to analyze sentiment in the user comments

The network graph illustrates the relationships between actors, genres, and themes. The nodes are represented by circles of varying sizes, and the edges represent connections between them.

- Actors (Red Nodes):** This cluster includes prominent actors like Kim Min-hee, Lee Seung-yun, and Kim Jong-bae, as well as other actors like Shin Min-ah, Ahn So-yeon, and Kim Min-hee. The size of the red nodes indicates their relative importance or frequency in the dataset.
- Genres (Orange Nodes):** This cluster includes various film genres such as Drama, Thriller, Mystery, Horror, Crime, Non-Fiction, True Story, Romance, and Family. The size of the orange nodes indicates their relative importance or frequency in the dataset.
- Themes (Green Nodes):** This cluster includes a wide range of themes such as Love, Real, Couple, Housewife, Respect, Friendship, Mature, Village, Script, Japan, Credit Card, In Love, Motion, Roman, Foster, Attraction, Smuggle, Korea, Kill, Photograph, Photographer, Desperation, Touch, Marriage, Scary, Gender, Love Triangle, Tradition, Airport, Family, Life, Scared, Aerophone, Wife, and others. The size of the green nodes indicates their relative importance or frequency in the dataset.

The graph shows a high degree of connectivity between the actors, genres, and themes, suggesting a complex and interconnected network of relationships.

Conclusion: Douban UGC as a Barometer of Popular Culture in China's Social Mediasphere

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However, in the social media era, online and mobile opinion mining and category modelling on open access sites such as IMDb and Douban are changing everything.

While its effects are somewhat predictable, it is known that the power of WOM surrounding movies can fade quickly (Roschk and Große 2013). In addition, there is a limit to what we can learn about an audience through box office statistics collected in particular markets. However, eWOM generated via UGC on a variety of online and mobile platforms has become a significant factor not only in a film's commercial success, but also in gauging its popularity and longevity among global film viewers. To gain a better understanding of the latter factors – which fall outside of conventional economic measures and are not accessible from English-language sources – the authors have proposed an alternative framework for conducting cross-cultural audience research, one that goes beyond a mere sentiment analysis. They have already established that data quarried from sites like Douban help us understand the opinions, attitudes, and tastes of Chinese audience with regard to major film categories such as directors/directing, actors/acting, story, and genre (See Yecies et. al. 2015). At the same time, the preliminary study has provided a privileged perspective on the reception of Korean cinema by Chinese audiences, findings which can be applied more broadly to *all* Korean films on Douban. The five feature films analyzed here constitute only the starting point in this process.

A large proportion of those reviewing the five films in this study posted their comments around the time that the films became available through illegal DVD shops and kiosks, and unlawful peer file-sharing networks in China and elsewhere. (The authors have seen these titles among the plethora of pirated Korean DVDs available in Beijing-area shops and also –illegally – online shortly after their respective release dates.) Although some of these films are still not available legally via commercial VOD platforms, all those who rated the films wrote as if they had seen them. This trend fits with observations made in other, similar studies (Kokas, 2014).

Illustrating this point for *The Naked Kitchen*, pockets of users posted bursts of comments around key dates corresponding to various eWOM and promotional activities related to the film, such as an appearance by a particular actor in a new film or event. Thus, according to our findings, Douban users frequently tap into the extra-textual buzz surrounding particular stars, encouraging them to return to an older film thread to post new comments. In turn, this keeps the eWOM surrounding a film alive well after its release date. For films lacking big name stars, the incidence of comments usually levels off after about five months to a steady trickle – as in the case of all five films in our study. Clearly, the availability of these films on a range of unauthorized viewing sites is contributing to the longevity of eWOM on Douban.

The approach employed in the present study offers academics an opportunity to discover the specific features that are attracting audiences to (or compelling them to avoid) particular Korean films – in this case, created by a diverse range of female writer-directors. Accordingly, such data can be used to inform new understandings of how such filmmakers and their films travel across cultures, and to identify the features that resonate most

strongly with foreign audiences. Researchers can use this opinion-mining approach to determine if or to what extent Chinese audiences display empathy with the social and political themes, messages, and issues represented in films from across the globe, including domestic Chinese films made with one or more international partners.

A key aim for future work is to gain a deeper understanding of the real users behind Douban's UGC and to investigate the ways in which they place their trust in the people that they follow. How does the Douban experience compare, for instance, to Americans or Koreans participating in OSNs in their native language? According to one study, the relationships that Chinese social media users maintain through eWOM are more influential than those experienced by their counterparts in the US (Chu and Choi 2011). Given this trend, and given how Douban users actively engage in eWOM by offering, searching for and sharing opinions, it is likely that the Chinese commentators under investigation have a marked degree of influence on the opinions and attitudes of their fellow cinema fans. In any case, it is hoped these findings will expand scholarly understanding of how to measure and analyse the growing cinema audiences in OSNs and the eWOM tools that they are using to increase their enjoyment of film. There is also an opportunity here to think more deeply about the range of stories and visual styles found in Korean films that are inspiring Chinese filmmakers and the film industry in China more broadly – especially given the growing number of Chinese remakes of Korean films. In turn, this approach can benefit industry players as well, by informing strategies not only for producing and promoting films featuring particular actors and plot elements, but also for localizing stories for specific markets, regions, and target audiences.

Obviously, the circumscribed nature of short comments on Douban prevents users from offering deep thoughts on a given topic – unlike the small number of semi-professional writers on Douban that post longer critiques – similar to English-language websites such as Film.com or RogerEbert.com. However, our study has suggested how, at least in some films that portray aspects of real life, users are using story elements and plot lines to broach larger social and cultural issues and their feelings and attitudes towards them. In this way, the study of UGC on Douban not only gives us a privileged view of the film tastes of Chinese audiences, but opens a window on contemporary society. Hence, we have begun to understand how Douban users are contributing to conversations about a new era of lighter commercial entertainment that is reducing China's 'cultural trade deficit' (see Keane 2007), which has resulted from a long-term heavy diet of propaganda-oriented content.

This preliminary analysis of the quantitative and qualitative data generated by registered users on Douban has barely scratched the surface of what can be learned about the cultural habits of Chinese 'digital natives'. Nevertheless, thanks to Douban and its active users, films made in Korea and other countries – including the large numbers that fail to gain selective approval for exhibition on cinema screens – are gaining a new lease on life through conversations on social networking services.

Given that it is beneficial to connect transnational audience reception to multiple types of media content thereby facilitating a fuller grasp of broader social experience, more

attention is needed to the type of ‘channel-multiplication’ that is inseparable to globalization (Athique 2014: 7) and also impacting on users of Douban. Our next step will be to drill deeper into the dataset and its corresponding geo-location markers in order to observe significant shifts in the location and timing of particular features addressed in individual postings – insofar as they reflect either a positive or negative opinion. In addition, the authors are eager to explore the attributes of the small number of semi-professional writers posting more detailed critical comments. In undertaking studies of this kind, the authors aim to demonstrate that Douban’s registered film commentators possess a measurable degree of influence on those who follow them online, and to reveal what the interconnecting roles of user sentiment, timing and location can tell us about the ongoing transformation of eWOM as a function within social networks. Over time and with the collection of bigger data, including other sources of media that may shape users’ experience, the authors aspire to identify additional meaningful patterns in Chinese-language eWOM traffic by further utilizing the natural language processing techniques they have developed to study the cultural predilections and tastes of digital natives in this interest-oriented OSN.

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Notes:

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² In an interview Mr. Zhang Zhao, CEO of Le Vision Pictures and the co-producer of the box-office hit series *Tiny Times* (2013), *Tiny Times 2.0* (2013), and *Tiny Times 3.0* (2014), used the phrase 'Internet aborigines' to describe China's digital natives. See Liu 2014.

³ Recent examples of Douban as a compelling film industry "go-to" source include the use of Douban ratings in *The Hollywood Reporter's* review of *Pan* (2015) and its abysmal performance in China, where it was released in October 2015 (www.hollywoodreporter.com/news/why-china-is-panning-pan-835052); and the *Los Angeles Times's* reproduction of Douban comments reflecting the Chinese reception of *Spectre* (released in November 2015) and past Bond characters (www.latimes.com/entertainment/envelope/cotown/la-et-ct-spectre-china-box-office-james-bond-007-20151117-story.html).

⁴ For more background on the cinematic component of the Korean Wave, see Paquet, 2009; Choi, 2010; and Yecies and Shim, 2016,

⁵ Approximately one-third of the total comments in this study were ruled out and removed prior to the analysis stage, a trend that fits with earlier research on social media. See Yu, Asur, and Huberman 2012.

⁶ See the special section: “Approaching the Online Audience: New Practices, New Thinking”, *Participations: Journal of Audience and Reception Studies* 8 (2). Available at:

www.participations.org/Volume%208/Issue%202/contents.htm. Of particular relevance is the sentiment analysis on Finnish and Chinese audiences in Kääpä and Wenbo (2011).

⁷ Two previous technical studies include: Yuan, C., Zhuang, Y., Li, H. (2011). Semantic based Chinese sentence sentiment analysis. *International Conference on Fuzzy Systems and Knowledge Discovery (FSKD)*, Vol. 4, pp. 2099–2103; and Singh, V.K., Piryani, R., Uddin, A., Waila, P. (2013). Sentiment analysis of movie reviews: A new feature-based heuristic for aspect-level sentiment classification. *International Multi-Conference on Automation, Computing, Communication, Control and Compressed Sensing (iMac4s)*, 712–717.