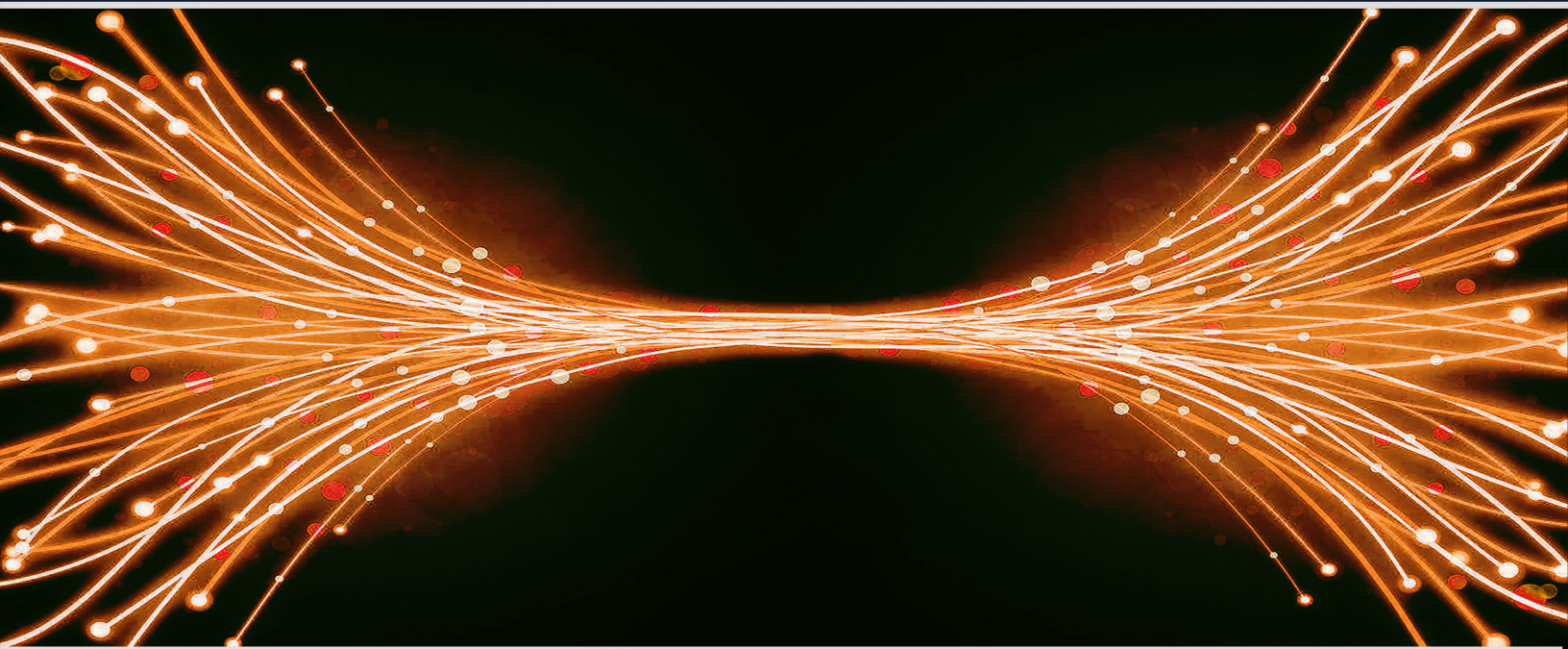# WARNER BROS. HOME ENTERTAINMENT
# UNIVERSITY OF CALIFORNIA SANTA BARBARA

# CONNECTED VIEWING INITIATIVE

## YEAR TWO
## FINAL REPORT

### JUNE 2014

**CWC** CARSEY-WOLF CENTER | **Media Industries Project**    **UCSB**    **WB**

# The Connected Viewing Research Team

June 14, 2014

Welcome to the Connected Viewing Research Summit, Year 2. We are thrilled to have reached this milestone in the collaboration between Warner Bros. Home Entertainment and the Carsey Wolf Center's Media Industries Project at the University of California, Santa Barbara. This project began as a conversation with Thomas Gewecke about the changes in media distribution brought on by digital technologies and the value scholars may be able to provide with our unique perspective on these changes. Today, it has evolved into a multi-year international research project examining the future of connected viewing all over the world as it relates to new forms of engagement, production opportunities, audience expectations and behaviors, international privacy regulations, and big data.

Our initial inquiries into the multi-screen, socially-networked entertainment experience began with thirteen projects, ranging from a study of the collector's mindset to projects focused upon connected viewing behaviors in the UK, Portugal, and Sweden. This year, we continue to explore international audiences with projects about China, India, South Korea, and Brazil, while also presenting findings about privacy regulation and the growing importance of the digital ecosystem, from business models to methods of content discovery. This research has been ongoing throughout 2013-2014 and represents what we view as the best that industry-academic partnerships can generate: a truly engaged community of research with fresh insights around a rapidly evolving area of mutual interest. We are hopeful these findings will prove valuable for a range of audiences from executives at Warner Bros. to students of digital media industries at our universities.

It has been our privilege to work with this dedicated team of researchers and our WB Home Entertainment partners as we all discover more about this rapidly changing ecosystem. We remain grateful for the continued support of all the Home Entertainment executives who have been working with us this project over the past year, most especially Anuraj Goonetilleke who has overseen this collaboration from its inception and provided us with essential guidance and insights. We are truly excited to share the product of everyone's hard work here with you today. On behalf of the Carsey-Wolf Center and all of the Connected Viewing researchers, we thank you all for your spirited participation and look forward to our continued collaboration.

Dr. Jennifer Holt
Director, Media Industries Project

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**User Engagement with Online Distribution Services in India, Brazil and South Korea**

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**User Engagement with Online Distribution Services in India, Brazil and South Korea**

## Executive Summary

India, Brazil and South Korea represent markets at very different stages in the development of online viewing services. Despite these differences, however, our audience research found two overarching themes that cross all three markets and manifest in various ways: *choice* and *quality*. "Choice" manifested in the high value that the sample placed on a service's "range of content," a term encompassing both core film and television titles and additional "add-on" material. Choice also emerged in other contexts in the high value placed on services that are flexible and personalized in terms of pricing, language, and device viewing options. The management of choice merged with concepts of quality in the importance of taste gatekeepers (friends and professional reviewers) in signposting "quality" content and clear, straightforward interfaces that could both guide choice and demonstrate the quality of the service overall. Combining these characteristics presents the opportunity to build a flexible, personalizable, and simple service that provides additional value to core film and television content.

## Key Findings

- For all three markets, the most valuable characteristic of any online service for consumers is "range of content," mixing local, international, new and archival film and television programming, plus exclusive content that had not been made available elsewhere (e.g. not broadcast on television) and additional material (soundtrack information, behind the scenes featurettes, alternate versions). There is the expectation that all forms of content be updated quickly and regularly revised.

- Indian audiences perceive weak, slow, and unreliable Internet infrastructure as a significant problem shaping their economic choices, viewing practices, and perceptions of service "quality."

- In India, the absence of a market-leading service presents the opportunity to set an industry standard with a service that is consistent, reliable, and flexible. This flexibility should cover pricing and language options as well as the ability to switch viewing between devices without having to restart content.

- Taste gatekeepers play key roles in determining content choices in Brazil, India, and South Korea. These gatekeepers are primarily friends, but also encompass professional reviews and in-service metadata, and can make content discovery smoother and more attractive to audiences.

- South Korean audiences want easy to use and intuitive interfaces. In particular, consumers highly value services that make their route to content quick and easy, with a minimum number of clicks.

**User Engagement with Online Distribution Services in India, Brazil and South Korea**

India, Brazil and South Korea are markets at very different stages in the development of online viewing services. India is still developing high-speed Internet connections and has few legitimate options for viewers. Brazil is more developed, thanks to the presence of Netflix and iTunes. South Korea is the most saturated of the three markets, with high-speed fixed or mobile Internet, and dozens of available services. Each market sample displayed unique characteristics, which will be discussed below. However, our research found the potential to transfer experience from one market to another, with two overarching values appearing in all three markets:

- Choice—the value of a wide array of content and viewing options and the processes by which consumers make content choices.
- Quality—technical issues concerning infrastructure and the quality of the interface.

**Methodology and Sample**

Preliminary interviews formed the basis to develop online questionnaires tailored to the contexts of each territory. A second round of interviews sought clarification and greater detail on the questionnaire findings. Each market's sample was predominantly middle class, urban and aged 30-39 years, with high media technology ownership. The majority of each sample had broadband access and owned a laptop or smartphone:
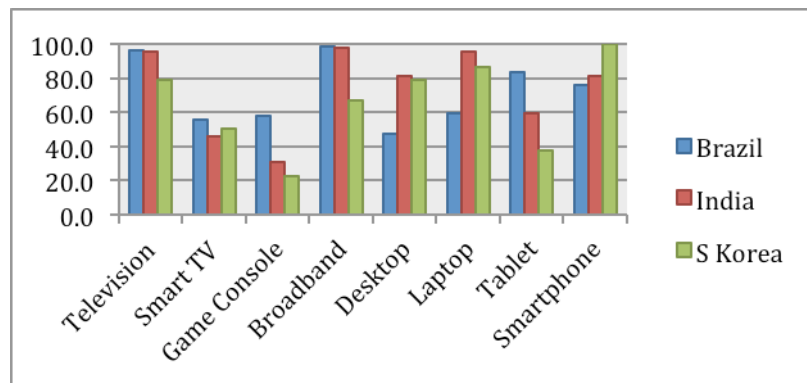


**Figure 1: Ownership of Connected Devices**

**Range of Content**

When asked to rank existing online viewing services, "range of content" emerged as the most important evaluative factor in each market (India: 72%; Brazil: 63%; Korea: 64%—see Figure 2). Price was the second most important factor in Brazil (58%) and Korea (60%), reinforcing a correlation between economic and cultural value and the importance of balancing what a service charges its users and what it can offer. YouTube and torrent sites were seen as having the best range of material and are equally free at the point of access. In interviews, "range of content" was refined to mean a combination of local and international content, new and archival content, a variety of genres, and content that is not otherwise available (e.g. that had not been broadcast in that country). Participants wanted new content to be made available as soon as possible.

**Figure 2: Criteria used to rank online viewing services (%)**

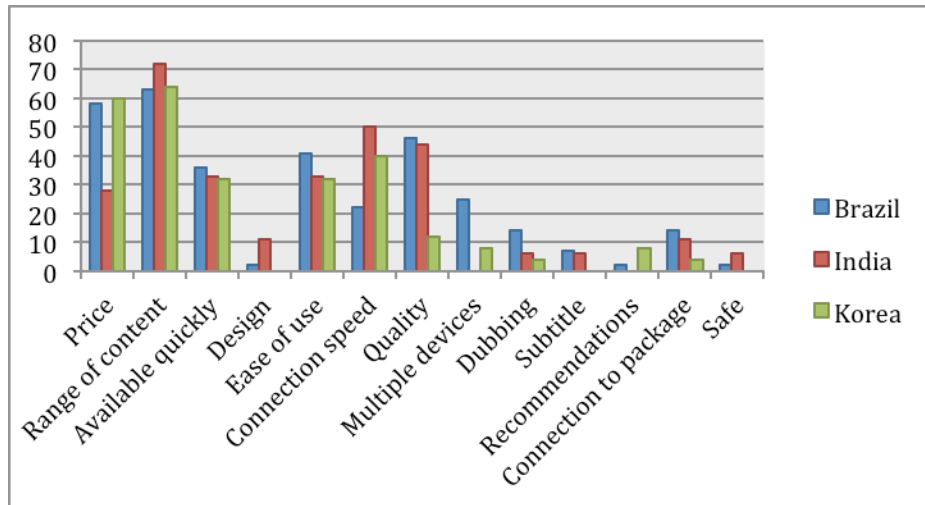The importance of choice and range of content was not limited to films and television episodes. There was also evidence that consumers would see value in a service that provided additional material or information as part of its primary package. Such material would work as promotional material to drive customers to a service. These included:

- soundtrack information including links to purchasing options (Brazil: 54%; Korea: 36%)
- behind the scenes featurettes (India: 60%; Brazil: 48%; Korea: 32%)
- alternative versions such as Director's Cuts (Brazil: 46%; Korea: 36%)

*Range of content is a priority for audiences and content should be made available as soon as possible. Additional services such as soundtrack information and featurettes could be exploited as additional drivers to content.*

**India: Infrastructure Flexibility**
India is the least developed market of the three territories in terms of online viewing services and audience habits. Live television is the most popular viewing technology, followed by laptops and recorded television:
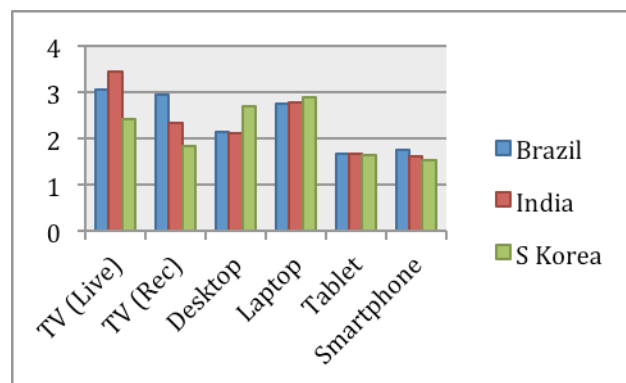


**Figure 3: Viewing preferences by technology**
(*average rating out of 5 where 5 = preferred option*)

Although some major broadcasters (e.g. STAR, Sony, ITV) do offer online catch-up services, very few of our sample had used them (28.6%, 14.3% and 0% respectively). This is despite the high levels of technology ownership among our sample. Most online viewing takes place via YouTube, Vimeo, and illegal torrent sharing sites. There is a slight preference for domestic-produced film (46% vs. 32.4% for U.S.-produced), though preference for television is evenly divided between domestic (40.5%) and U.S.-produced (40.5%).

The biggest challenge facing an Indian online viewing service is the country's Internet infrastructure. Despite investment ("FICCI-KPMG Indian Media and Entertainment Industry Report 2013"), audiences see poor and inconsistent Internet speeds as a barrier to their full engagement with online viewing, limiting choice and positioning Indian online viewing as low quality. One interviewee commented: "In India, connection speed…is a problem. The second you go outside Calcutta, Tata Photon becomes like a dial-up Internet connection." In contrast, television broadcasting is seen as "convenient" and "easy." The quality and cost of Internet access also influences viewer habits and behavior in a number of sometimes-contradictory ways. Participants prefer to download long-form film content (61.1%; streaming: 38.8%) as streaming requires a more stable and consistent service than is currently available. Downloading, however, is seen as more expensive due to data caps, and streaming was preferred for shorter content such as television (streaming: 78.6%; downloading: 21.4%). As one interviewee commented, "Downloading takes time, then is it not affordable [sic]." The cost and speed of basic Internet access is a core factor shaping the Indian sample's online viewing habits.

The challenges of unstable and uneven connectivity links with a key value that emerged from the Indian sample as associated with quality services: flexibility. Within the Indian sample, 65% described an ideal service as being available on multiple devices and allowing the transferal of viewing between devices ("device flexibility"), as found in Amazon's Whispersync technology (Brazil: 71%; Korea: 32%):
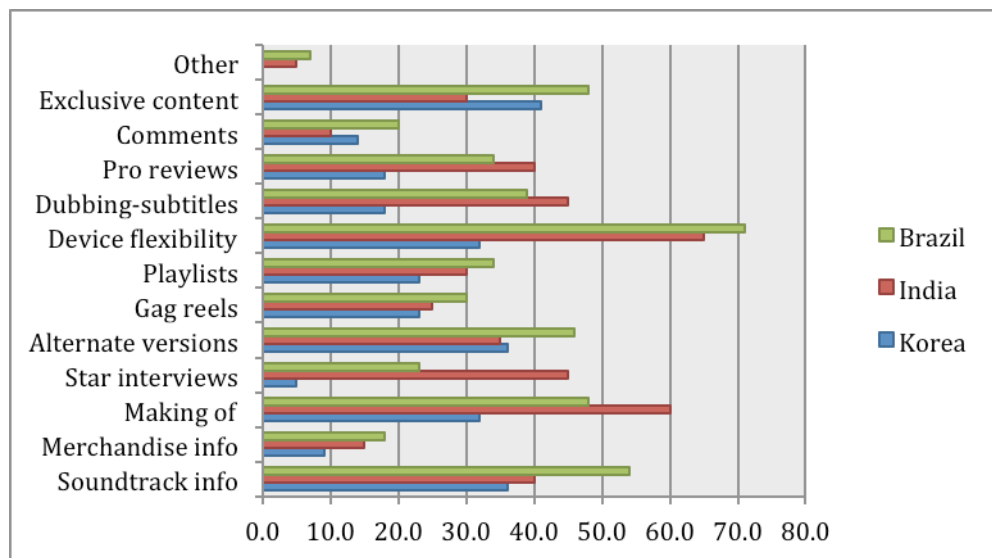


**Figure 4: Which additional features would you most like a service to offer? (%)**

"Flexibility" also related to language and pricing options. Subtitles were overwhelmingly preferred (73%), but evidence suggests that the ability to switch between subtitles and dubbing would also be valued, with 45% desiring such an option in an ideal online service. Interviews clarified that an ideal service would provide multiple language options encompassing both national (Hindi and English) and regional (Bengali, Punjabi, Tamil, etc.) dubbing and subtitle options, including closed caption subtitles in English for U.S.-produced content.

*Such flexibility depends upon a strong broadband and mobile Internet infrastructure and so requires working with local ISPs to offer such high-bandwidth services.*

As there is no commercial service currently leading the market, participants struggled to articulate an appropriate price banding. "Monthly subscription" was the most popular option for television (52.4%; AVOD: 14.3%; flexible combination of payment options: 28.6%). However, for film consumption, participants preferred flexible payment options, which would allow subscription and PPV (40%: flexible; PPV-rental: 25%; monthly subscription: 20%). The majority of the sample (77%) were prepared to pay up to INR499 (approx. $8.30) per month for access to such a service, with WB's proposed price point of INR150 being considered reasonable or even cheap.

*In the absence of any clear market leader, there is the opportunity for a service that delivers a wide range of content choice with flexible pricing, device, and language options to succeed in the Indian market. This will require working with local ISPs to improve broadband access and speed.*

**Brazil: Taste Gatekeepers, Quality and Choice Management**
Netflix dominates the legitimate Brazilian online viewing space, with 73.7% of the sample using it compared to 52% for its nearest rival (iTunes). Sites with some ambiguously legitimate content such as YouTube (98.2%) and Vimeo (75%) were also highly popular. *A flexible model, with PPV and subscription options, was the desired payment option* (film: 45%; television: 42%). However, when asked about their preferred rate for a monthly subscription, Netflix's influence is evident, with results falling in line with Netflix's rate of R$16.90:
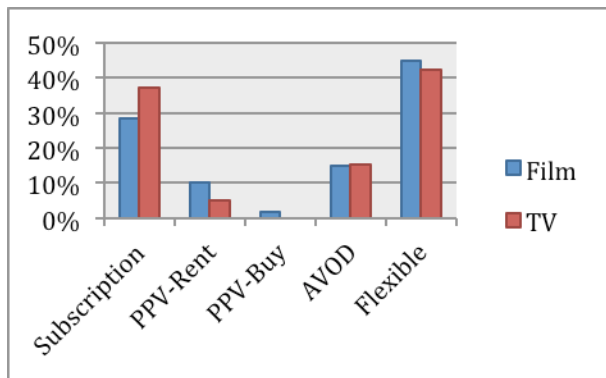


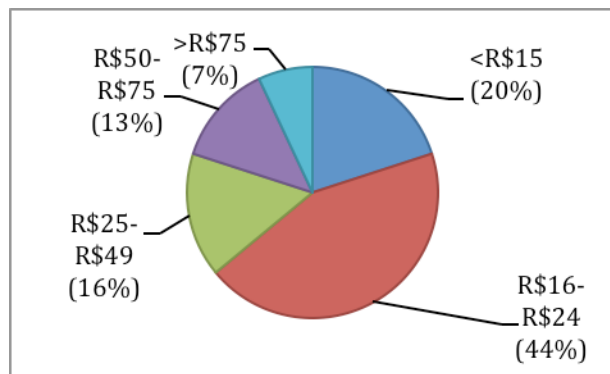**Figure 5: Payment preference.**



**Figure 6: How much would you be willing to pay for a monthly subscription? (Brazil only)**

There is strong interest in U.S.-produced film and television with 55% of the sample preferring U.S. film (against 9.9% for Brazilian film) and 47.8% preferring U.S. television (against 36.2% for Brazilian TV). Live broadcast television remains the dominant technology for viewing film and television content, followed by recorded television, the laptop, and desktop (see Figure 3).

When choosing content, community and trust are highly important for Brazilian audiences. A consequence of desiring a wide range of content is that navigating through that content may be difficult or time consuming. There are ways in which that navigation can be managed to create a quicker, smoother experience. When asked how they choose which content to watch, 67% selected friends (India: 64%; Korea: 33%), followed by professional reviews (40%; India: 77%; Korea: 50%):
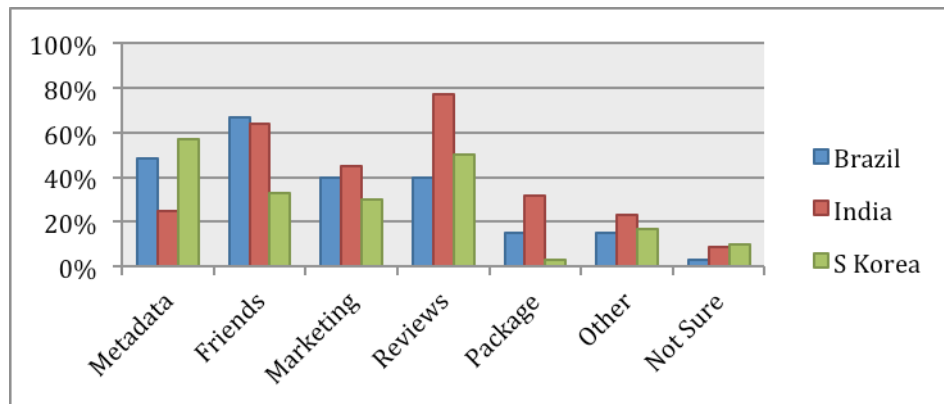


**Figure 7: How do you select which content to watch?**

*Friends and reviewers serve an important "taste gatekeeper" role, acting as markers of quality and minimizing the amount of "work" viewers must do to reach content that will engage them.* In Brazil, television series form the core of many conversations, and interviewees described their content selection process as firmly integrated into the dynamics of their platonic and familial relationships. Trust and authority are important here, however. As one interviewee commented: "There's always someone who says 'you should watch this, you should watch that'…I go for those people…whose tastes are similar to mine, because I was recommended a number of series [that] I watched and found a bit silly." Such gatekeepers are not limited to friends or professional reviewers. Within the Brazilian sample, 48.6% selected in-service metadata tools such as genre/star information, charts, or recommendations as a tool for content selection (Korea: 57%; India: 25%—see Figure 7).

*A successful service will drive viewers to content via an infrastructure of trusted recommendations from friendship groups, professional reviews, and metadata.*

**South Korea: Quality as Easy Interface**
In line with South Korea's marketplace of multiple legal and illegal providers, our sample's use of online viewing sites was spread across a number of services including YouTube, KT Olleh, and NAVER N Store. Legitimate services tend to be directly linked to Internet (3G or 4G) contracts. The sample indicates a slight preference for U.S. film (47.2%; Korean film: 38.9%) but high preference for Korean-produced television (89.2%; U.S.-produced: 8.1%). The maturity

of the South Korean online viewing market is reflected in audience habits. The entire sample had smartphones and preferred laptop and desktop computers as viewing devices to the more traditional television set (see Figure 3). More than half the sample view while "on the go" (57.9%; India: 35.6%; Brazil: 36%). However, domestic spaces in the evening (post 11pm) remain the primary context for viewing film and television.

The Korean sample valued simple and easy-to-use services. The key criteria they used to evaluate services were:
- price (60%)
- speed of connection (40%)
- ease of use (32%)

The latter two options directly speak to services that are straightforward and in which the infrastructure and interface do not impede access to content. Interviewees mentioned factors such as good search engines or the ability to watch wherever they are.

Issues of price also demonstrate the value placed on easy-to-use services. Korean respondents preferred services supported by advertising:
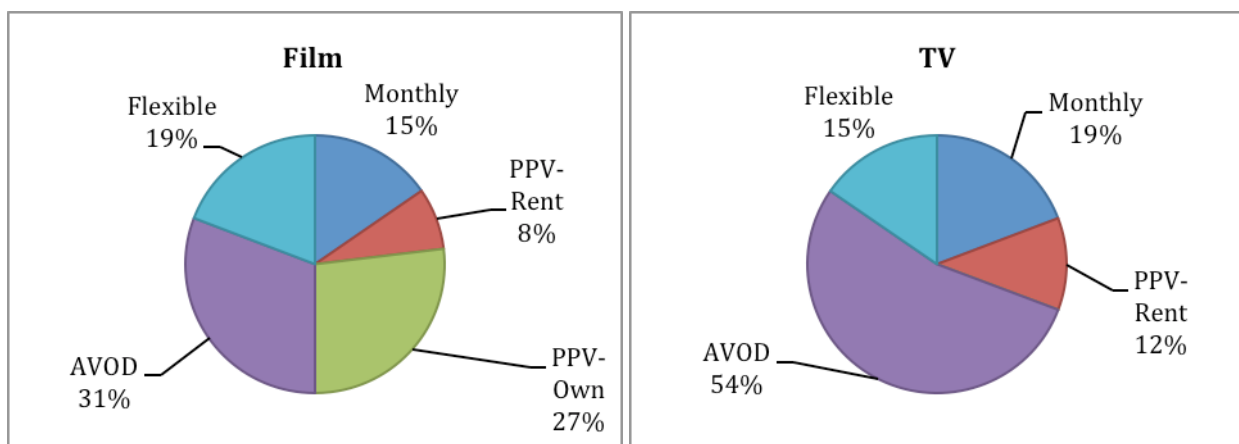


**Figure 8. Payment preference (Korea)**

This emphasis on advertising-funded services speaks both to a preference for content that is free at the point of access and to the ease of using such services. In interviews, participants commented on not wishing to "log-in" to services, as the additional time taken to create an account, provide payment details and authorize any payment (however minimal) works against the overriding preference for a service that is easy, quick, and simple to use.

*Korean viewers are more mobile and value easy-to-access services, ideally with no up-front cost.*

**Conclusion: Challenges and Opportunities**
The research highlighted the challenges of developing online viewing services in these markets:
- ensuring a wide choice of content that is local and international, as well as recent and archival;
- overcoming ISP limitations in India.

However, this research also revealed the opportunity to become the online viewing market leader in India and use experiences in one market to shape and enhance activities in another.

We recommend that online viewing services in these markets do the following to ensure success:
- be flexible and personalizable, with multiple payment, device, and language options;
- involve easy-to-use interfaces that provide quick access to content via as few clicks as possible;
- define added value and drive audiences to content through the provision of additional soundtrack information or extra content (featurettes and alternative versions);
- improve consumer choice through recommendations that make use of trusted friendship groups, professional reviews, and metadata.

**Connected Viewing in China 2014**


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**Connected Viewing in China 2014**

**Executive Summary**
As the PRC's online and mobile video market (O&M) begins to consolidate and industry practices become more formalized, we see growing opportunities for Western content providers in China but also caution that the Chinese market is very diverse and competitive. It is therefore important to investigate audience niches and innovative services that exhibit credible growth potential. For example, Zimuzu (subtitle teams) voluntarily translate TV shows and movies, making them freely available on websites and mobile apps that attract tens of millions of viewers. This report examines the popularity of Zimuzu (ZMZ) and other such innovative services. It also describes the motivations of various O&M users by mapping out a constellation of viewer types that are especially receptive to foreign content. Finally, and most importantly, we envision the conditions under which licensed content providers may be able to grow their audiences and revenue streams. We conclude that the time is ripe for WB to invest significant resources in O&M video promotion, allocating dedicated staff to cultivate targeted audiences that are especially receptive to foreign content.

**Key Findings**

- O&M viewers switch freely among providers seeking the latest content free of charge. They also place a premium on search, functionality, and navigation features, as well as image and sound quality.
- Audiences for licensed content have grown significantly, as the six video streaming services that dominate the market have become important buyers of licensed content. Consequently, these services become stronger advocates of IP regulation. Moreover, the increasing popularity of mobile devices means that many viewers are now using popular apps that feature licensed content.
- U.S. film and television distributors should position themselves for a sizable and growing but very competitive market. Hollywood films have inherent advantages in modern multiplex theaters, yet those advantages diminish in the O&M space where viewers show strong affinities for regional (e.g. Korean) and national products.
- Audience targeting and product promotion are therefore crucial tools of success in this evolving market. Our research identifies and describes nine types of online viewers that represent promising market niches: star gazers, trendinistas, young romantics, culture vultures, action buffs, animatics, drama queens, comediacs, and language learners.
- ZMZ offer an instructive example of innovative services for niche viewers. ZMZ websites attract audiences that are especially receptive to foreign content, providing accurate and timely translations that usually exceed the quality of their licensed counterparts. Although ZMZ are non-profit organizations, we discuss the role they could potentially play in content promotion and viewer awareness.
- Given the competitive nature of the O&M market, we recommend that WB establish dedicated staffing and resources at its Beijing office to develop promotional campaigns and content enhancements designed to attract targeted audiences to subscription and ad-supported services that carry licensed WB products.

# Connected Viewing in China 2014

## Online and Mobile Viewing Behaviors

The number of online and mobile (O&M) viewers has grown rapidly across China, reaching 428 million by the end of 2013. Overall, students and young adults are the most avid consumers, especially of international content, which is remarkably popular in the first-tier cities of Beijing, Shanghai, Shenzhen, and Guangzhou.

Major video sites deliver both exclusive and non-exclusive content, providing a wide range of options and making it easy for O&M viewers to switch freely among providers while seeking the latest and trendiest content free of charge. Consequently, young audiences (13-22) exhibit scant loyalty towards specific video sites. Yet as viewers age, as their incomes rise, and as demands on their time increase, they begin to develop loyalty to a few providers out of habit and convenience. In general, they stick to one or two sites, allowing providers to record their viewing history and make recommendations. Since most services offer international TV content free of charge, mature viewers have few incentives to switch providers or seek out pirated TV shows. Mature viewers do, however, range more widely in search of recently released foreign movies since these may not be easily available on their preferred services.

Due to the growth of broadband, WiFi, and 3G networks, viewers show a marked preference for high quality video and well-written subtitles. Both are now available in most major urban areas on multiple screens, from desktop to tablet to cellphone. Innovative licensing deals and lively competition make it possible for viewers to stream the most desirable foreign content within hours of its home market premier. For instance, the BBC's *Sherlock* streamed with meticulous subtitles on Youku only two hours after it first aired in the United Kingdom.

Due to the vast universe of available titles, viewers make extensive use of search engines (e.g., Baidu) and review sites (e.g., Douban), both of which play an influential role in content selection. Social media, such as WeChat and Weibo, are also significant drivers of viewing behavior.

## Trends Among Leading Providers

The early years of video streaming were characterized by a rapid proliferation of services, which has more recently been followed by a *period of consolidation, so that today six platforms have emerged as industry leaders, offering similar services and interfaces* (see Figure 1). Each of the big six claim increasing revenues and viewer demand. Escalating competition has fueled a rise in licensing fees. Youku-Tudou, the market leader, has proclaimed 2014 the "year of international acquisition" and has earmarked nearly $50m USD to secure rights to new content.

**Figure 1:** Major Providers
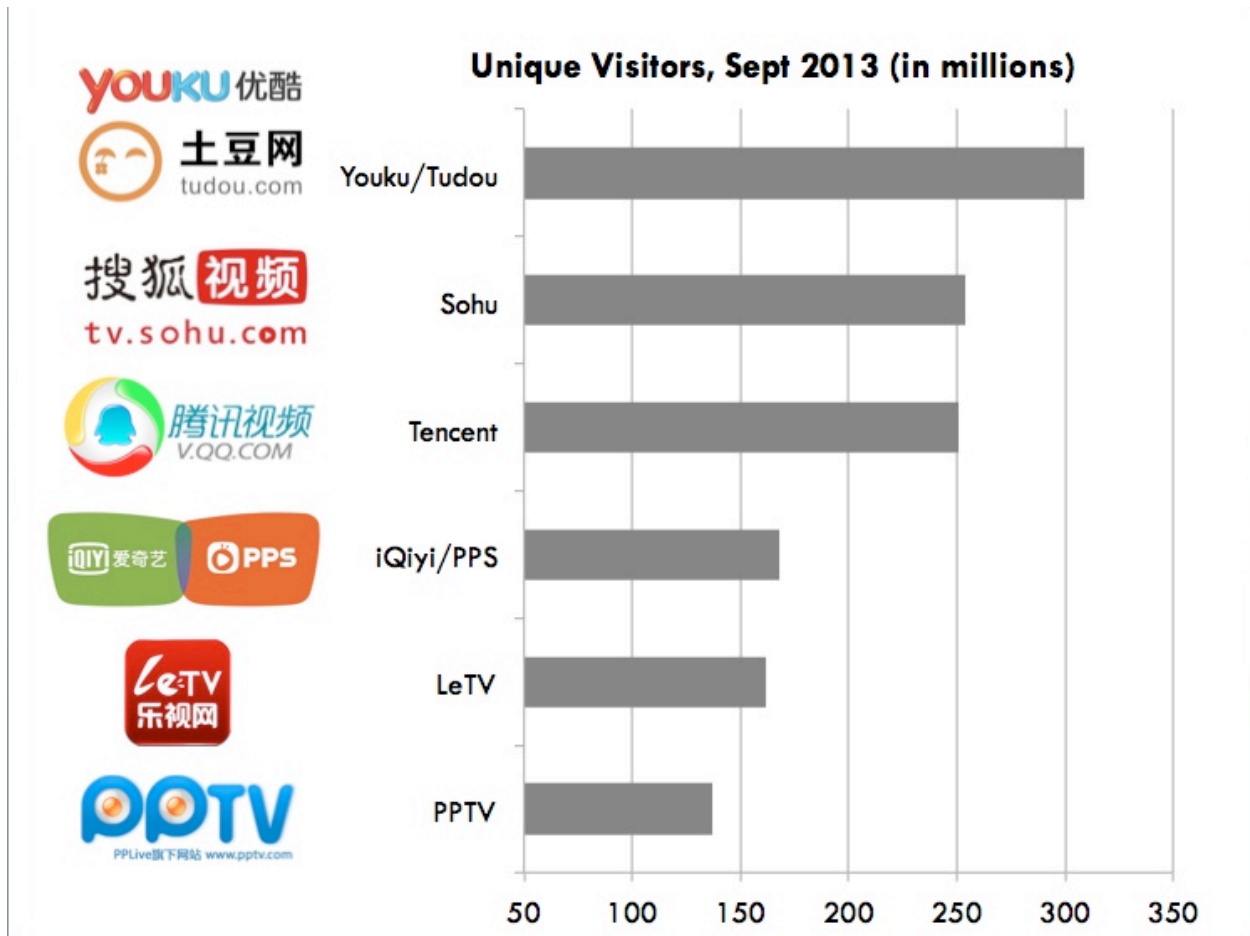


Given their commitment to licensed content, the *market leaders* wish to protect their investments and therefore *have become more active advocates of IP regulation*. Consolidation and regulation of streaming services seems likely to continue, since it serves the interests of major providers and government officials, both of them leery of unruly online behavior.

Other trends are contributing to the growth of licensed content as well. For example, most revenue from online video comes from *advertisers who prefer sites that abide by international copyright conventions*. Consequently, video delivery platforms have two motivations for protecting licensed content: (1) their reputations for providing exclusive content to viewers; and (2) their reputations with international advertisers. These motivations were on display in 2013 when licensees took successful legal action against Baidu, resulting in regulatory sanctions and a substantial fine.

*Mobile apps are another driver of licensed content*. Seventy percent of new Internet users come online via smartphone where they are served by streaming video apps maintained by the major platforms. These portals have dramatically increased the consumption of licensed Chinese content and foreign TV shows. Notably, recent international film releases are less accessible via

legitimate platforms and therefore this market sector is the primary domain of pirate circulation and consumption.

**U.S. Content in the Chinese Streaming Video Market**

U.S. film and television distributors should embrace these trends by positioning themselves for a period of rising revenues and viewer consumption. It is nevertheless important to emphasize that *this is a very competitive market unlike conventional theatrical and television distribution, which are highly regulated*. For example, Hollywood films currently enjoy advantages in modern multiplex theaters where the number of available options is limited. In the O&M space, however, U.S. films and TV shows vie with thousands of titles from Korea, Japan, Hong Kong, and other foreign locales. Moreover, *O&M viewers exhibit strong affinity for local and national products, especially content that is actively promoted by Chinese stars, critics, and bloggers via complementary media*.

Perhaps the best way to characterize the competitive features of the O&M market is to look at data on audience consumption of television shows. Unlike feature films that are subject to licensing and exhibition constraints, television shows are freely available on advertising-supported platforms. This makes it possible to compare the popularity of U.S. products with foreign- and domestically-produced programs. In this apples-to-apples comparison, PRC programs such as *We Get Married* perform strongly against Western competitors, while among imports, Korean dramas are by far the most popular. For example, during its recent run, *The Heirs* (SBS, Korea) averaged 50 million clicks per episode on Youku while the most popular western import, BBC's *Sherlock* (season 3), drew 19 million and AMC's *The Walking Dead* (season 4, the top U.S. show on Youku) attracted a more modest 14 million clicks. During the same period, *We Get Married*—a multi-platform release that premiered simultaneously on CCTV, Hunan TV, and several O&M sites—averaged 23 million clicks on Youku alone. Social media chatter likewise indicates that among foreign TV shows, Korean products attract the greatest amount of commentary, followed by Hollywood, British, and Japanese offerings.

**Figure 2.** Most Popular TV Series by Country of Origin
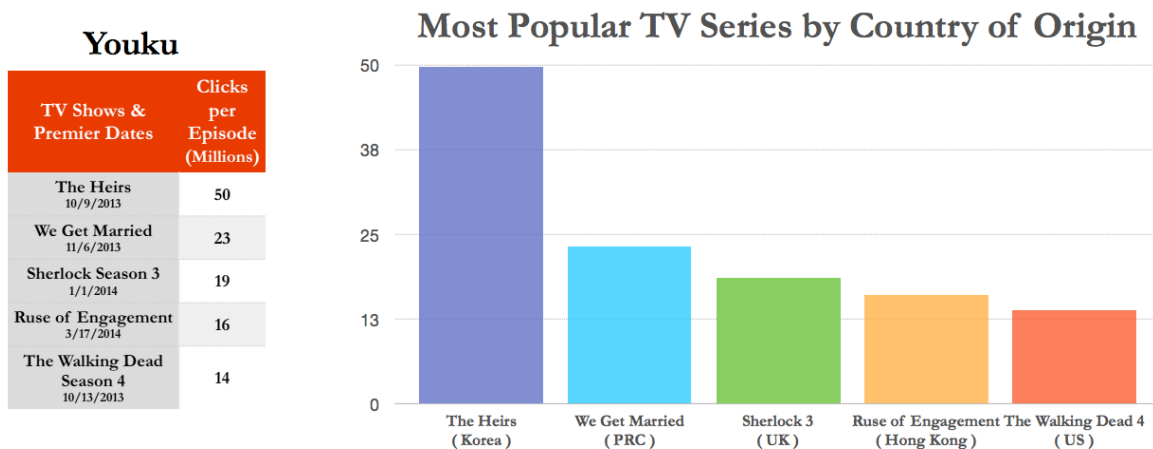
Such findings suggest that *the popularity of U.S. content should not be assumed and that distributors need to be very aggressive promoters of their products* if they are to realize substantial revenue growth. They also *need to become more alert to the discrete market segments* that comprise the world of O&M video.

**Niche Market Opportunities**

Successful performance therefore *requires a deeper understanding of audience motivations and behaviors*. Although the online audience in China is vast and growing, it can be broken down into segments that pursue viewing opportunities that are not available on broadcast or cable television. International distributors might benefit from packaging their promotional efforts and licensing deals with these specific audiences in mind. *Using surveys, interviews, and online ethnographies, our research uncovered nine types of viewers that may be willing to pay for services that target their distinctive interests*. We briefly describe their characteristics below and recommend further research on their preferences and behaviors.

*Star Gazers* – Chinese fans develop intense and enduring affinities for their favorite stars. Although this is true in many world markets, Chinese commercial cinema has been especially star-driven throughout its history, in part because entertainment news focuses so heavily on stars. As for imported content, fans are quick to pick up on emerging new stars, such as Benedict Cumberbatch, while sustaining interest in those they have followed for some time, such as Leonardo DiCaprio. Fan loyalty spikes significantly when foreign stars make overtures to Chinese fans.

*Trendinistas* – These viewers are acutely alert to programming that develops cultural cachet via social media criticism and commentary. For example, chatter about fashion and make-up has contributed substantially to the success of Korean TV dramas. Similarly, online Anglophilia has fueled the success of the third season of the BBC's *Sherlock*. However, trendinistas can prove mercurial, pivoting quickly in response to shifts in taste and fashion.

*Young Romantics* – Romantic drama is the most popular genre with young female viewers. Love triangles and extended social networks feature in the most popular films and programs, most of them currently produced by East Asian companies. The CW's *The Vampire Diaries* is a notable exception, attracting Chinese fans who appreciate its young stars, melodramatic intensity, and stylistic excess.

*Culture Vultures* – Whether it's food, fashion, or wine, many Chinese are enamored of brands that are reputed to be the very best. In the O&M world this translates into a passion for films and television shows that have achieved international recognition regardless of cultural origin. Award-winning productions fare well, as do titles that generate critical buzz.

*Action Buffs* – Young male viewers in the PRC exhibit a penchant for adventure, super-hero, and science fiction titles, many of them linked to popular foreign source material, such as graphic novels, video games, and sci-fi fantasy books. They also show loyalty to 1980s/90s American action stars, e.g., Schwarzenegger and Stallone. Hollywood titles clearly have an edge given their big budgets, strong franchises, and high production values.

*Animatics* – Animation is popular with younger viewers, especially students. The most popular films and shows are typically Japanese including *InuYasha*, *Naruto*, and *Attack on Titan*. Animatics are the most obsessive group of viewers, consuming massive quantities of ancillary content and engaging in active debates about favorite shows. They are the only viewer type that tends to avoid the major video delivery platforms. Instead, they congregate around their own media-hosting sites where viewer participation is central to the user experience.

*Drama Queens* – Mature women (35+) have emerged as a very significant O&M niche. This audience seems to be expanding due to the increasing availability of tablets that allow asynchronous access to favorite domestic dramas and to series from regional producers that are unavailable through mainstream TV channels.

*Comediacs* – Domestic comedy, in both TV and film, commands the largest audiences. As for foreign comedy, TV shows dramatically outperform feature films. Fans of long-running foreign series develop tremendous loyalty over time. Recently, foreign variety shows have also taken off among younger viewers.

*Language Learners* – In the PRC, English competence is a marker of educational and social achievement, as well as cosmopolitan status. Young viewers with middle-class backgrounds are commonly exposed to foreign television programs via language instruction. Subtitled shows are especially popular with language learners.

**Case Study: Subtitling Teams**

Zimuzu offer an instructive example of innovative services for niche viewers. These groups translate, subtitle, and upload foreign audio-visual programs to their websites free of charge. Members are college students and young professionals with a work ethic of teamwork, commitment, and passion. Their activities are *informal and non-profit, yet organized and disciplined*. They contribute according to their individual skills—language, web design, post-production, and management. Some ZMZ are open web portals and some are subscription only. Praised for their accuracy, these non-profit services *provide subtitled day-and-date downloads of popular programs, which distinguishes them from streaming sites* such as Sohu, Youku, iQIYI, and Tencent.

ZMZ first became popular in 2002 by subtitling American TV shows. Most were *organized by fans of specific film and TV content, such as the viewer types described above*. Indeed, animatics were some of the earliest and most enthusiastic ZMZ practitioners. One ZMZ is entirely devoted to Disney content. Soon ZMZ groups moved beyond English-language material and are now a window onto a diverse range of content organized by country of origin (Korea, Japan, U.S., U.K.), genre (anime, comedy, sports), and stars (Jake Gyllenhal, Benedict Cumberbatch, Martin Freeman). Most recently, ZMZ began to focus on lectures delivered by online courses from elite universities.

*The largest, most prominent ZMZ are devoted to English-language TV dramas*. They include: YYeTs, YDY, QAF, SLOMO, OAC, Ragbear, SCG, UUbird, TLF, ShinY, plsub, 1000fr. In

April 2014, more than 80 teams were providing regular services, with the largest, YYeTs, claiming more than 2.8 million subscribers. Established in 2006, it ranks first in streaming volume, database size, and accessibility. In April 2014, YYeTs offered 918 television dramas, while YDY, the second largest site for English-language TV drama, carried 281 shows. Source material comes from overseas 0-day servers accessed by ZMZ members studying or working abroad. Closed captions help to facilitate ZMZ translations.

ZMZ use social media to co-produce, view, and share foreign-language content that is unavailable on conventional PRC television channels. Programs are recorded off air in the U.S. and then the team goes to work, aiming to be the first to post an elegantly translated version of the latest episode. Although unpaid, subtitle teams compete for recognition among peers and subscribers. Website and server costs are often covered by advertising. ZMZ provide ready pathways to commercial spending via ubiquitous links to online shopping, dating, and gaming platforms. They also provide translation services to leading video streaming sites such as Youkou, Sohu, Le Vision and Tencent.

*Major service portals* do not view ZMZ as adversaries. Rather, big players *employ ZMZ to produce quality subtitles for licensed programs*. Sohu employed ZMZ to produce subtitles for Netflix's *House of Cards*. Consequently, the character and identity of ZMZ's may be changing. Many now desire legitimacy and perhaps greater recognition. For instance, YYeTs is careful to issue disclaimers: "Our subtitles are for studying English, not meant for any commercial purposes. Please delete your downloads within 24 hours." ZMZ also avoid subtitling current theatrical releases, Chinese-language films, pornographic, and political content. ZMZ operate in a grey area, both in and outside the remit of licensed content and regulations. We anticipate that a diversity of ZMZ services will remain. Yet groups specializing in American TV and films are likely to be assimilated by major portals, such as Sohu, Youku, iQIYI/Baidu, Le Vision, and Tencent.

Table 3 (see below) illustrates the modes of online viewing in China and the overlap between un-licensed and licensed content providers. YYets allows P2P downloads that permits storage and archiving of contents; while Sohutv represents a B2B (business to business) model that exposes viewers to compulsory ads, so streaming sets ad rates for Sohu to amortize costs, like regular broadcasters. While YYeTs lets you keep, collect, and curate the product, Sohu only lets you view, at the "price" of seeing advertisements. Overlap is significant between these two types of provider: both use the same sponsors; both have pathways to other businesses (games, e-commerce, social); and both provide hundreds of choices. Both also have CBS's *The Big Bang Theory* on top, which now is being broadcast by CCTV, the national network. This clearly shows the crossover, symbiotic relation between ZMZ and licensed providers. It also shows the capacity of the market, which can sustain both types of access to content.

**Table 3*: American television series on un-licensed (Zimuzu) vs. licensed video hosting sites (Sohutv)**

|  | **YYeTs** | **Sohutv** |
|---|---|---|
| Viewing format | Download | Streaming |
| Advertisements | Web, click-through to online games, travel, shopping (Taobao, Alibaba) | Web, 60sec pre-roll advertisements for brand name goods (cosmetics, cars, electronics, perfume, milk powder, diapers). Ads cannot be skipped. |
| Partner portals | Baidu and Alibaba | Baidu and Alibaba |
| Ranking* | 1. The Big Bang Theory | 1. The Big Bang Theory (1.4 billion) |
|  | 2. Vampire Diaries | 2. Nikita (575 million) |
|  | 3. Game of Thrones | 3. Friends (278 million) |
|  | 4. The Walking Dead | 4. Vampire Diaries (236 million) |
|  | 5. Spartacus | 5. 2 Broke Girls (186 million) |
|  | 6. Nikita | 6. Prison Break (139 million) |
|  | 7. Arrow | 7. House of Cards (126 million) |
|  | 8. Modern Family | 8. Arrow (88 million) |
|  | 9. White Collar | 9. Breaking Bad (87 million) |
|  | 10. Homeland | 10. Masters of Sex (84 million) |

*Ranking on the left column is taken from YYeT's site which does not give the number of downloads.

ZMZ have become popular for several reasons: (1) ZMZ deliver desirable TV series that are often not available on government-owned television channels. ZMZ therefore help to overcome regulatory and linguistic obstacles to access, allowing young viewers an expanded sense of control over their cultural options. (2) Many young people associate English with a cosmopolitan outlook, even if other cultural products (Korean, Japanese, or Taiwanese TV shows) may be perceived as trendier or more culturally proximate. (3) English competence is seen as a gateway to educational and social mobility. (4) Young people are familiar with English-language television series because video clips of popular programs are commonly employed in classroom instruction.

Though foreign distributors complain about copyright infringement, *ZMZ play a substantial promotional role, seeing themselves as co-producers of the content since they provide*

*translation and offer technical infrastructure*, such as layout, design and access templates. In addition to providing subtitles, many ZMZ operate as data resource centers, similar to IMDB. They compile and store information about video content, enabling users to search and learn about titles of interest. By providing open access, ZMZ widen Chinese viewers' media consumption beyond regulatory constraints, cultivating niche audiences for non-Chinese products. They help to broaden the tastes of a youthful demographic that defines itself against traditional media that are owned and regulated by the government. PPS, a subtitle team that was acquired in 2013 by Baidu's iQIYI, promoted itself as a service that would "Take you to see the world."

ZMZ are non-profit associations and are therefore *unlikely to provide potential revenue streams to content license holders. Nevertheless, they point to a number of opportunities* for Hollywood distributors: (1) Collaboration between ZMZ and streaming services provides cost-free, accurate, and timely subtitling services for licensed versions of leading shows. (2) ZMZ demonstrate the potential use of language instruction materials as a way to grow brand awareness for particular shows and for American television products overall. For example, distributors could collaborate with textbook producers to place video clips of recent programs in commonly-used instructional materials. (3) ZMZ subscriber communities could be effective partners to grow the circulation of studio promotions, such as exclusive sneak previews, outtakes, and star interviews. Given the enthusiasm of ZMZ subscribers, these materials could then ripple out as informal recommendations via social media.

## Conclusion: Recommendations

Given the competitive nature of O&M viewing, we recommend growing the allocation of resources for dedicated promotional campaigns, such as WB branding via online services and social media, an elevated presence on Weibo and WeChat, and the active cultivation of popular critics with demonstrated market influence. We also recommend content enhancements designed to promote discrete products and specialty subscription services. The latter could be fashioned as online "hangouts" that feature behind-the-scenes footage, star greetings, "super cuts" of existing WB content (famous love scenes or action sequences), viewer contests and games, as well as promotional prizes and ancillary products (Harry Potter emoticons).

Specifically, we recommend the following strategies:

**Research Niche Market Opportunities**: Our investigation of ZMZ provides a model for developing a more complete understanding of the motivations and desires of niche viewer groups. Research will help to identify specific promotional and marketing opportunities that speak to targeted segments of the PRC's very competitive O&M video market.

**Enhance Content**: In order to enhance viewer enthusiasm for discrete properties and/or subscription services, offer outtakes, behind-the-scenes footage, and exclusive star interviews or greetings. Position such material as "exclusive" and "China-specific." Furthermore, ensure that popular core properties like *2 Broke Girls* are flanked with links to supporting media (i.e. an interview with Kat Dennings on *The Ellen Show*).

**Mobilize Fans**:  Capitalize on existing user enthusiasm and social media savvy. For example, stage prize-backed competitions that enlist fans in targeted creative tasks. Fan-created "super cuts" and original film posters have already generated significant online buzz for Hollywood content among Chinese netizens. WB staff could track this extensive pool of existing fan-generated content to support, nurture, and harness for WB publicity efforts. Similarly, WB staff could host trivia-based contests and games via social media, offering niche-focused prizes to targeted viewing groups (e.g., tickets, star greetings, official merchandise).

**Spread Awareness**:  Engage with users on social media, especially WeChat and Weibo. Set up accounts for big WB film and TV stars, especially if stars have existing fan bases or are Chinese talent. Build relationships with popular Chinese media critics/personalities via Mtime, Douban, Weibo, and WeChat. In advance of upcoming releases, strategically seed online discussions with promotional materials and exclusive content. Also consider reviving online branding efforts. Look to "Disney Zone" on Tencent Hollywood's subscription service as a model for spreading brand awareness.

**Accelerate Release Strategies**: Whenever possible, accelerate O&M release of popular WB properties on the major streaming platforms. Interview responses suggest that this could considerably increase subscription numbers on licensed providers. Moreover, once content appears with a licensed provider, the licensee is likely to pursue copyright infringement actions against unlicensed providers.

**Interface with Language Learning Institutions:**  Although WB is unlikely to generate licensing revenues from non-profit ZMZ, educational use of video clips can dramatically raise awareness of key properties. Try to create alliances with Zimuzu, major language schools (New Oriental, Wall Street English), and English-language TV channels.

**The Value of Privacy for Content Providers**

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**The Value of Privacy for Content Providers**

## Executive Summary

This project focuses on the role that privacy and data security are playing in the realm of big data-driven digital content distribution, examining the challenges and opportunities related to privacy initiatives and cloud computing that will affect the ability of content providers to leverage markets in the digital ecosystem. Our research shows that privacy is a commodity highly valued by consumers, and it is also a swiftly moving target for international regulators. Content providers are not represented in most current regulatory and cultural debates on this topic and we believe they should be participating more aggressively in the developing "privacy ecosystem."

WB can help influence the global privacy ecosystem by adding its voice to various domestic and European initiatives that affect data flow and security, and by forming relationships with third-party identity intermediaries. The company can also become involved in the process of expanding the Domain Name System, which will dramatically reshape the primary commercial interface of the Internet, impacting all content providers and their distribution strategies. In this social and political context of information insecurity, we see privacy as a highly valuable asset to trade on in the digital space—one that can be incorporated and leveraged by content providers in ways that are currently under-explored.

## Key Findings

- While 88% of Internet users consider themselves "concerned" about online privacy, 40% responded that they would be willing to pay an online service more for privacy protections, suggesting that content providers have an opportunity to offer privacy as a marketable commodity at a premium.

- In the aftermath of the NSA surveillance leaks, the EU has assumed a more powerful and aggressive position on the regulation of cloud computing, and is likely to influence the ways in which global consumer data can be obtained, stored, and traded in the digital environment.

- Partnerships with U.S. government-approved Identity Service Providers, which will act as a cloud-based layer of Internet infrastructure designed to augment American privacy protocols, will be central to the success of content providers in managing digital markets.

- Warner Bros. has the opportunity to affect the formation and management of the global "privacy ecosystem" by cultivating a greater presence in cultural debates over cloud policy and Internet infrastructure—on par with that of companies such as Google and Amazon. Many of these debates are currently being framed and negotiated in relation to international concerns over privacy and data security, which are chief among the major concerns for consumers (and, consequently, providers) of content in the digital space.

**The Value of Privacy for Content Providers**

## I. Introduction

As digital content distribution becomes increasingly reliant on streaming platforms, remote servers, and access to viewers' personal preferences, privacy and data security have become key issues for producers, distributors, and consumers of cloud-based media. Pervasive fears about data privacy, accessibility, and integrity are significantly affecting consumer attitudes about their personal information in the digital space. According to a recent Pew survey, 86% of Internet users have taken steps online to remove or mask their digital footprints—this is everything from clearing cookies to trying to hide their identity, avoiding using their real name to using virtual networks that mask their internet protocol (IP) address.[1]

This project focuses on the role that privacy and data security are playing in the realm of big data-driven digital content distribution, analyzing the core issues and initiatives most critical for content companies to consider in this environment. The necessity for securely managing digital identity and maintaining the confidentiality of online data has become vitally important for governments, individual citizens, and private corporations. The international nature of cloud storage has only made this more challenging, given the gaps and fissures in international data jurisdiction, regulating third party hosts, and the global difficulties defining "personal information." We have done extensive research on national, regional, and international privacy regulations and trends, and conducted a U.S.-based survey to assess the attitudes and beliefs of Internet users on the subject of privacy in the digital ecosystem. After conducting this research, we see *privacy as both a selling point and a commodity that is highly valued by consumers—one that can be leveraged by content providers in ways that are currently under-explored*. As the regulation of privacy is shifting alongside its importance to Internet users, it is critically important for expansive approaches to data security to be at the forefront of any content provider's strategic planning and branding moving forward.

## II. Challenges and Considerations

The cultural anxieties around digital privacy have increased dramatically in recent years, and particularly of late thanks to the NSA, the Heartbleed security bug, and the instability and unpredictability of global Internet policy. Half of Internet users say they are worried about the amount of their personal information online, and more than 2/3 of those surveyed by Pew do not think that our current laws are sufficient to protect their privacy online.

Our own survey for this project found similar levels of consumer trepidation about their digital footprints. Almost half of respondents (43%) said that privacy is a primary concern of theirs when online. Additionally, 62% responded that the NSA controversy has changed the way they feel about sharing personal information online, and 27% responded that they now share less information online due to the NSA revelations.

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[1] Rainie, Lee, et.al., "Anonymity, Privacy, and Security Online," Pew Research Internet Project Report, September 5, 2013. http://www.pewinternet.org/2013/09/05/anonymity-privacy-and-security-online/

For 75% of those surveyed, the threat of identity theft was the most important reason to keep information private, and credit cards were by far the most valued personal information according to 80% of respondents, followed by Paypal accounts (62%) and phone numbers (54%). A significant majority of those surveyed—78%—said they are aware that their personal information is of financial value to online services. Interestingly, 40% of respondents said they were *less* likely to share personal information with media companies knowing that this information is of value, but 81% of respondents said they would value an online service more if it clearly explained how the company used their personal information (see Figures 1 and 2).

**Figure 1**
The fact that your personal information is valuable to media companies makes you:
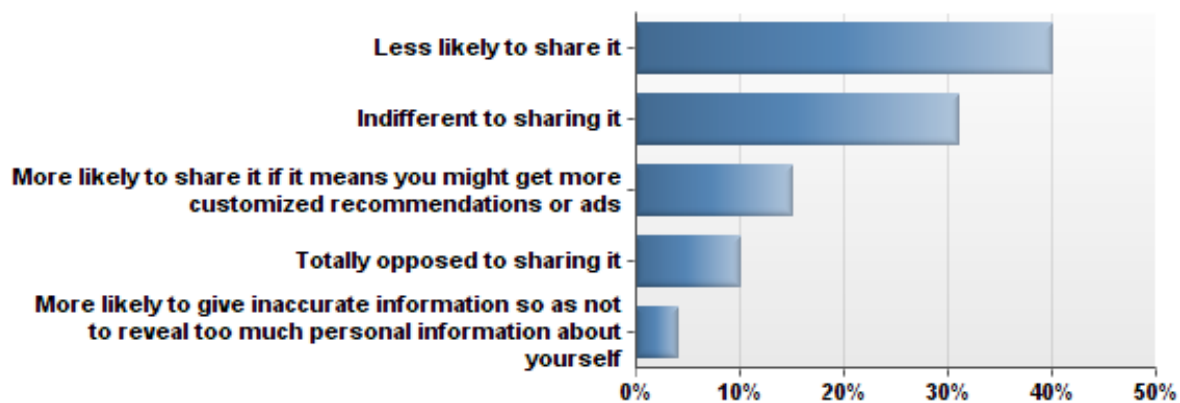


**Figure 2**
Would you value a service more if it clearly explained how your personal information is used by the company?
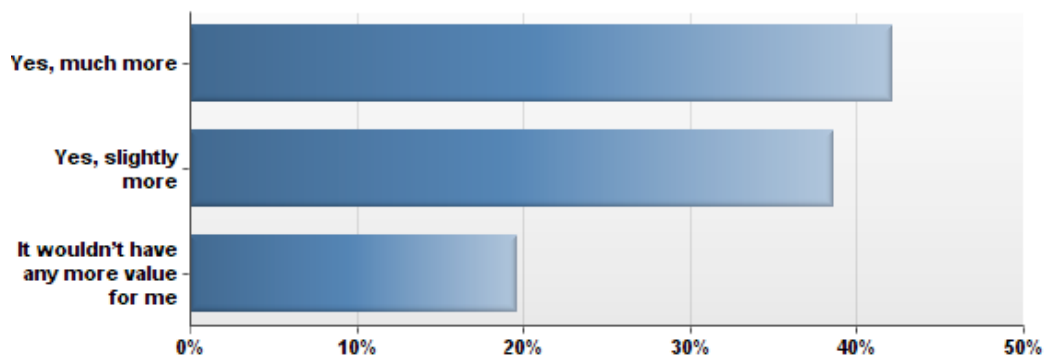


Privacy also has its thresholds . . . and its rewards: 69% of our respondents chose not to use an online service because it required too much personal information in order to get the initial account, and 49% had stopped using an online service because it asked too many questions about personal information once the service was in use. Consumers are also willing to reward companies for giving their information greater privacy: 41% of our respondents said they would

be willing to spend more on a video subscription service if they knew their personal information would not be shared with others; 27% of respondents would be willing to spend a 5% premium, and 12% of respondents would pay a 10% premium (see Figures 3 and 4).

**Figure 3**
Would you be willing to spend more on a subscription video service (like Netflix) if you knew your personal information would not be shared with others?
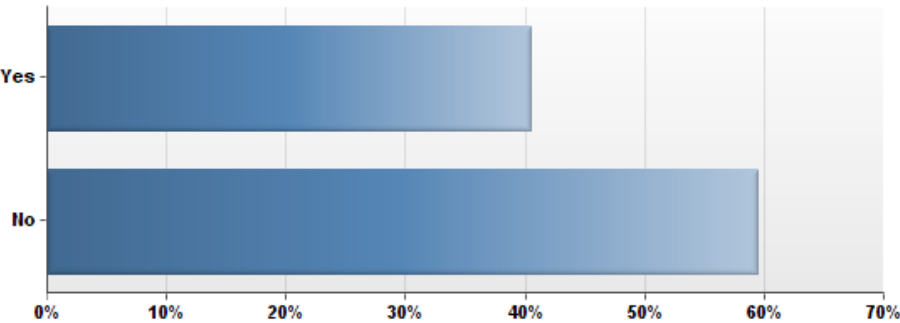


**Figure 4**
How much more would you be willing to spend on a subscription video service (like Netflix) if you knew your personal information would not be shared with others?
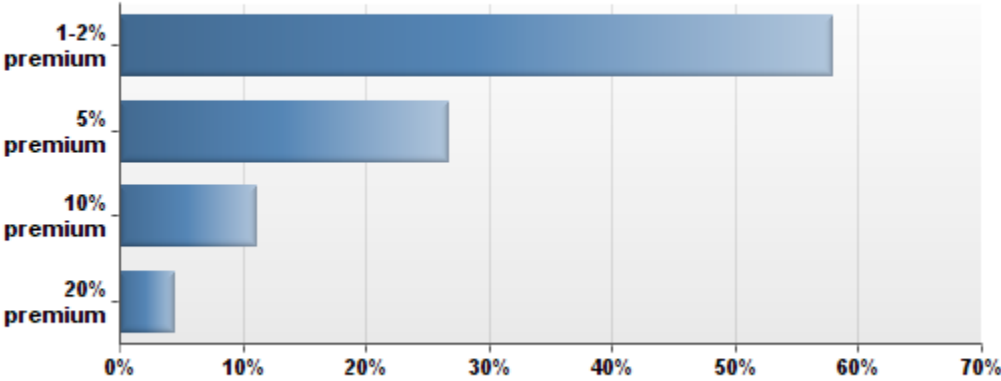


Despite growing consumer fears about personal information circulating in the digital space, and an increasing consumer awareness of how their information is being monetized (as well as a greater reluctance to share it), we found that this is actually a timely moment to better understand these anxieties and mobilize privacy as a selling point. The ability to utilize and capitalize on the full value that privacy offers for consumers depends on technological issues such as *global interoperability, data security, and control* in the digital ecosystem. These elements are increasingly unstable, even more fragile and complicated now than when we began our research because of: (1) new global privacy initiatives; (2) the expanding presence of intermediaries; and (3) shifts in Internet governance. Below we address these various dimensions of privacy regulation and their impact for content providers in the digital ecosystem.

### *Global privacy initiatives affecting data flow and security*

Contested privacy standards are a central obstacle in stabilizing an interoperable Internet that is simultaneously open enough for global commerce and communication, yet secure enough to protect individual, commercial, and governmental interests. Currently there are somewhat conflicting developments in the international security space. In some respects, the EU is moving towards a more unified digital ecosystem that will standardize some aspects of Internet governance and lessen the power of ISPs. However, growing anxieties about data security and the protection of citizens are also driving individual European states to propose cloud-based infrastructures with regulations unique to each nation. We see this looming balkanization as one of the biggest threats to content providers in the coming years.

In direct contrast to what has transpired in the U.S., the EU recently voted to approve a version of "net neutrality" rules for the continent, legislating non-discrimination into the regulatory foundation for Internet pipelines. Further votes are needed before it becomes official, but the principles of an open Internet are well on their way to becoming EU law. If the legislation passes, telecom companies and other Internet service providers would not be able to discriminate between services that run on their data networks or content providers connecting to audiences and consumers. It would also mean more secure access for content providers who would not be at the mercy of ISPs as they are in the U.S., where the ISPs are legally free to privilege their own content or relegate any other to a much slower and unsustainable delivery speed. Blocking and throttling content in the EU will become illegal, and roaming charges for mobile phones will also be abolished by the end of 2015, which is beneficial for both consumers and content providers, as those limits on engaging with mobile media will no longer exist.

At the same time, the European Parliament recently voted overwhelmingly to suspend the Safe Harbor agreement with the U.S. in the wake of revelations about the NSA spying program, stating that the agreement (a set of privacy protections for EU data being transmitted to U.S. service providers) afforded insufficient safeguards for European citizens. Additionally, there are a growing number of European privacy initiatives designed to create cloud infrastructure that will help shield data from the Patriot Act and increase security for European citizens. These measures must also be contextualized within the EU's impending Connected Continent initiative, which advocates implementing a single, pan-European interoperable market with high data portability, coordinated use of the spectrum and broadband infrastructure, more standardized pricing across national borders, and a uniform approach to protecting the privacy of European citizens. This would include a continent-wide security breach notification law, and a portability law that gives consumers more rights protecting their personal information—and content providers potentially less rights to that same data.

Despite these measures emphasizing pan-European security, various movements around Internet protectionism have continued to swell, with governments in India, China, Japan, Iran, Brazil, France, Germany, and Switzerland, among others, working to create something of a domestic Internet and/or sovereign cloud space for storage of data belonging to its national citizens. Eric Schmidt recently said, "Restrictions on information flows are trade barriers." It is also true that *the growing movement around national cloud infrastructures and data protectionism pose*

*serious and similar potential trade barriers for the future of streaming and on-demand digital media.*

In this context where there are movements to remove barriers (such as the momentum behind global net neutrality and no roaming charges) as well as install them (national clouds), companies that foreground rigorous privacy protections will more likely gain entry to various world markets. *In supporting network neutrality regulation and adopting EU-friendly privacy measures, content providers will be more widely accepted in European markets, while at the same time appealing to privacy-conscious consumers.*

### *Identity Intermediaries*

While Europe has been addressing privacy concerns through the competing constructs of a "Connected Continent" co-existing with various "national clouds," the U.S. is fostering a cloud-based layer of Internet infrastructure composed of identity providers that are designed to augment American privacy protocols. The Obama administration's National Strategy for Trusted Identities in Cyberspace (NSTIC) aims to establish an "Identity Ecosystem," in which all government agencies adopt a single standard to authenticate and obtain citizens' digital identities which are necessary to access government services. *We see this as part of a developing global "privacy ecosystem" that content providers will want to take part in shaping.*

The U.S. Postal Service, which maintains one of the largest computer networks in the world, is developing the Federal Cloud Credential Exchange (FCCX), a platform for identity credential exchange among government agencies. In order to establish a competitive market for identity contracting, the Federal Risk and Authorization Management Program (FedRAMP) has been established to certify private identity providers as suitable companies for U.S. government agencies to rely on for privacy and security. So far, FedRAMP has approved big players such as Amazon, AT&T, Microsoft, and Akamai. While this "Identity Ecosystem" refers explicitly to the U.S. government's migration to cloud-based services, its authorized identity providers will become powerful intermediaries in the delivery of commercial content. *Content providers would benefit from more active relationships with identity providers in order to play a larger role in setting the foundational terms of exchange and interaction in this new "Identity Ecosystem."*

Identity providers are intermediaries in many ways similar to Content Delivery Networks (CDNs). Whereas content providers derive a benefit from CDNs based upon infrastructural proximity to end-users, identity providers will prove to benefit content providers based upon volume—the sheer number of clients whose identities they manage. Identity providers with the biggest client base will not only have the largest pools of data, they will also garner more widespread trust among consumers. Content providers who foreground their association with trusted identity providers will augment the perceived security of their services. Identity providers already include some of the biggest players in the digital ecosystem, including Google, Facebook, and Amazon. While a site like Flixster already allows users to sign in with their Facebook or Google accounts, an opportunity exists to build further relationships with firms that have received or are in the process of receiving FedRAMP approval, including Microsoft, SecureKey, and Verizon Terremark. Allowing consumers the ability to sign into any WB content

site with federally approved identity services will increase ease of consumer use and ensure the viability of consumer data for the company.

### *Internet Governance and Intellectual Property*

International concerns about digital privacy standards have also influenced decisive changes in Internet governance bodies that maintain global interoperability while protecting intellectual property interests. Spurred by the international fallout following the revelation of NSA surveillance programs, the U.S. Department of Commerce (DOC) announced that it would end its unilateral control of the Domain Name System (DNS), ceding its authority completely to the Internet Corporation for Assigned Names and Numbers (ICANN) in a year. ICANN manages the distribution of Internet Protocol (IP) addresses and maintains global authority over domain name retailers. While it has, until recently, flown under the radar of popular scrutiny, the role ICANN plays in daily lives of consumers and the control it can wield over access to domains and websites cannot be overemphasized. It manages the primary interface of the Internet, including the commercial signposts of cyberspace.

While business interests have relied almost exclusively on the .com top-level domain, this will soon change. ICANN is expanding the number of top-level domains immensely; tech companies such as Google and Amazon have applied for dozens of the most valued possible domains (such as .web), while other companies are vying for control over market specific keywords (Starbucks, for example, is fighting for ownership of .cafe). On top of the domain expansion, ICANN has introduced internationalized domains, paving the way for the DNS to accommodate languages such as Chinese, Arabic, Russian, and others not based on the Roman script.

As disputes over digital privacy currently motivate a restructuring of global Internet governance, business interests would be well served to take an active role in shaping the newly internationalized ICANN, with the goal of securing brand identities online well into the future. With its governing authority over the DNS, a basic aspect of Internet architecture that largely functions as the commercial interface of the Internet, another primary function of ICANN is to enforce intellectual property infractions in the realm of domain names. Historically influenced by the DOC, ICANN has traditionally policed intellectual property disputes in a manner friendly to U.S. business interests. As the U.S. loses its direct influence over ICANN, however, it is unclear what the future holds for this entity that in many ways ensures the basic functioning of the Internet while simultaneously protecting brand identities online. *Content providers would benefit from greater involvement by helping to shape ICANN policy, while also proposing new top-level domains based upon market keywords of interest to digital business (.streaming, .instant, .archive) that can be implemented as a basic component of Internet infrastructure.*

### III. Conclusion: Opportunities and Recommendations

Given the heightened consumer awareness and attention to their personal information circulating online, and the increased value placed on data security, WB would benefit from foregrounding their privacy policies and commitments in clear, concise language for consumers. Content companies and platforms that are dedicated to consumer privacy have yet to foreground this quality in their branding; in fact, consumers are beginning to adopt a somewhat hostile position

toward companies that want their personal information as metadata. However, this creates *opportunities for WB to actually monetize the value of privacy, as consumers have indicated a willingness to pay more for a greater degree of security and protection of their personal information*. Privacy has become a premium value for consumers and an important commodity in the digital ecosystem.

There is also a developing global privacy ecosystem that will dramatically impact the initiatives of content companies in the digital space. There are a host of opportunities for content companies to protect and advance their own interests in this ecosystem. They include:

A. *Joining Digital Due Process*. It would greatly benefit WB to be the first content company to be involved with Digital Due Process, a coalition of companies, organizations, and individuals devoted to "modernizing surveillance laws for the Internet age," particularly the Electronic Communications Privacy Act (ECPA). Apple, AT&T, Google, Microsoft, and Twitter are all involved already. With increasing dependence on digital platforms to disseminate content, WB is as much a stakeholder in these laws as any dedicated tech company and should have a seat at the table of such organizations dedicated to shaping policy discourse and decisions.

B. *Develop direct relationships with FedRAMP-approved Identity Providers*. Partnerships with U.S. government-approved Identity Service Providers, which will act as a cloud-based layer of Internet infrastructure designed to augment American privacy protocols, will become central to the success of content providers in managing digital markets. These relationships will create an expanded role for WB in the developing privacy ecosystem, providing more easily-accessible and authoritative consumer data for digital initiatives while giving consumers a streamlined, authenticated menu of options when engaging with WB content.

C. *Become involved in the concerns of ICANN*. WB has a large stake in how the present landscape of digital privacy laws evolves, particularly given the uncertainty in areas of global jurisdiction. Lobbying for governance structure and interoperable laws that are conducive to balancing privacy regulation with intellectual property concerns is of key importance to the health of future home entertainment initiatives. With the U.S. Department of Commerce forfeiting its authority over the Internet Corporation for Assigned Names and Numbers, content providers should play an active role in influencing this governance body, particularly in the At-Large Advisory Committee. If WB can successfully register a generic top-level domain, it can also influence ICANN policy through the Generic Names Supporting Organization (GNSO). Participation in both organizations will allow WB to help shape the expansion of the Domain Name System as a primary commercial interface of the Internet.

In sum, Warner Bros. has the opportunity to affect the formation and management of the global privacy ecosystem by cultivating a greater presence in global cultural debates over cloud policy and Internet infrastructure—on par with that of companies such as Google and Amazon. Many of these debates are currently being framed and negotiated in relation to international concerns over privacy and data security, which are chief among the major concerns for consumers (and, consequently, providers) of content in the digital space.

**Making Metadata Matter: The Business of Connecting Viewers**

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# Making Metadata Matter: The Business of Connecting Viewers

**Executive Summary:**

Content providers such as Warner Bros. face certain challenges in the digital distribution marketplace because (1) there are many different platforms that provide digital video via EST or SVOD, including Amazon, iTunes, and Netflix; (2) each platform has a different interface for displaying, discovering, and consuming media; and (3) these distributors have powerful sway over discovery and consumption. These challenges largely revolve around media metadata, because metadata defines how content appears on digital devices and is crucial to the discovery and consumption of media on different platforms. My research suggests there are two distinct areas for Warner Bros. to improve its use of medatata and address these challenges: (1) more deliberate curation of metadata for digital platforms and (2) building upon Flixster's current strengths as a highly flexible, attractive interface that serves as a portal to multiple video distributors.

**Key Findings**

- Warner Bros. can optimize their presence in the digital distribution marketplace by building efforts to tailor its metadata. First, the company should continue to maintain a large amount of metadata generated in the production process, for use on current and future distribution platforms and discovery portals. Second, metadata for specific products, particularly tent-poles and "big bets," should be curated on a platform-by-platform basis. Third, and extending from this, all metadata should be optimized for discovery on smartphones.

- Consumers use a wide variety of devices and platforms, but can be frustrated by inconsistencies among them. Flixster.com already serves as a portal to many different distributors, yet many customers are not aware of this. Additionally, the Flixster app for mobile devices could be modeled on the Flixster.com site, making it less of a transactional property and more of a portal.

- Consumers want to customize their shopping experiences, and making metadata more flexible is one way to provide greater personalization of the shopping experience. Flixster.com currently offers a highly customizable shopping venue, but the platform's flexibility could be increased by allowing customers to add their own metadata tags to content, make new lists and ways of categorizing content, and share these tags and lists with others.

## Metadata Matter: The Business of Connecting Viewers

Content providers such as Warner Bros. face challenges in fully exploiting the digital distribution marketplace because it is fragmented and irregular. There are many different distribution platforms (e.g., Amazon, iTunes, Netflix), each with a different interface for discovering and consuming media, and these distributors have powerful sway over discovery and consumption. The common element among all the different devices and platforms is the metadata about media that they use to display content and make it searchable. Simply put, without metadata, there would be nothing on digital retailer "shelves." Due to its centrality to digital distribution, metadata represents a crucial area for innovation by companies like Warner Bros.

Through my research, I identify the central role that metadata plays in digital media distribution as well as problems that content providers face in optimizing their retail presence through metadata. I examined a large sample of devices and platforms to determine how they did or did not facilitate browsing, discovery, and consumption. Devices included: Comcast cable box, Samsung Blu-Ray player, Apple TV, Roku, iPad, iPhone, and PC. Distribution interfaces and apps included: Amazon, Flixster, Hulu, iTunes, Netflix, Redbox Instant, and Vudu. I then conducted a survey (200 respondents) to gather data about how consumers engage with metadata on a variety of devices and interfaces. I also consulted with the following executives at Warner Bros. whose work involves metadata: Steven Anastasi, Susan Cheng, Sean Cooney, Jeff Junge, and Jeff Stevens. This research provides the background for a series of recommendations and best practices for using metadata in strategic ways.

*In broad terms, these recommendations are: (1) develop capabilities that would allow Warner Bros. to tailor the presentation of metadata on a platform-by-platform basis, with a particular emphasis on phones; (2) promote Flixster as a highly customizable shopping platform that links to all the major distributors; and (3) allow Flixster users to generate their own metadata on that platform.*

### The Importance of Metadata

Although consumers spend an immense amount of time shopping for media on a variety of devices and platforms, the interfaces through which people shop largely appear "invisible" to them. Devices and interfaces are considered "portals" or "gateways" that consumers must pass through to get their content. Yet each of these devices and interfaces offers different displays, different search capabilities, and different amounts of information about media products. This has created a highly fragmented and irregular marketplace for digitally distributed media, which consumers can find confusing and frustrating.

A survey conducted in December 2013 confirms that digital media distributors have significant influence on how customers discover and choose their content. This is because, first, most consumers search for and discover information about media content through a distributor's interface. This means that *the particular way that a platform presents content or makes content searchable defines that content for digital media shoppers*. Second, the majority of consumers browse for content at least once per week without knowing exactly what they want to watch. Third and finally, respondents indicated that browsing led to consumption most of the time.
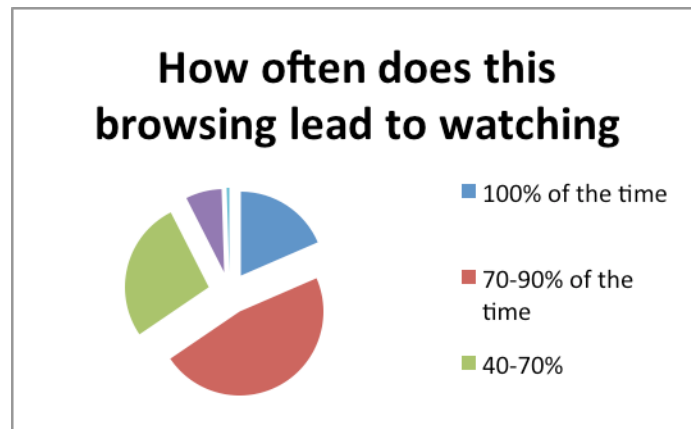
**Figure 1: Discovery and Consumption**

Metadata is thus crucial to digital distribution, yet currently distributors have significant control over how that metadata impacts consumer activity because they control the way metadata appears and is made searchable.

**Typical Ways of Generating and Deploying Metadata and New Industrial Trends**

There are three ways that media metadata has generally been/is generated for use by digital distributors and discovery platforms: (1) by content providers, who deliver product information directly to distributors: (2) by commercial entities that enter product information given to them by content providers (e.g., Rovi Corp) and that regularly provide additional forms of metadata to distributors: and (3) by a general public that enter the data onto "open" platforms (e.g., IMDb.com), which may or may not have an editorial/curatorial team that provides quality control. Digital distributors typically rely on content providers or commercial metadata providers for "core" metadata because it is consistent and high quality. Because user-generated metadata is "open-source" and highly malleable, distributors and discovery platforms have typically not relied on this method to gather core metadata. Rather, user-generated media metadata serves as a "bonus feature" for consumers, who use this information to gain a deeper, more detailed, or more contextual understanding of media products.

Once acquired, the actual use and presentation of metadata on specific platforms can be highly variable, depending on their display configurations and search capabilities. Additionally, platforms typically alter the presentation of metadata to conform to particular devices; IMDb, for instance, looks different on a phone than it does on a tablet. All this suggests that specific content items are being represented differently across the digital marketplace; there is no uniform presentation of any particular movie title or television program. This flexibility is both a problem and a source of potential innovation. On the one hand, this variability can create confusion about particular products, as they look different in different places. On the other hand, the different presentations of a product can be tailored to suit the interests of specific kinds of consumers.

In practice, many digital media distributors and portal websites make use of both commercially-provided metadata and user-generated metadata. In all these cases, user-generated metadata is "peripheral" to the functionality of the interface and serves as "bonus" information. In most

cases, this bonus metadata takes the form of user ratings on a numeric scale and written reviews. Platforms that integrate such material thus allow browsers to survey a standard package of core information as well as gain a socially-generated sense of the value of the content.

Most recently, distributors themselves have begun generating "core" metadata about media products, often in the form of qualitative tags and genre categories. The most noteworthy case is Netflix, which has categorized all the content it provides according to a variety of tags and associations. This represents a significant problem for content providers such as Warner Bros., as these distributors are taking even more control over how content is defined, displayed, and discovered.

**Managing Metadata on the Production and Promotion Side**

Despite the scenario outlined above, there are ways that Warner Bros. can improve its presence in the digital distribution arena. The two primary areas Warner Bros. could innovate its generation and use of metadata are: (1) develop strategies for tailoring its metadata on current and future interface displays, optimizing the way content appears on each device and platform; and (2) retool Flixster to make it a primary venue for people to shop for media content.

Currently, Warner Bros. generates an immense amount of metadata about its products during the production process, from screenplay to editing room. Also, good effort is made to tailor the presentation of Warner Bros.' products on different platform interfaces. Nevertheless, Warner Bros. could greatly expand its use of metadata by synthesizing the workflow around metadata, with the aim of anticipating future discovery tools as well as improving the presentation of its products on current platforms.

Metadata serves as a vital commercial resource from the first stages of the production process but there could be greater efforts to exploit it. This could even entail pre-selecting properties based on their ability to conform to easy and intuitive search criteria; like an extension of "high concept" filmmaking, media could be made that anticipated digital discovery. Currently, an abundance of metadata is generated at every stage of a movie's production. Making some of this material available to consumers represents a significant opportunity, as it could help consumers discover and sort media products in new ways, or such data could be sold as "bonus material" to consumers who value gaining details about media production.

Digital media platforms are consistently improving their search and discovery capabilities, and Warner Bros. should expect that discovery possibilities will grow and become more detailed in the future. By continuing to generate and store significant metadata about its products, Warner Bros. will be in a good position to anticipate the ways that digital distributors will make this metadata searchable and perhaps purchasable in the future, thereby providing a wider range of discovery possibilities and "bonus features" for media consumers. This could entail metadata that currently serves no commercial purpose, including filming locations, dialogue, or specific events (e.g., "a woman buys a coffee"). Product placement, in particular, could be augmented by tagging the different brands that appear in a movie, such as beverages, clothing, and furniture. If there were a platform that allowed customers to browse by brand, Warner Bros. could charge its

product placement partners for the opportunity to have their products made searchable within Warner Bros. movies.

Metadata should be curated on a platform-by-platform and device-by-device basis. Curation, in this context, means that Warner Bros. must balance computer engineering concerns with conventional advertising and promotion considerations. In fact, digital distribution should be approached first and foremost in terms of the technological possibilities of specific devices and platforms. *Advertising and promotional materials should be approached from this perspective*, and not as an afterthought.

Extending from this, metadata should be optimized first for discovery on smartphones; this includes movies going to theatrical release and every other venue. Although consumers typically do not watch long-form content on phones, they do use their phones to search for and discover content they will watch on other screens, including in movie theaters. There are a number of ways to optimize for phones. Thumbnail displays should be bold, simple, and suggestive. Thumbnails should typically have little or no text; if used as part of a thumbnail image, movies should have short, punchy titles that contribute to the graphic interest. Warner Bros. could consider creating shorter titles for its properties as a strategy to make them appealing and easily grasped on phone displays. Along these lines, there should be a creative relationship between the thumbnail graphic and a movie's title. This could mean that the title *reinforces*, *explains*, or *creatively contrasts with* the thumbnail image. These strategies could help create consumer interest and provide consumers with accurate expectations about the related content.

**Attracting Digital Shoppers**

Media consumers use a wide variety of devices to discover media, and they acquire media through a variety of platforms. As a result, consumers express confusion about the diversity of the digital media landscape and frustration that there is no central site for all the different content they want. This suggests there is a place in the market for a site that serves as a portal to *all* the major digital media distributors. Because it serves as a portal to different distributors, including those that provide both EST and SVOD services, and because it features an attractive and highly flexible interface, Flixster is in a strong position to become a primary gateway for consumers to shop for and discover all manner of media. But its capabilities could be strengthened and better promoted.

Flixster.com is currently under-utilized by media shoppers. Consumers are generally unaware that Flixster allows people to shop for content across different platforms. My research suggests that consumers would respond strongly to this capability, and thus it could be an element to focus on in future efforts to promote and "brand" Flixster. Another way to create a consistent "brand" under the Flixster name would be to bring the functionality of the Flixster app into line with the Flixster.com website. For instance, although the mobile app allows users to "sort" titles according to a variety of criteria, this sorting is much less nuanced than on the website. Further, Warner Bros. could consider promoting the Flixster app as primarily a discovery tool rather than a transactional site.

People want to customize their shopping experiences. One way of addressing this desire would be for Flixster to adopt a model of incorporating user-generated metadata about media products. Currently, Flixster allows users to input numerical scores and written reviews. However, my research suggests that media consumers would be interested in having the ability to "tag" or comment on media in more nuanced or detailed ways. This is true of both films that consumers have already seen as well as films they are merely shopping for.

Extending from this, consumers would like the ability to sort movies according to their own criteria; in practice, this could function similarly to the "lists" that users of IMDb are able to create and share. In this way, users would not just tag individual titles but rather create the *criteria* for sorting titles. This would allow users to personalize their shopping experiences *and* makes their customized experiences shareable and social.

## Conclusion: Future Opportunities

The display and discovery options for digitally distributed media are highly variable. Warner Bros. can anticipate future developments and influence the way that distributors and discovery platforms currently present content by generating, storing, and offering forms of metadata that are not presently exploited. This will require close collaboration with retail partners as well as new efforts to integrate the multiple departments within Warner Bros. that contend with metadata, including production, archival, and sales.

Flixster represents a key site for growth and innovation. To make it a primary gateway for digital distribution, the range of metadata used on Flixster for display and discovery could be expanded; this includes adding new kinds of granular details generated in the production process as well as user-generated metadata tags and lists. My research shows that consumers want to add metadata to *unviewed* movies in the following way: a graded scale that indicates "want to see"-factor. They want to add metadata to *previously viewed* movies in the following ways: new genre classifications, often according to idiosyncratic criteria (e.g., "movies with explosions"); viewing conditions (e.g., "great for a date," "Friday night with family," etc.); descriptive "ratings" about age-appropriateness of content; and moods. Although these elements could be incorporated within user-generated reviews, opening up spaces for Flixster users to tag movies along such lines would allow other users to search for and discover movies in these expanded ways.

# Key Issues in Digital Ecosystem Design and Implementation

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**Key Issues in Digital Ecosystem Design and Implementation**

**Executive Summary**

Though there exists a general consensus among media companies that digital ecosystems can (1) provide useful data about consumer behavior and (2) help drive consumption, the variety of ecosystems brought to market suggests an absence of clear best practices for ecosystem design and implementation. In this project, we used market analysis, interface analysis, and consumer behavior and marketing scholarship in order to identify and analyze the major trends and challenges in ecosystem design and implementation over the last half-decade. Our research reveals four key issues—two related to infrastructure development and two related to software and content delivery—that we believe all ecosystems will need to address in the near future in order to provide maximum value to their creators/managers and their users. These key issues are *network convergence, the integration of physical consumption, indirect monetization,* and *the re-evaluation of participation* as a strategy to drive consumption. We then examined the current state of Warner Bros.' ecosystem(s) in regard to these issues so as to suggest how the issues might inform the Home Entertainment division's future strategy.

**Key Findings**

- To derive the full benefits from a digital ecosystem, a company must link together all of its consumer-serving sites and services (i.e. Flixster, Warner Archive Instant, CW TV Now, etc.) into a single network sharing a single user database. When linking services, a company should signal to consumers that it has done so by employing unified design principles in the consumer-facing software and enabling previous users to merge existing accounts.

- In-package codes, when coupled with rewards programs, can be used to integrate the consumption of physical media products (DVDs, game discs, comics, etc.) into the digital ecosystem.

- Especially when dealing with franchises and well-known IPs, a company should consider forgoing immediate revenue by strategically distributing content to consumers for free or at very low cost; the eventual revenue gains would come *indirectly* through increased consumption of related, directly monetized products.

- To fully exploit the indirect monetization of content, companies will require a data-rich—and ideally, fully converged—network infrastructure as well as robust data analytics.

- Because participatory features (comment threads, sharing services, content-creation tools) entail increased costs in technology and labor but produce uncertain results, we expect most media companies to de-emphasize participatory features in future ecosystem software.

**What a Digital Ecosystem Is For**

Though there exists a general consensus among media companies that digital ecosystems can (1) provide useful data about consumer behavior and (2) help drive consumption, our research suggests that there currently exist no agreed-upon best practices for ecosystem design and implementation. Instead, the market reveals a host of experiments, varying partly by companies' industrial "origin" (tech, physical retail, film and television, video games, etc.) and partly by their traditional consumer base (children, adult, casual, fans, tech-savvy, etc.). This variety reflects a broader uncertainty among media companies as to *what a digital ecosystem is for* and how it should best be designed and implemented.

The phrase *digital ecosystem* is itself ambiguous, referring to two related but distinct components of electronic distribution initiatives. In the first, the phrase describes *a networked infrastructure* in which multiple apps are linked to a central user database. In the second, the phrase refers to the *consumer-facing software* or *apps* connected to the database. In general parlance, however, the two meanings are often confused, so that, for example, "the Apple ecosystem" might refer to: (1) Apple's single digital sales network, organized around a single user database, accessed by consumers via a single account; (2) the various devices and apps (iTunes, the App Store, iBooks) that link to the database; or (3) both simultaneously. In our research, we consider an ecosystem any network that consists of multiple apps connected to a single database—even when the multiple apps are variations of the same service (e.g. Flixster.com, Flixster Collections, Flixster for iOS). From the perspective of digital ecosystem development, however, the strongest examples of ecosystems consist not only of multiple apps but also of multiple services (film streaming, games, retail stores) networked together via a single database.

Despite the lack of clear best practices, we believe that some approaches to digital ecosystem design and implementation appear more promising than others. Our research also suggests that effective ecosystem design must take place simultaneously at both levels: that of the networked infrastructure and that of the consumer-facing software. In what follows, we provide an overview of four issues—two related to networked infrastructure and two related to software and content delivery—that we believe all ecosystems will need to address in order to provide maximum value to their creators/managers and their users.

**Key Issues in Ecosystem Design and Implementation**

**1) Network Convergence**

Except for a few tech companies, most of the major players in digital entertainment entered the market by developing and/or purchasing multiple, discrete digital services, each with its own database, and each eventually constituting its own network of linked apps. Though this strategy allowed companies to quickly gain toeholds in a young market, the multiplication of networks has since proven an obstacle in the development of robust, in-house data analytics and data-driven marketing methods. Managing multiple networks has also resulted in marketing inefficiencies, as companies are forced to market multiple services separately to the same consumers—who must themselves create/manage multiple accounts for the multiple networks.

Though few media companies have yet to start integrating their multiple networks into a single database, network convergence is clearly the next phase in ecosystem management. Tech companies have been at the forefront here, partly due to the additional benefits of such convergence for hardware marketing and sales. Despite managing few separate networks to begin with, companies such as Apple, Amazon, and Microsoft have strived to reduce the number of their respective networks to one. At the same time, the growth of mobile devices and the development of device-specific app markets have encouraged the multiplication of consumer-facing software for all networks.

As Apple's troubled—and ultimately incomplete—attempt to merge their iTunes and iCloud networks in 2011 demonstrates, the implementation of network convergence presents a number of problems for digital media companies. On the consumer front, the most important of these problems revolves around account management. Given the multiplication of consumer-facing software, consumers must be made aware—preferably within the app interfaces themselves— that they are interacting with a single network. If this is not clear, consumers may inadvertently create separate accounts for each app, thereby preventing the parent company from realizing some of the benefits associated with convergence. Consumers must also be offered a simple method of merging the separate accounts originally associated with the separate networks.

*In terms of network convergence, Warner Bros. is ahead of the game with their WBID system. The current implementation of WBID, however, has yet to address many of the problems inherent to network convergence. Few of the apps that accept WBIDs indicate to consumers that they do so. What is more, the different apps (e.g. WBShop, WB BD-Live, Warner Archive Instant) also share no unifying designs that would suggest they are part of the same network. There also exists no method for merging separate accounts. Lastly, we note that Flixster—a key service for Warner Bros.' digital strategy—has not been integrated into the WBID network, we suspect due to Flixster's heavy reliance upon Facebook.*

## 2) Integrating Physical Consumption

With very few exceptions, digital ecosystems have been designed to measure and manage only the consumption of *digital* media products, not *physical* media products. Though this bias partly reflects the inherent difficulty of integrating physical consumption into a digital network, it also stems from a tendency among media companies to treat digital and physical media consumption as qualitatively separate activities. In cases where companies have created links between physical consumption and digital ecosystems (UltraViolet, EA Online Pass), the primary purpose has not been to collect data or drive consumption, but to reshape markets and/or combat piracy.

In light of privacy laws and the large number of physical media vendors, media companies have settled on in-package codes as the simplest and cheapest method of tracking and recording physical purchases in digital ecosystem databases. In some cases, these codes provide digital versions of the physical good; in others, they provide reward points or—in the case of video games—access to in-game perks. The most radical use of in-package codes, however, has treated them as opportunities to market associated digital goods in other media. Video game companies

have been the first to experiment in this area, with Blizzard Entertainment and Microsoft Game Studios even working with licensees to create unique codes.

*Because Warner Bros. is a large media conglomerate that owns a number of highly recognizable IPs, we believe that Warner Bros. is well-suited to capture the benefits of integrating physical media consumption into its digital ecosystem. UV codes already provide some form of integration for DVD purchases, but the codes' expiration dates, selective packaging, limited network integration (Flixster, but not WBID), and minimal consumer perks limit their effectiveness as a means of linking DVD consumption to Warner Bros.' digital ecosystems. In some cases (e.g. print versions of DC Comics) Warner Bros. charges consumers extra for the codes—a practice at odds with the goal of integrating physical media consumption.*

## 3) Indirect Monetization

Partly because the market for digital media is still relatively new, media companies continue to struggle with the question of how best to monetize digital content delivery via their own apps. Despite what may seem like a wide variety of monetization strategies, the vast majority of apps employ some form of *direct monetization* scheme. In direct monetization, a company derives revenue from charging consumers—or advertisers, in the case of free TV streaming apps such as CW TV Now—directly for access to content.

By contrast, media companies have experimented very little with what are sometimes called *indirect monetization* schemes. In indirect monetization, a company forgoes immediate revenue by strategically distributing content to consumers for free or at very low cost; the eventual revenue gains come indirectly through increased consumption of related, directly monetized products. To fully exploit indirect monetization, companies will require a data-rich—and ideally, fully converged—network infrastructure as well as robust data analytics. Together, these will allow companies both to customize indirect monetization initiatives for specific groups of consumers and to measure the initiatives' effectiveness.

Though indirect monetization is essentially another name for marketing, we use this term in order to suggest a paradigm shift in how entertainment companies conceive of what their products do and are for in the context of digital ecosystems. Though media content is a media company's main product, it is also always an advertisement for related products.

Disney's recently re-tooled Marvel Unlimited comics service represents an example of indirect monetization in practice. Though Marvel Unlimited brings in some revenue via an underpriced subscription charge, the service seems primarily designed not as a means of directly generating revenue but as a means of encouraging and maintaining consumer participation in the Marvel brand and of marketing Marvel Studio films and television shows. Indeed, Marvel Unlimited even works to undercut the profit potential of the EST and physical retail markets for Marvel comics and graphic novels. The trade-off, Disney apparently believes (and we with them), is increased profit potential for films, theme parks, video games, and branded merchandise.

*Given the strength of IPs owned by Time Warner, we believe that the Warner Bros. Home Entertainment division should focus less on directly monetizing access to digital content and*

*more on developing creative strategies for the indirect monetization of such content. When developing these strategies, Warner Bros. should remember that the higher the value of the product given away, the higher the indirect return. For example, indirectly monetizing films like* 17 Again *(as Warner Bros. did during the launch of UltraViolet) will offer a much smaller return than a film like* The Hangover *or* The Dark Knight. *We also believe that the indirect monetization of some DC-Entertainment affiliated content is urgently needed in order to compete with Marvel.*

## 4) Re-evaluating "Participation"

Thanks to the success of Facebook, Twitter, and other social media sites, media companies have over the last half-decade regularly sought to emulate (or integrate) social media functionality when designing ecosystem software. According to Web 2.0 pundits, social or participatory features such as comment threads, sharing services, and content-generation tools can produce increased profits for companies by both engendering a more engaged user community and providing increased information about user behavior.

In practice, however, attempts to integrate participatory features have produced mixed results for media companies. Though ecosystems such as Steam and Amazon appear to be successful in employing such features to drive sales, other companies, including Apple, have had less success. Indeed, Apple's attempt to layer social media functionality atop iTunes via Ping in 2010 stands as the company's only major failure during the twenty-first century.

Because participatory features entail increased costs but produce uncertain results, we expect most media companies to de-emphasize participatory features in future ecosystem software. Disney Movies Anywhere is an important example in this regard, as the software offers virtually no participatory features save Twitter and Facebook share links (both of which have been moved off the software's main screens and placed in a sub-menu) and instead relies upon a rewards system to drive consumption. We also believe that few apps will continue to rely heavily on social media architecture in the way Flixster currently does with Facebook. Not only does such reliance limit designers' ability to fine-tune software features, it also poses a barrier to network convergence and unnecessarily links the ecosystem's fortunes to that of an external company.

*We believe that Warner Bros.' Home Entertainment division should reject the received wisdom that social media functionality is the key to successful software design. Instead of designing tools to connect ecosystem users or enable them to share their collections, Warner Bros. should focus instead on (1) creating indirect monetization strategies and (2) developing rewards programs that directly incentivize media consumption. This is not to suggest that social media platforms (Facebook, Twitter) are not useful marketing tools, but rather that they should be no more than peripherally integrated into ecosystem software.*

## Conclusion: Challenges and Opportunities

Because digital ecosystems remain a relatively new frontier for media delivery, we expect to continue to see significant experimentation in ecosystem design and implementation over the next half-decade. Despite such experimentation, we also expect to see clear best practices begin

to take shape around the four issues highlighted above. Given Warner Bros.' existing digital services, its content library, and its early efforts at convergence via the WBID, we believe that Warner Bros. is well-positioned to be at the forefront of digital ecosystem design and management. To get there, the Home Entertainment division should bring Flixster into their WBID network, use in-package codes to integrate physical consumption, create strategies for indirect monetization, develop a rewards program, and reduce Flixster's reliance upon Facebook.

# Mapping the Digital Ecosystem: Connected Viewer Priorities

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**Mapping the Digital Ecosystem: Connected Viewer Priorities**

**Executive Summary**

This project explores consumer priorities and broader trends of content circulation and viewing habits within the digital ecosystem. It examines hardware ecosystems maintained by over-the-top applications and a range of smart devices, from smart televisions to mobile phones and tablets. Findings are based on two surveys: one focused on SVOD subscriber priorities and satisfaction, and the second focused on hardware ownership and its impact upon content consumption. Across these two surveys, the research suggests that the variety of OTT devices and SVOD services play a complimentary rather than a competitive role with cable, as well as with one another, in the digital ecosystem. In other words, their value is largely additive. For example, 96% of respondents subscribed to at least two of the following at the same time: cable/satellite service, Netflix, Amazon Instant Video, and Hulu/Plus (Hulu or Hulu Plus). Consumer appetite for content seems to have no limit, with library content playing a large role in maintaining SVOD stickiness. New and original television content serves as a major draw for streaming companies, but it is library content, for both film and television, that keeps consumers loyal to the ecosystem. About exclusive television licensing deals, survey respondents expressed frustration when they could not find particular programs through their OTT device and applications, but they also considered access to exclusive content a benefit of subscription. In line with the expansion of the ecosystem of online content delivery devices and applications, consumer demand continues to expand as well, creating opportunities for content companies to benefit from exclusive licensing deals, particularly in terms of library and children's content.

**Key Findings**

- This research suggests that OTT device ownership and SVOD viewing is additive, rather than competitive, with broadcast and cable television. In other words, cord cutting has not yet achieved critical mass.

- Original and exclusive television content is a significant driver of consumer sampling for SVOD services and functions primarily to bring new subscribers into the ecosystem.

- Original content is not, however, the most significant factor in maintaining subscriber loyalty. Once consumers commit to an SVOD service, film and television library content and inertia reinforce stickiness.

- The OTT device marketplace remains a competitive one, as no single device has emerged as a clear market leader.

- Within the expanding market of children's content, parents strongly prefer SVOD over EST, though they are also willing to dedicate half of their media budget to purchase access to content for their children.

**Mapping the Digital Ecosystem: Connected Viewer Priorities**

Introduction

This project explores consumer priorities and trends within the digital ecosystem—hardware ecosystems maintained by over-the-top (OTT) applications and a range of smart devices, from smart televisions and OTT devices to mobile cellular phones and tablets. Findings are based on two surveys: one focused on SVOD subscriber priorities and satisfaction, and the second focused on hardware ownership and its impact upon content consumption. The majority of respondents were aged between 30 and 65, and all used connected devices regularly to stream video content. They identified as avid video consumers, with 74% agreeing that they like to own the latest communication devices and 92% considering themselves film and television lovers. The surveys were created in conversation with Warner Bros. executives Laura Gross (Vice President of Research and Media), Eleanora Jonusiene (Director of Global Consumer Insights and Research), and Olivia Llamas (Executive Director of New Products Research).

Hardware Ownership and Content Consumption

Consumers who are cable subscribers are also engaging with a variety of web-based content distribution devices, applications, and websites. The majority of my respondents were cable subscribers (91%), and half of them use their cable system's On Demand services regularly. Notwithstanding, 55% of respondents also purchased an OTT box to watch content unavailable through broadcast or cable network channels. Among avid media consumers, then, SVOD options provide the opportunity to timeshift without sacrificing the large screen of the television set and, largely, did not replace the cable subscription.
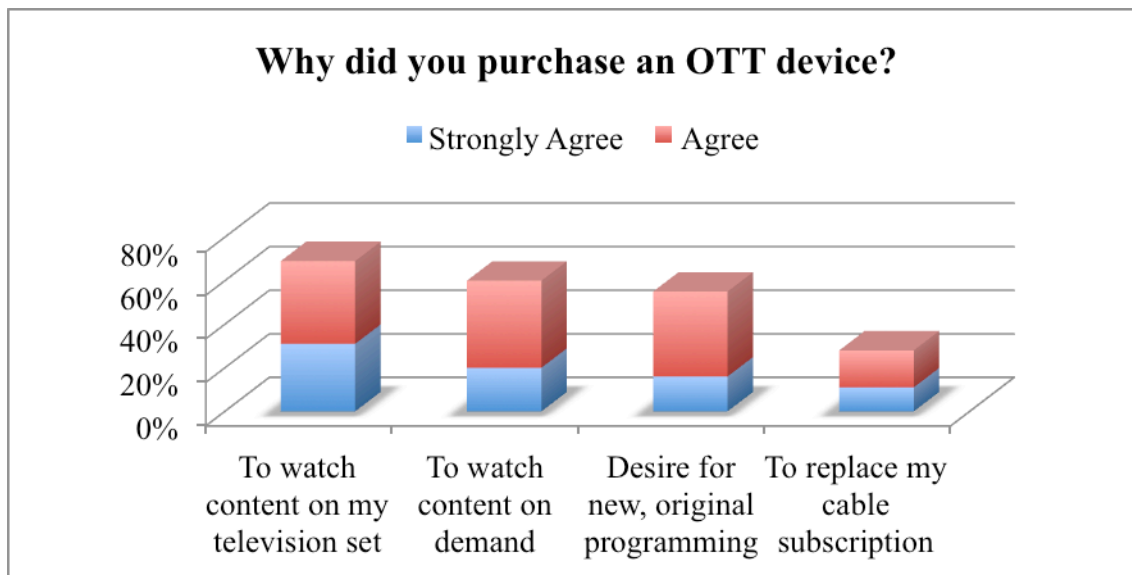


Figure 1: Reasons for purchasing an OTT device.

The television set's importance, at least for now, was confirmed by the sample (see Figure 1). Accordingly, 84% of respondents want to watch video content on their television, and a primary complaint about viewing full-length content on mobile devices was screen size and image

quality. Among adult respondents, the television was the most popular device for media consumption, followed by the laptop, the desktop, tablet, and smartphone. Adult respondents with children living in their homes reported that their kids watch content most often through their television, too, but their children's second most used video streaming device was a tablet. This aligns with recent studies that have found parents of small children to be the fastest growing tablet owner demographic.

Three quarters of respondents own and regularly use an over-the-top device to stream content, with Sony's PlayStation (models 3 or 4) and Smart TV's reported as the most popular devices for streaming video (see Figure 2). Broadly, respondents were satisfied with the performance of their OTT devices, though one quarter of respondents indicated Internet speed as a limiting factor in their OTT use. Additionally, 25% of OTT users reported ordering faster Internet service to stream content, and another 22% of respondents complained about slow load times or buffering difficulties. Internet speeds pose a problem for mobile device users as well. While half of the sample watched full-length TV episodes or films on their mobile devices, 24% complained about video load times and performance. *This suggests that lack of access to high speed Internet may frustrate streaming video consumers, but it is not preventing them from viewing content online.*
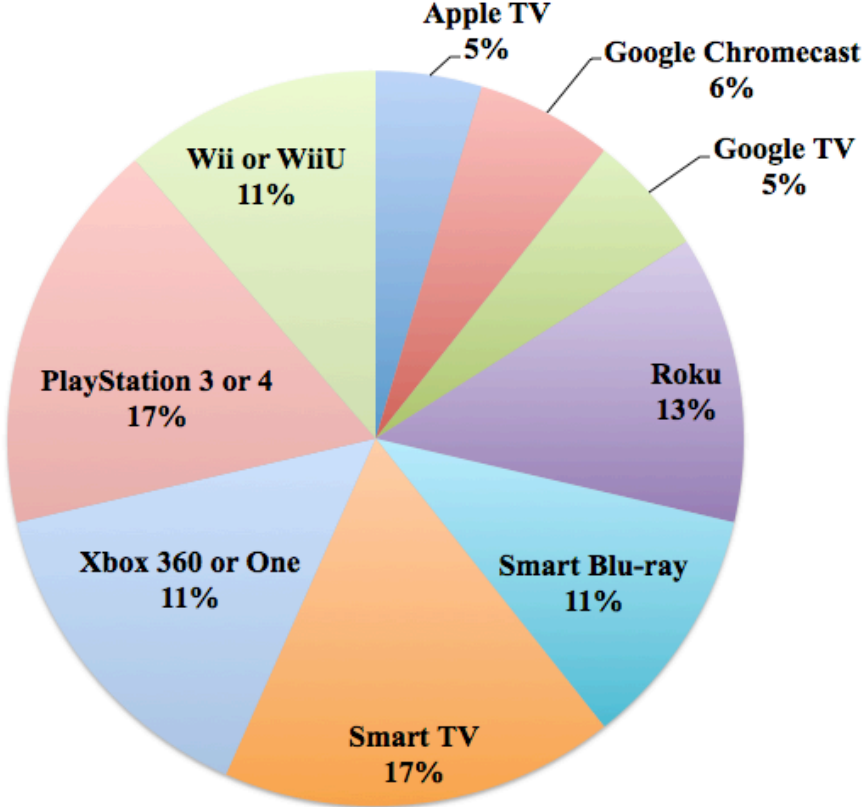


*Figure 2: Over-the-top or smart devices used regularly to stream long-form TV or film content.*

As demonstrated by Figure 2, the market for OTT devices is highly competitive, featuring a range of companies, from television set manufacturers and gaming companies like Microsoft, to tech companies like Google and Apple. No one leader of the OTT device market has emerged. When survey respondents were introduced to a new ecosystem of streaming services through the purchase of an OTT device, they reported watching a lot more video than expected through the applications available on that device (see Figure 3). In fact, applications like YouTube, Amazon Instant Video, Flixster, VUDU, and Crackle enjoyed impressive stickiness among new consumers after being sampled.

When asked about the apps they use, consumers remained relatively loyal to the apps with which they were most familiar (see Figure 3). The most well known streaming media companies benefitted from their reputations, such that consumers did not seem to stray much beyond these dominant apps, despite services like Roku offering hundreds of "channels." For example, when asked what new apps they discovered through their OTT device that they use regularly, 64% of survey respondents had discovered NO new apps. Moreover, when asked what apps were unavailable through their OTT ecosystem, 86% of respondents were unable to think of any apps they could not access through their OTT device. Within these hardware ecosystems, then, *consumers tend to use the prominent content distributors most familiar to them and rarely venture beyond those to explore new entrants*. Consumer preference for the familiar represents a challenge for undersampled services like Flixster, though as Figure 3 indicates, there is a high rate of return when consumers use a new streaming service.

When asked if they tend to use native applications (using iTunes through an iPad or Amazon through an Amazon Fire, for example), 60% confirmed regular use of applications native to the device in use. When asked to list individual programs to which they did not have access through their OTT applications but wished they did, many mentioned CBS programming (like *The Big Bang Theory*) and major cable dramas (AMC's *The Walking Dead* and HBO's *Game of Thrones*). *Interestingly, when unable to find a desired program or film, 74% of respondents simply watched something else, whereas 26% purchased the desired program or film through an EST option and 12% subscribed to another site that provided the desired program.* Only 2% admitted to pirating the program when unable to access it legally through an OTT application.

Original and Exclusive Content as Driver of Consumer Engagement

Two compelling trends within the SVOD universe are the production of new, original television programming and exclusive licensing deals, particularly focused upon popular television content. Among the survey sample, original content provided marquee value, driving both sampling and new subscriptions. The value of exclusive licensing deals was less clear-cut for consumers.

# Media Content Application Use

■ Apps consumers anticipated using before purchase of OTT device
■ Apps currently using through OTT device

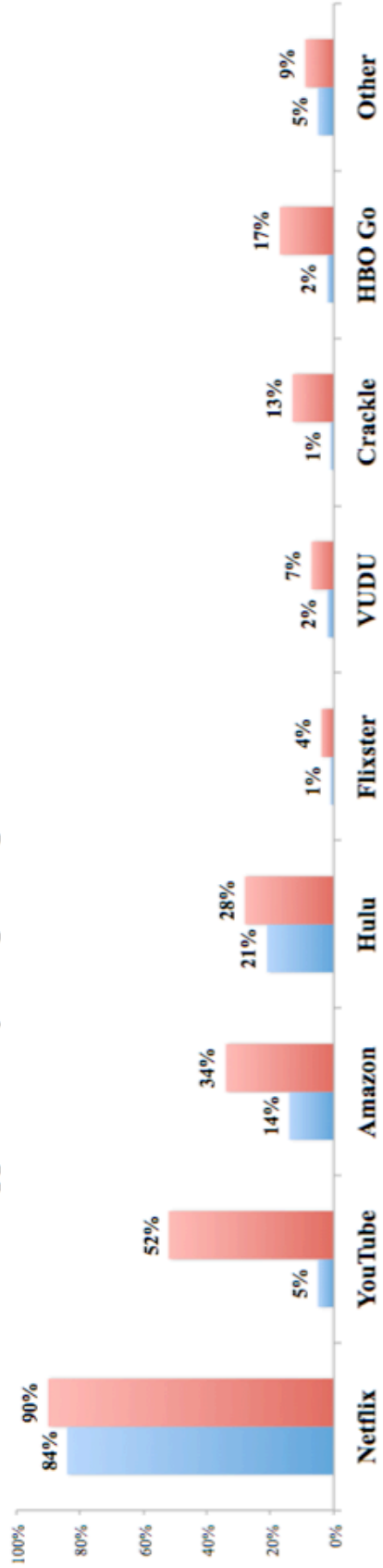| | Netflix | YouTube | Amazon | Hulu | Flixster | VUDU | Crackle | HBO Go | Other |
|---|---|---|---|---|---|---|---|---|---|
| Anticipated | 84% | 5% | 14% | 21% | 1% | 2% | 1% | 2% | 5% |
| Actual | 90% | 52% | 34% | 28% | 4% | 7% | 13% | 17% | 9% |

*Figure 3: Anticipated versus actual usage of OTT device video applications.*

Respondents were not consistent in their responses about the relative importance of content as a driver of SVOD loyalty. For example, 87% agree that content is the *primary* factor in their selection of an SVOD or AVOD service. Nevertheless, 81% said a desire to watch a particular program or film would *not* motivate them to subscribe to a new SVOD service. Moreover, the sample overwhelmingly rejected the idea of canceling an SVOD subscription when a particular program or film became unavailable. There is widespread confusion among consumers about why content is unavailable on particular services or why content may disappear from a service to which they subscribe. While this confusion annoys consumers, their frustration does not seem to provoke cancellation of their service or subscription to a new service.

Awareness of exclusive content is high; on average, 82% of Netflix, Hulu Plus, and Amazon Instant Video subscribers reported familiarity with exclusive content available through their service (see Figure 4). When asked if they subscribe to an SVOD service to access exclusive content, though, these numbers dropped somewhat, to 63% for Netflix, 49% for Hulu Plus, and 62% of Amazon Instant Video users. Nevertheless, *it seems clear that the availability of exclusive content encourages stickiness among SVOD subscribers.*
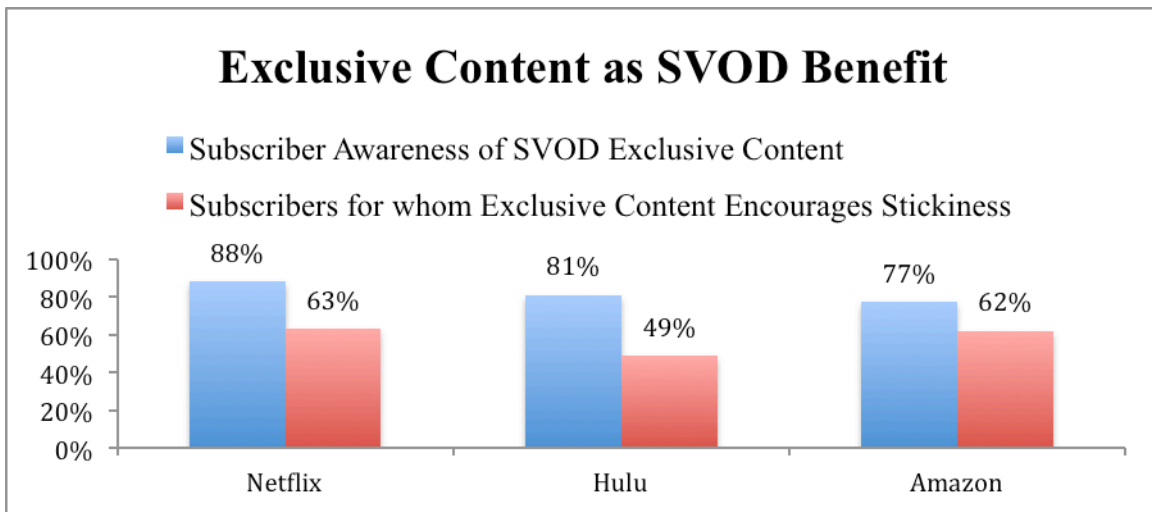


*Figure 4: Exclusive content is a motivation for stickiness for half of SVOD subscribers.*

Consumers prize the exclusivity of content available through their subscription, yet they also resent when they are unable to access content exclusive to another site. My theory of the consumer migrant, which presumed that consumers committed to a monthly subscription would feel free to cancel subscriptions based on content availability, did not hold up. Instead, subscriptions for SVOD remained relatively steady once consumers joined the service. *Only 33% of respondents re-evaluate their subscriptions on a monthly basis and 58% said they do not consider cancelling a subscription when content they enjoy becomes unavailable.* Whether due to inertia or genuine loyalty, once consumers commit to an SVOD site, they generally express contentment with that service. In terms of original programming, *fewer than 50% of subscribers to Netflix, Hulu Plus, and Amazon Instant Video have sampled new, original content.* Netflix has benefitted most from its marquee programs, *House of Cards* and *Orange is the New Black*.
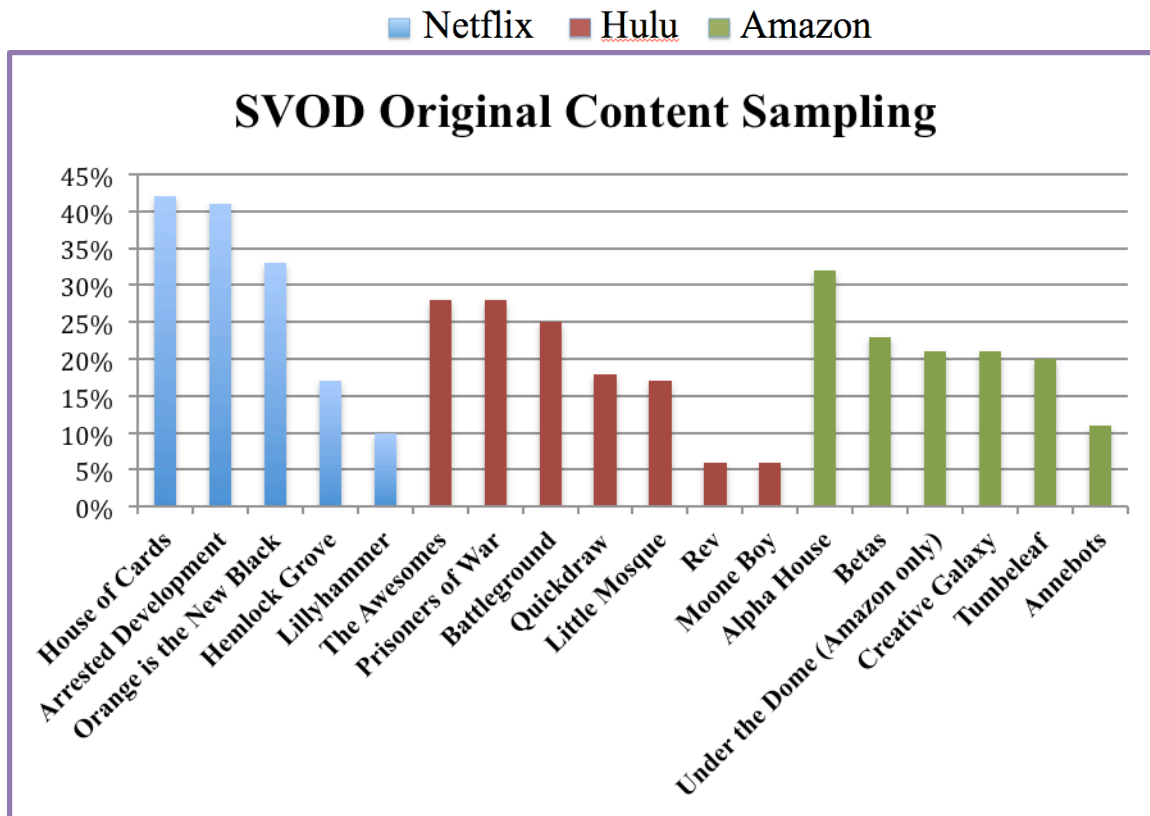
*Figure 5: Fewer than 50% of subscribers to each SVOD service
have sampled original content on that site.*

Library content of older programs and films were popular with subscribers, with 46% of Netflix subscribers citing old movies as the third most important justification for continued membership, following: (1) convenience and (2) price as more important considerations. New movies were the fifth most important reason for Netflix users to keep their subscription active, behind "catch-up" television. Amazon Instant Video subscribers cited older movies (at least five years old) as their fourth most important reason for stickiness (equally as important as more recent movies), following: (1) convenience; (2) price; and (3) the smooth interface. Consumers reiterated this interest in older content when asked what content they'd like to see more on each SVOD service: 35% of Hulu users would like access to additional older TV and film content, and for Amazon Instant Video subscribers, an equal number asked for increased access to new *and* older content. Certainly, new and original content remains a draw, but *content providers should not underestimate the importance of library content for SVOD satisfaction and stickiness*.

Netflix's popularity is thus far unrivaled (see Figure 6). In the sample, 90% had used Netflix in the past three months. When asked why they remained committed to this site, the answer provided most often was "familiarity," with comments ranging from "I trust them-have used them for years," to "reliable, familiar." Additional explanations for the Netflix preference included its variety of content, the depth of its library, its great reputation, and valued recommendations from friends and family. Despite the fact that many new (film and television content) releases are not immediately available for streaming, the sample continued to be satisfied with the selection available through Netflix. Original content, therefore, seems to be

effective in motivating sampling, and then other values, like familiarity and ease of use, seem equally strong motivators for consumer loyalty to particular video content applications and websites.
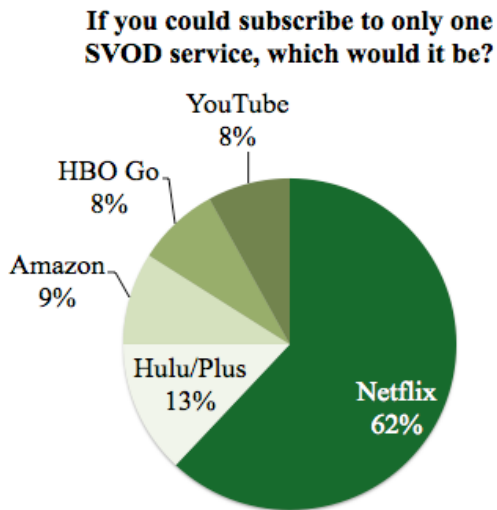


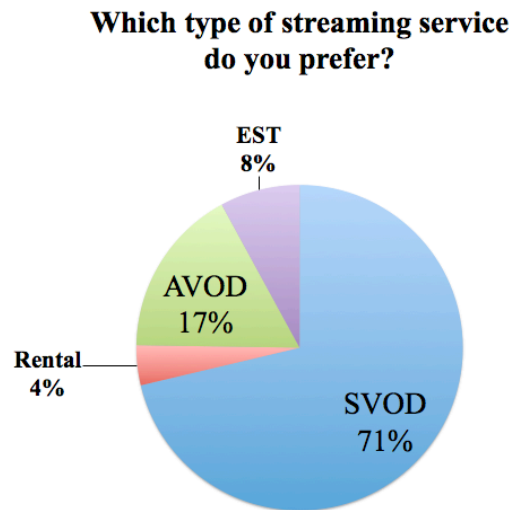Figure 6: SVOD Service Popularity



Figure 7: Business Model Preferences

EST and The Growing Importance of Children's Content

Consumers expressed a preference for the subscription business model for streaming all manner of content (see Figure 7), but the sample also continued to buy some media content. For instance, 60% of the sample had purchased a DVD or Blu-ray in the past year, and 31% had purchased a digital copy of a film or TV program (with 65% of those consumers buying from Amazon). Of the consumers who had purchased a digital copy of a film, 81% reported having watched the content more than once. Only 11% expressed anxiety about storing their purchased content in the cloud, and the sample overwhelmingly found the process of buying and downloading digital media to be easy. When asked if they were more likely to buy a film than a TV program, 81% said, "Yes."

*Streaming is the most popular option for parents*, in particular, with only 34% of the sample of parents indicating that they prefer to own children's content. Notwithstanding, 60% of parents who responded to the survey said they were more likely to buy content for their children than for themselves, making children's media and ancillary content profound growth areas for media companies. In fact, half of parent respondents noted that they spend half of their total media budget on children's content. Only 33% of parents got the majority of their children's content from YouTube. As was consistent with adult content, parents were willing to subscribe to a new service to give their children access to a favorite program, yet they were unlikely to cancel that subscription if the same content became unavailable.
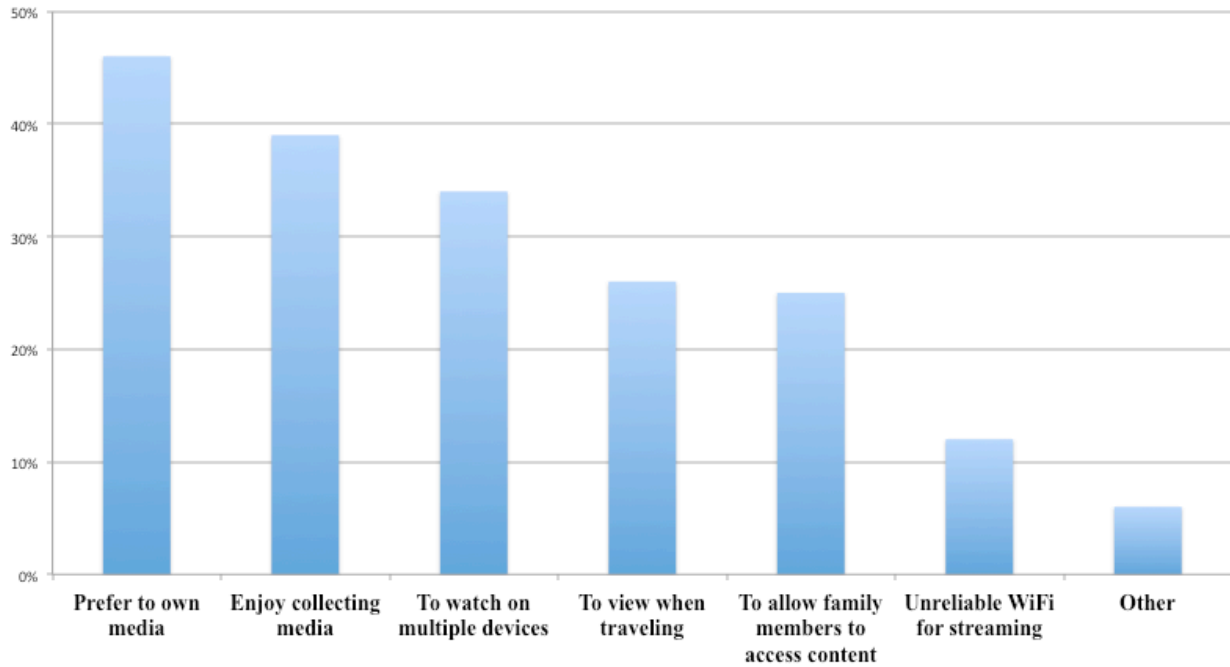
## Why Buy Media Content?



*Figure 8: The Ownership Proposition*

## What factors play a role in your decisions about viewing children's content?
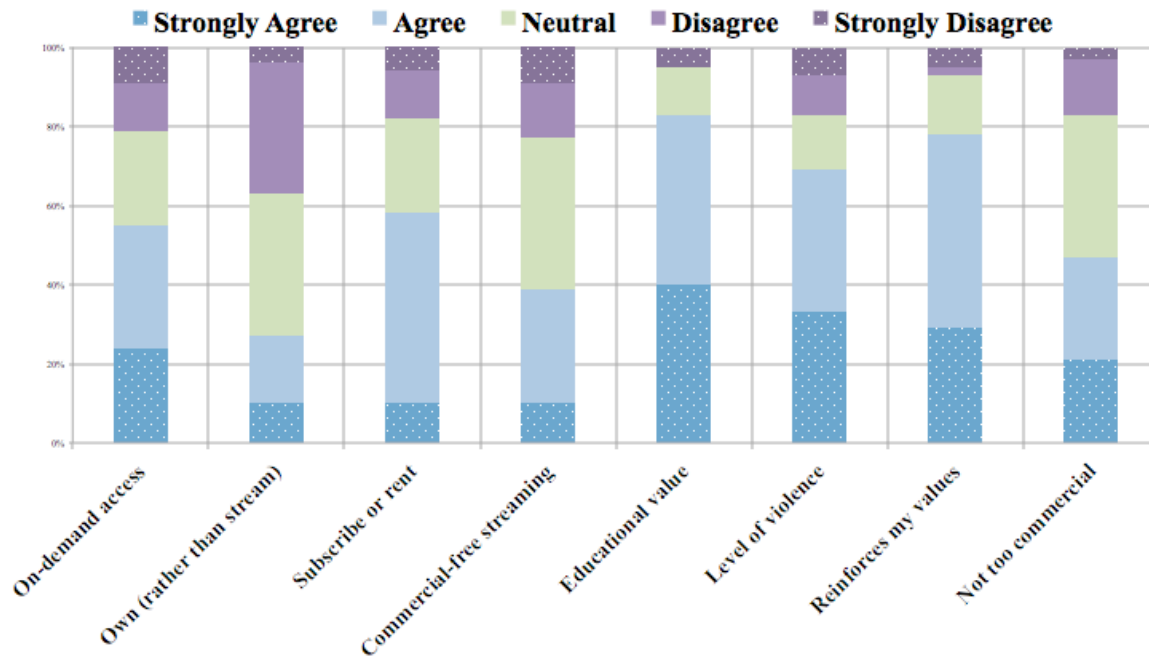


*Figure 9: Parents' priorities for Children's Content*

**Conclusion: Challenges and Opportunities**

The continued importance of the living room television screen is driving OTT device adoption and use. In general, OTT devices satisfy consumer desires to watch content on the large screen of the television, though timeshifting also remains a key motivator for OTT viewers. Cord cutting appeared in the survey as a minority experience, with most survey respondents adding new methods of viewing without canceling their cable subscriptions.

For SVOD subscribers, content matters, particularly as an encouragement to sample new streaming applications or services, with high sample rates for new, original television programming and high levels of awareness of exclusively licensed content. Library content, it needs to be noted, also provides a tremendous value for connected viewers, who seem to view older movie and television programs as avidly as they do new ones.

There are some challenges that remain for both consumers and content providers. Internet speeds in the U.S. lag behind global rates of service, and survey respondents cited slow or choppy video performance as a key frustration, though not an outright deterrent to connected viewing. Netflix totally dominates consumer mindspace within the OTT ecosystem. Nevertheless, users who sampled apps like Flixster tended to view them more frequently than anticipated after sampling. As the connected viewing device landscape continues to evolve and expand, I recommend the following:

A. *Warner Bros. could experiment with exclusive licensing in a more targeted manner, particularly with television content that will drive sampling and inspire EST.* While original programming is a powerful draw for SVOD services like Amazon Instant Video and Netflix, it is library content, particularly from companies like Warner Bros., that drives loyalty. The value of the library, therefore, may be increased through exclusivity, particularly as SVOD sites like Hulu Plus, Netflix, and Amazon jockey for preeminence.
B. *Warner Bros. can more fully incorporate the rising significance of children's content within the digital ecosystem by developing a dedicated portal with streaming and EST options.* Children are particularly demanding consumers of media content, and their parents, who are willing to spend half of their total media budget on content of interest to them, have been shown to prefer the SVOD model for this type of web-based consumption.
C. *Rotten Tomatoes could become a key portal for television content*, attracting increasing traffic and driving consumption by providing clear and detailed information of available television content across the digital ecosystem. As Flixster has mastered with film, there is an urgent need for a website that directs consumers to linear, EST, SVOD, and streaming platforms for individual programs (*and* individual seasons of those programs) to help viewers navigate the complex digital landscape.

## About the Researchers

**Connected Viewing Research Team**

**Juyeon Bae** is a Ph.D. candidate in the Department of Culture, Film and Media at the University of Nottingham. Her research addresses how contemporary South Korean cinema represents Asian others – migrant workers, Korean Chinese and North Korean defectors – from industrial, social, and political perspectives. The research examines the enlarged landscape of Korean cinema, its filmic negotiation with global flows, and the kinetic definition of national cinema. Previously she completed her M.A. in Cinema Studies at the Korea National University of Arts, where her dissertation focused on Korean action cinema of the 1960s and 70s. She has worked as a programmer for the Sangsangmadang cinema in Seoul and is a former member of the Critics Committee for Jeonju International Film Festival.

**Dr. Michael Curtin** is Co-Director of the Media Industries Project at the Carsey-Wolf Center and is the Mellichamp Chair of Global Studies in the Department of Film and Media Studies. He is an expert on global media industries, having consulted, published, and taught courses on U.S., Chinese, and Indian media. Curtin's books include *The American Television Industry*, *Playing to the World's Biggest Audience: The Globalization of Chinese Film and TV*, and *Reorienting Global Communication: Indian and Chinese Media Beyond Borders*. He is currently working on a comparative analysis of media capitals around the world, including Hollywood, Miami, Lagos, and Mumbai.

**Dr. Darrell William Davis** is an independent scholar based in Hong Kong, and will be taking up a visiting professorship at NYU in early 2015. He is author of *Picturing Japaneseness: Monumental Style, National Identity, Japanese Film* (Columbia University Press, 1996), co-author of *Taiwan Film Directors: A Treasure Island* (Columbia University Press, 2005), *East Asian Screen Industries* (British Film Institute, 2008) and co-editor of *Cinema Taiwan: Politics, Popularity and State of the Arts* (Routledge, 2007). Presently he conducts research on China's film industry and is composing an essay on Ang Lee.

**Dr. Liz Evans** is Lecturer in Film and Television Studies in the Department of Culture, Film and Media at the University of Nottingham. Her research explores the relationship between audiences, technology, and screen narratives, and her publications include *Transmedia Television: Audiences, New Media and Daily Life* (2011). Her current project explores the use of multiple screen devices within the home and the relationship between screen content accessed via different technologies, which involved working with industry partners BT, OFCFOM, ThinkBox and RedBee Media.

**Dr. Daniel Herbert** is Associate Professor in Screen Arts and Cultures at the University of Michigan. He holds a Ph.D. in Critical Studies from the University of Southern California. His research examines the relations between media industries, geography, and cultural identities. He is author of *Videoland: Movie Culture at the American Video Store* (UC Press, 2014). His essays appear in *Canadian Journal of Film Studies*, *Film Quarterly*, *Millennium Film Journal*, *Quarterly Review of Film and Video*, and a number of edited collections.

**Dr. Jennifer Holt** is Associate Professor of Film and Media Studies at the University of California, Santa Barbara and Co-Director of the Carsey-Wolf Center's Media Industries Project. She is the author of *Empires of Entertainment* (2011) and co-editor of *Media Industries: History, Theory, and Method* (2009); *Connected Viewing: Selling, Sharing, and Streaming Media in the Digital Era* (2013); and *Distribution Revolution: Conversations about the Digital Future of Film and Television* (2014). Her work has appeared in journals and anthologies including *Cinema Journal*, *Moving Data* and *How to Watch Television*. Currently, she is working on a book about policy issues related to digital media infrastructure, including broadband regulation, distribution protocols and platforms, cloud-based media, and data servers.

**Wesley Jacks** is a doctoral student at UC Santa Barbara. He earned his Master's Degree in Film Studies from the University of Wisconsin-Madison and his BA from Wabash College. Between 2008 and 2012, he lived and worked in Beijing. His Ph.D. research at UCSB focuses on Chinese media industries.

**Yongli Li** is an East Asian Language and Cultural Studies doctoral student at UC Santa Barbara. She earned a bachelor's degree from Communication University of China (formerly known as Beijing Broadcasting Institute) and completed her M.A. in International Film Studies from Beijing Film Academy. She worked on the Chinese Film Collection at the Moving Image Research Collections at the University of South Carolina for over two years, and has served as a programmer for the Chinese Film Festival for the art house Nickelodeon since 2010.

**Steven Malčić** is a Ph.D. candidate in the Film and Media Studies Department at UCSB. He is interested in media historiography, information infrastructures, and network culture. His dissertation examines mutual emergence of internetwork communication and contemporary critical theory, arguing that understandings of "identity," historically, motivated the technological practice of network design in union with philosophical traditions of subjectivity. He holds an M.A. in Film & Media Studies from UCSB and B.A.'s in Latin and Linguistics from the University of Missouri, Columbia.

**Prof. Paul McDonald** is Professor of Cinema and Media Studies and Director of Research in the Department of Culture, Film and Media at the University of Nottingham. His research concentrates on contemporary screen industries, and his publications include *Video and DVD Industries* (2007), *Hollywood Stardom* (2013) and co-editing *The Contemporary Hollywood Film Industry* (2010). Currently he is co-editing the collection *Hollywood and the Law*. Since 2001, he has co-edited the *International Screen Industries* book series from the British Film Institute.

**Dr. Matthew Thomas Payne** is an Assistant Professor of Telecommunication and Film at The University of Alabama. His research interests include video games and interactive entertainment, convergent media industries, new media literacy, media representations of war, and ethnographic audience research. Dr. Payne is currently working on a book manuscript that examines the production and reception of military-themed shooter games following the September 11th terrorist attacks. He was also a member of the 2011-2012 Connected Viewing Initiative research team.

**Dr. Karen Petruska** is the Project Lead for the Connected Viewing Initiative. Her research interests include digital distribution, television history, and media policy studies. After earning her Ph.D. in 2012 at Georgia State University, Petruska served as a Postdoctoral Teaching Associate at Northeastern University in Boston. She has published two book chapters, and her work may also be seen in *Creative Industries*, *Spectator*, *Popular Communication*, *In Media Res*, and *Antenna*.

**Sriparna Ray** is a Ph.D. candidate in the Department of Culture, Film and Media at the University of Nottingham. Her research looks at how the Hindi film industry, based in Bombay, has restructured itself with regard to production and exhibition practices since India's economic liberalisation. It examines this transformation in relation to wider socio-economic shifts, especially the emergence of a new urban middle class.

**Emanuelle Santos** is a Ph.D. candidate in the Department of English and Comparative Literary Studies at the University of Warwick. Her research investigates the ways in which the contemporary postcolonial African literatures written in Portuguese portrait the 'nation' and critically talk back to their local literary tradition set around the intellectual effort of literary nation-building.

**Dr. Gregory Steirer** is an Assistant Professor of English and Film Studies at Dickinson College. His research focuses on the impact of technological and economic changes on the production and consumption processes surrounding old and new media forms. Greg's current book-length project, *Narrative Inc.*, looks at big-brand media franchises and the changes they have wrought to traditional processes of narrative creation and consumption. He received his Ph.D. from the University of Pennsylvania in 2010.

**Dr. Emilie Yueh-yu Yeh** is Professor at the Academy of Film, and Director of the Centre for Media and Communication Research at Hong Kong Baptist University. Her publications include: *Taiwan Film Directors: A Treasure Island* (Columbia University Press, 2005, Co-author), *Chinese-Language Film: Historiography, Poetics, Politics* (University of Hawaii Press, 2005, Co-editor), *East Asian Screen Industries* (British Film Institute, 2008, Co-author) and *Staging Memories: Hou Hsiao-hsien's A City of Sadness* (University of Michigan Press, forthcoming). She also edited *Rethinking Chinese Film Industry: New Histories, New Methods* for Beijing University Press (in Chinese, 2011).

**Additional Team Members**

**Richard Hutton** is Executive Director of the Carsey-Wolf Center and Adjunct Professor in Film and Media Studies at the University of California, Santa Barbara. He previously held executive and producer positions with Vulcan Inc., Disney, and the Public Broadcasting System (PBS). He has extensive experience with the media, education, museum, and entertainment sectors.

**Dr. Constance Penley** is Professor of Film and Media Studies and Co-Director of the Carsey-Wolf Center at the University of California, Santa Barbara. Her major areas of research interest are film history and theory, feminist theory, cultural studies, contemporary art, and science and technology studies. She is a founding editor of *Camera Obscura: Feminism, Media, Cultural Studies* and editor or co-editor of the influential collections *Feminism and Film Theory*, *Male Trouble*, *Technoculture*, *The Visible Woman: Imaging Technologies, Science and Gender*, and *The Feminist Porn Book: The Politics of Producing Pleasure* (with Tristan Taormino, Mireille Miller-Young, and Celine Parreñas Shimizu). Her books include *The Future of an Illusion: Film, Feminism, and Psychoanalysis*, *NASA/TREK: Popular Science and Sex in America*, and the forthcoming *Teaching Pornography*. Penley is a recipient of the MacArthur Foundation Digital Media and Learning Award and the Kenneth Burke Society Prize in Rhetorical Criticism.

**Dr. Ronald Rice** is the Chair of the Department of Communication, the Arthur N. Rupe Chair in the Social Effects of Mass Communication, and Co-Director of the Carsey-Wolf Center at University of California, Santa Barbara. He has conducted research and published widely in communication science, public communication campaigns, computer-mediated communication systems, methodology, organizational and management theory, information systems, information science and bibliometrics, and social networks. He has co-authored or co-edited *Public Communication Campaigns* (4th ed: 2012), *The New Media: Communication, Research and Technology* (1984), *Managing Organizational Innovation* (1987), *Research Methods and the New Media* (1988), *The Internet and Health Communication* (2001), *Accessing and Browsing Information and Communication* (2001), *Social Consequences of Internet Use: Access, Involvement and Interaction* (2002), *The Internet and Health Care: Theory, Research and Practice* (2006), *Media Ownership: Research and Regulation* (2008), and *Organizations and Unusual Routines* (2010).

**Dr. Kevin Sanson** is the Research Director of the Carsey-Wolf Center's Media Industries Project at the University of California, Santa Barbara, where he also teaches in the Department of Film and Media Studies. His current book project focuses on the spatial dynamics of global media production and examines issues of location, labor, and creative identity. He is co-editor of *Connected Viewing: Selling, Streaming, & Sharing Media in the Digital Era* (Routledge 2014) and *Distribution Revolution: Conversations about the Digital Future of Film and Television* (UC Press 2014).

**Sheila Sullivan** is Associate Director of the Carsey-Wolf Center. Her areas of expertise consist of personnel management, vision setting, program development, program management, students services, and career services, with proven success in promoting a positive environment for student interaction and engendering a spirit of collaboration within a diverse workforce. After 15

years at the American Film Institute, Sheila left her position as Vice Dean of the AFI Conservatory in 2009 to join the University of San Francisco. At USF, she was an Associate Dean of the School of Management, Director of Student Advocacy, and Co-Director of Student Leadership and Engagement.

**John Vanderhoef** is a Research Associate with the Media Industries Project and a Ph.D. Candidate in the Department of Film and Media Studies at the University of California, Santa Barbara. His research interests include digital game production, media industries, residual media, power and resistance, and discourses around gender, race, and sexuality in media and production cultures. He has published work in *Television and New Media*, *Ada: A Journal of Gender, New Media, and Technology*, and *The Routledge Companion to Video Game Studies*. He received his M.A. from the University of Wisconsin, Milwaukee's Media Studies program in 2010. He has contributed to the Carsey-Wolf Center's Media Industries Project, and is on the editorial collective for *Media Fields Journal*.

**About the Media Industries Project**

The Media Industries Project (MIP) is a trusted authority on the study of media globalization, digitization, and creative labor.

By examining the dramatic changes affecting the global media landscape, MIP offers critical insights about the media industries and their publics. Our research and programming foster dialogue between professionals and scholars, encouraging innovative thinking about the prospects of modern media. MIP is an initiative of the Carsey-Wolf Center.

**About the Carsey-Wolf Center**

The Carsey-Wolf Center supports research, teaching, and public programming about media. The Center aims to foster the creativity, critical skills, historical understanding, and new forms of literacy that students need to be informed citizens in the 21st Century. Engaging industry professionals and policy makers, as well as students and scholars, the Center seeks to increase public understanding of the role of media in society and inform policy debates. It is the institutional home of the Media Industries Project.

**About UC Santa Barbara**

Part of the world-renowned ten-campus University of California system, the University of California, Santa Barbara has been recognized as a major center for teaching and research. It is an elected member of the Association of American Universities, placing it with Harvard, Stanford and UC Berkeley among the 63 leading research institutions in North America. UC Santa Barbara faculty have won numerous honors, including five Nobel Prizes, Guggenheim fellowships, National Endowment for the Humanities fellowships, Fulbright Fellowships, major book prizes, and memberships in the National Academy of Sciences. Faculty in the humanities and social sciences have national and international reputations for research in global studies, religious studies, and film and media studies. More than half of all graduating seniors report having collaborated with faculty members on original research or creative projects. Demand for admission to UC Santa Barbara is highly competitive, with nearly 60,000 applications for an entering class of 4,000.