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Do Online Video Platforms Cannibalize Television? How Viewers are Moving from Old Screens to New Ones

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INTRODUCTION

Although television has been the predominant medium in reaching mass audiences for the past several decades, some noteworthy trends have emerged in recent years concerning the competitiveness of television as a distribution channel.

Young generations—namely Generations Y and X—spend more time online than they do watching television. A slightly older profile—younger "baby boomers"—spend almost equal amounts of time on television and online (Anderson, 2010). According to a recent survey conducted by Arbitron and Edison Research, American adults chose the Internet as "the most essential" medium over television (Marketing Charts, 2010).

Recent trends in advertising trend also reflect these media-consumption behaviors. The migration of advertisers from traditional mass media to online media concerns television networks. According to the Yankee Group, television advertising revenue declined 21.2 percent between 2008 and 2009, and online advertising revenue grew 8.3 percent—primarily during the same time period—due to the popularity of online videos (Marketing Charts, 2010).

Online video platforms are systems that utilize Internet streaming via computers that enable users to watch and distribute video content. And the role of the Internet has expanded and grown as a platform to distribute and view video content. As numerous industry reports have indicated (comScore, 2009a, 2009b), online video platforms seem to have entered a rapid stage of growth in the United States. As more and more consumers use the Internet to watch video content, the television industry is questioning whether online video threatens the viability of the television industry.

According to a 2010 survey, approximately 40 percent of American households with broadband Internet access use the Internet to watch television programs and movies (Parks Associates, 2010). As video platforms are diversified and consumers want seamless access to video content, television firms should not underestimate the interest in online video platforms.

This study investigates whether (and, if so, how) online video platforms are displacing television with respect to time investment and viewership. Through the investigation, this study will offer insights into how the television industry itself employs different types of distribution channels and leverages the value of online platforms.

LITERATURE REVIEW

Displacement

When a new medium emerges in a market, historically there is debate over one consideration: does the new offering displace an existing one? The discussion is based on the principle of relative constancy or a zero-sum game. The logic is that because spending by consumers and advertisers is relatively constant, the emergence of a new medium decreases the time spent with traditional media. What changes with the introduction of new media is simply the way the consumers' resources are distributed (McCombs, 1972; McCombs and Eyal, 1980; Picard, 2002). One study contended that "attention to a particular channel is a zero-sum game in that one channel's viewers come at the expense of another's" (Owen and Wildman, 1992).

Most displacement-effects research has focused on whether the use of a new medium lowers the time devoted to the original medium (McLeod and Reeves, 1980). Applying the zero-sum principle to today's media offerings is more complicated than it might seem: more customers are "multitasking," using different media simultaneously. For instance, a consumer may listen to traditional radio while using the Internet to read Web blogs at the same time. A weakness of the zero-sum game principle is that it does not take this kind of multitasking possibility into account. The simultaneous use of an existing medium and a new medium, in fact, may not decrease the amount of time consumers spend on the existing medium.

An idea alternative to the displacement effect is the theory that a new medium complements old media (Dimmick, Kline, and Stafford, 2000; Lin, 2001; Schramm, Lyle, and Parker, 1961). Dimmick (1997) argued that consumers allocate their niche time according to the gratification they seek. The niche theory posits that different forms of media serve different gratifications and gratification opportunities (Dimmick et al., 2000). Forty-five years ago, when the means of consumer engagement were far more limited than they are today, one study suggested that a new medium displaces old media only if the new medium serves the same functions or offers the same gratifications as old media (Himmelweit et al.,1958).

At the Internet's nascent stage, the bulk of research did not directly examine whether the time spent using traditional media decreased as a consequence of Internet use. Rather, it concentrated on a simple relationship between time spent on the Internet and time spent with traditional media—without investigating the possibility of a causal relationship. The findings from the research are inconclusive. A survey conducted in mid-1994 found that time spent reading newspapers remained the same during the introductory stage of the Internet (Bromley and Bowles, 1995). And, in 1998, another study revealed that frequent Internet users tended to watch television programs more often (Shapiro, 1998).

The research that attempted to investigate the direct influence of Internet use on time spent with traditional media showed more consistent results. These studies discovered a displacement effect of the Internet on traditional media at some levels. One report found that Internet usage negatively affected time spent watching television (Lee and Kuo, 2002). Another revealed that time spent on the Internet most critically reduced time spent watching television, followed by reduced telephone use, newspaper use, and domestic conversations in that order (Kayany and Yelsma, 2000).

While aforementioned studies examined the displacement effect of the Internet in general on traditional media, researchers maintained that the

important construct in research that investigates the relationship between a new medium and an old medium is whether the new medium is functionally similar, functionally more desirable, or complementary to the old medium (Ferguson and Perse, 2000; Lin, 1994). In 2008, one study found that the use of the Internet for entertainment was negatively correlated with the time spent watching television (Lee and Leung, 2008). The same study revealed that Internet use for news and information was negatively correlated with time spent reading print newspapers. An industry survey released in 2008 revealed that more than 92 percent of Internet users used the Internet for entertainment on a weekly basis, and 35 percent of them claimed to have spent less time on television as a result (Emigh, 2008).

Online video platforms have fundamental functional similarity to television in that both types of platforms deliver video content to consumers. Although the increase in consumers' multi-tasking possibilities lessens the plausible displacement effect of the Internet on traditional media, the relationship between online video platforms and television might differ.

Some consumers increasingly use television and the Internet at the same time. They would be less likely to use online *video* platforms and television simultaneously, however, because both types of video platforms use the same sensory systems. In this case, traditional television content providers may be more concerned about online video platforms' cannibalization of television. Given that there is little research on distribution channel cannibalization in general (Deleersnyder, Geyskens, Gielens, and Dekimpe, 2002), theoretical research that examined specifically whether online video platforms complement or displace television is scarce.

Thus, the present study examines how the extent of using online video platforms changes the time spent using television.

RQ1: How does the time spent using online video platforms affect the time spent watching television?

Venue Types

Online video viewing typically takes place on two types of venues—video-sharing sites and Web sites affiliated with television networks. These classifications are based on the type of content provider and the way the video content is distributed on each venue.

- Video-sharing Web sites: The operation of video-sharing sites is independent of television networks. Video-sharing Web sites allow both media firms and individual Internet users to distribute and share video content. Individual Internet users can use video-sharing sites as consumers and producers.

A classic example of a video-sharing site is YouTube.

- Television-network Web sites: Web sites affiliated with television networks constitute an alternative group of online video-viewing providers. Unlike video-sharing sites, television-network Web sites are affiliated with television networks. Television networks are directly involved in the operation of television-network Web sites. Unlike video-sharing sites, television-network Web sites restrict the role of individual Internet users to that of consumers. Television-network sites do not allow individual Internet users to distribute video content on their venues. Examples of television-network sites include ABC.com, CNN.com, and Hulu.

The displacement effect of online video platforms on television can be a particularly serious pitfall for television networks if consumers' online viewing occurs on video-sharing sites instead of television-network Web sites, because using video-sharing sites may reduce the time spent watching television or using television-network Web sites.

Even though we could assume that a vast number of audience members of a television network will migrate to its related Web sites instead of video-sharing sites, the migration still presumably will hurt the revenues of television networks due to the discrepancy of advertising prices between advertisements on television and on television-network Web sites.

Therefore, this study further addresses how the use of different types of online video venues influences the time spent watching television.

RQ2: How does the time spent using different types of online video venues (i.e., television-network Web sites and video-sharing sites) affect the time spent watching television?

Content Overlap

Although the degree to which individuals use online video platforms is a plausible factor that might affect the displacement effect of online video platforms on television, another factor to be considered is the degree of content overlap between online video platforms and television.

In the newspaper industry, prior studies have found that print newspapers or magazines that provide more overlap with their online counterparts in terms of content coverage are more likely to be cannibalized by their online versions (Chyi and Sylvie, 1998; Deleersnyder et al., 2002; Simon and Kadiyali, 2007).

The degree of video platform content overlap can be understood from two aspects:

- The first aspect focuses on how the content type overlap between television and online video platforms influences overall television consumption. There are two types of video content available online:
  - branded videos, which are originally produced by media companies, and
  - unbranded videos, which are produced by individual Internet users (i.e., user-generated videos).

The content overlap between branded videos online and television programs on television is extensive.

Conversely, user-generated videos online and television programs on television do not have content overlap. An industry report also revealed that consumers actually prefer branded videos online to user-generated videos online (Holahan, 2007).

The degree to which consumers spend their time watching these branded and user-generated videos through online video platforms might influence the time spent watching television.

Therefore, this study examines how the content type overlap between television and online video platforms affects the time spent watching television.

RQ3: How does the time spent watching branded-video content and user-generated video content, respectively, through online video platforms affect

the time spent watching television?

- The second aspect of content overlap addresses how much time and the duration of the video content that television and online video platforms actually share.

Some television content providers might upload an entire episode of their program online after that episode has aired on television. Others may post a short clip of the program online but not the entire episode. One reason why television firms post clips of a television program rather than the entire episode might be to spark viewers' interest through those online clips, eventually compelling them to watch the entire episode on television. This type of practice is becoming very common in the television industry.

Yet there is no empirical study that actually investigates how the consumption of an entire episode, or clips of television programs, through online video platforms changes the time spent watching television.

Therefore, this study addresses the question

RQ4: How does the time spent watching clips or an entire episode of television programs, respectively, through online video platforms affect the time spent watching television?

Viewership Overlap

Another way to address the relationship between online video platforms and television for consumer demand is to investigate whether consumers use either online video platforms or television exclusively.

Some researchers have investigated whether print newspapers and their online versions reached mutually exclusive audiences (Chyi and Lasorsa, 1999, 2002; Chyi and Sylvie, 2001). In one study, half of the readers of national and regional newspapers in the online forms also tended to read their print versions (Chyi and Sylvie, 2001). Another suggested that the existence of a substantial overlap between online and print readerships—if any—would serve as a strong indicator of the potential of a complementary relationship between the two related goods (Chyi and Lasorsa, 2002).

Given that there is little research that addresses whether online video platforms and television reach mutually exclusive audiences, this study inspects the user overlap between online video platforms and television.

RQ5: Do television and online video platforms reach mutually exclusive viewers?

Another variation of the inquiry regarding viewership overlap between online video platforms and television is whether the viewership overlap varies according to television subscription type.

The rise of the Internet as a video platform is of particular concern to cable and satellite television system operators (Arango, 2009; Schonfeld, 2010). An industry report by the Sanford C. Bernstein research group projected that about 35 percent of people who watch videos online might cancel their cable subscription within five years (Arango, 2009).

The use of online video platforms also may shrink the audiences of broadcast networks. People who receive broadcast networks over the air without subscribing to any fee-based television services do not have as many channels as do cable or satellite television subscribers. Thus, they might heavily rely on the Internet to watch video content. This study addresses whether television subscription type makes a difference in the user overlap between online video platforms and television.

RQ6: Does the viewership overlap between television and online video platforms differ according to types of television subscription (broadcasting over the air only, cable television, and satellite television)?

METHOD

Definition and Measures

For the purpose of this study, "watching video content through the Internet" was limited to situations in which a viewer watched streaming video content on the computer via the Internet.

Thus, this study excluded viewing video content after the video content has been downloaded to computers, television, or portable devices capable of accessing the Internet. Watching video content on mobile phones also was excluded.

To measure the amount of time spent using online video platforms, the respondents were asked to specify the number of hours they use the Internet to watch video content during a typical week. Additional questions regarding using the Internet to watch video content were asked to collect more detailed information about the types of video content (i.e., user-generated video content and branded-video content), types of online video venues (i.e., video-sharing sites and television-network Web sites), and video-content overlap (clips of television programs and an entire episode of television programs).

To measure the displacement effect, the respondents were asked about the change in time spent watching television since they started using online video platforms (Kayany and Yelsma, 2000; Bagozzi, Dholakia, and Pearo, 2007; and Lin, 2004). Respondents were directly asked whether the amount of time they have spent watching television had changed since they started to use the Internet to watch video content, using a seven-point scale (1 = decreased a lot; 7 = increased a lot).

When it comes to media use, respondents were also asked to check off all of the television subscription types they have from a list. The categories included over-the-air broadcasting only, basic and expanded cable, premium cable, satellite television, and others. Basic and expanded cable and premium cable were both included in the category of cable television subscriber for the purpose of data analysis. In cases where the respondent chose both premium cable and satellite television, the respondent was classified as a satellite television subscriber for the data analysis.

Data Collection

The data for this study were obtained through surveys. A total of 1,500 adults throughout the United States who use the Internet were employed for the sample of the main survey. Specifically, a mailing list of 1,500 Internet users was purchased through a leading mailing list brokerage firm. The

sample for the main test was randomly selected from the list of 150 million adults nationwide who use the Internet. To increase response rates, a $1 bill was enclosed with the questionnaire as an incentive in its first mailing. A follow-up mailing was conducted 2 weeks after the initial mailing, along with a questionnaire and a business reply envelope.

For the data analysis, 388 responses were used. The mean age of the respondents is 52.69 (standard deviation [*SD*] = 12.58). Males account for 57.0 percent of the participants, whereas 43.0 percent of the participants were females. Of 388 respondents, 47.4 percent of the participants completed college. Another 27.1 percent and 23.2 percent hold graduate degrees and high school diplomas, respectively. With respect to income, 26.3 percent of the respondents said that they earn $100,000 or more. Another 21.2 percent said that their income ranges from $40,000 to $59,999.

Approximately 87.1 percent of the respondents were non-Hispanic Caucasians. Another 4.5 percent and 2.8 percent of the respondents were African Americans and Asians, respectively. Compared with general U.S. Internet users, the demographics of participants in this study were slightly skewed toward male, non-Hispanic Caucasian, educated, and older.

The current study found that users of online video platforms spent 13.2 hours per month using the Internet to watch video content. This number was comparable to 12.7, which was reported by comScore in December, 2009 (ActivateMediaGroup, 2010).

RESULTS

Displacement Effects of Online Video Platforms on Television

RQ1 through RQ4 addressed whether the use of online video streaming via a computer affects the usage of television. Of 388 respondents, 177 said that they do not use the Internet to watch video content. As a result, a total of 211 responses were used to answer RQ1 to RQ4.

Specifically:

- RQ1 asked how the time spent using online video platforms affects the time spent using television.

The descriptive statistics illustrated that 60.6 percent of the Internet users watching video content thought that the amount of time they spent watching television had neither decreased nor increased since they started to use the Internet to watch video content.

Another 18.6 percent, 6.8 percent, and 3.2 percent, respectively, of the Internet users to watch video content said that the time spent watching television had “decreased slightly,” “decreased moderately,” and “decreased a lot” since they started using the Internet to watch video content.

In comparison, a relatively smaller percentage of people thought that the time spent watching television had “increased slightly” (7.2 percent), “increased moderately” (.9 percent), and “increased a lot” (1.8 percent).

RQ1 specifically focused on how the amount of time people spent using the Internet to watch video content affects the time spent watching television. To answer RQ1, a Pearson’s product moment correlation analysis was first conducted. The results showed a negative correlation between the amount of time people spent with online video platforms, and the amount of time changed watching television as a consequence ($r = –0.222$, $p < 0.01$; Table 1).

TABLE 1

Correlation Matrix for the Amount of Time Change in Watching Television

	TCTV	UGV	BV	CLIP	ENTIRE	VSS	TVNS
TCTV	—						
UGV	-0.230**	—					
BV	0.038	0.193**	—				
CLIP	-0.091	0.773***	0.333***	—			
ENTIRE	-0.057	0.470***	0.172***	0.616***	—		
VSS	-0.233**	0.670***	0.189**	0.473***	0.394***	—	
TVNS	-0.038	0.620***	0.361***	0.818***	0.637***	0.345***	—
M	3.73	1.88	2.31	1.07	0.73	1.78	1.80
SD	0.98	4.13	4.65	3.74	1.38	3.06	4.38

*$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed)

Note: TCTV: The amount of time changed watching TV; UGV: Time spent watching user-generated video content online; BV: Time spent watching branded-video content online; CLIP: Time spent watching clips of television programs online; ENTIRE: Time spent watching an entire episode of television programs online; VSS: Time spent on video-sharing sites; TVNS: Time spent on television-network sites to watch video content

- RQ2 asked how the time spent using television-network Web sites and video-sharing Web sites affects the amount of time watching television.

The correlation analysis showed that there was a negative correlation between the amount of time spent on video-sharing sites and the amount of time changed watching television ($r = –0.233$, $p < 0.01$). In comparison, the amount of time spent using television-network sites had no statistically significant association with the amount of time watching television as a result (See Table 1).

Multiple regression was further performed using the amount of time spent on video-sharing sites and television-network Web sites as independent variables.

The change in amount of time watching television since the use of online video platforms was specified as the dependent variable. There existed no multicollinearity problem with the model (variance inflation factor [VIF] = 1.135). The regression results indicated that the time spent on video-sharing sites statistically significantly reduced the time spent on television viewing ($\beta = –0.249$, $p < 0.01$). The time spent on television-network Web sites did not have a statistically significant relationship with the change in the amount of time watching television.

- RQ3 asked how the time spent on branded-video content and user-generated video content affects the amount of time change watching television since the use of online video platforms.

The correlation analysis showed that there was a negative association between the time spent watching user-generated videos online and the change in the amount of time watching television ($r = –0.230$, $p < 0.01$). There was no statistically significant correlation between the time spent watching branded videos online and the changes in the amount of time watching television.

Further, the amount of time change in watching television was regressed on the amount of time spent watching branded videos and user-generated videos online. There existed no multicollinearity problem with the model (VIF = 1.038).

It was found that the amount of time spent watching user-generated videos online significantly reduced the time spent on television viewing ($\beta = –0.237$, $p < 0.01$). The time spent watching branded videos on the Internet did not affect the amount of time change in watching television.

- RQ4 addressed how the amount of time spent viewing an entire episode of a television program and a clip of a television program through the Internet is related to the amount of time change in watching television since the use of online video platforms.

Both correlation and regression analyses showed that none of the consumption patterns are associated with the change in the amount of time watching television.

Finally, another multiple regression was performed to examine how the consumption of different types of video content, online video venues, and content overlap affects the amount of time change in watching television after controlling for each other. The amount of time change in watching television since the use of online video platforms was regressed on the amount of time spent using the Internet for (1) user-generated videos, (2) branded videos, (3) video-sharing sites, (4) television-network sites, (5) clips of television programs, and (6) an entire episode of television programs.

The backward-elimination method was used to remove the variables that did not contribute to the prediction. There was no multicollinearity problem with the model. VIF in the state of the full model ranged from 1.230 to 1.723.

The final model indicated that the amount of time spent watching user-generated videos online significantly reduced the time spent on television viewing ($\beta = –0.224$, $p < 0.01$) (See Table 2).

TABLE 2

Regression for the Amount of Time Change in Watching Television

		B	*SE*	Beta	*t*	*p*-value
Model 1	User-generated videos	–0.069	0.033	–0.181	–2.103	0.037*
	Branded videos	0.012	0.015	0.057	0.767	0.444
	Video-sharing sites	–0.043	0.030	–0.124	–1.417	0.158
	Television-network sites	0.014	0.029	0.042	0.491	0.624
	Clips	0.044	0.047	0.080	0.944	0.346
	Entire episode	–0.002	0.033	–0.004	–0.046	0.963
	Constant	3.826	0.086		44.498	0.000***
$F(6, 208) = 2.785$, $p = 0.013$*, $R^2 = 0.074$, Adjusted $R^2 = 0.048$						
Model 2	User-generated videos	–0.068	0.033	–0.181	–2.107	0.036*
	Branded videos	0.012	0.015	0.057	0.778	0.438
	Video-sharing sites	–0.043	0.030	–0.125	–1.447	0.149
	Television-network sites	0.014	0.027	0.041	0.507	0.612
	Clips	0.044	0.045	0.079	0.971	0.333
	Constant	3.826	0.086		44.614	0.000***
$F(5, 209) = 3.357$, $p = 0.006$**, $R^2 = 0.074$, Adjusted $R^2 = 0.052$						
Model 3	User-generated videos	–0.069	0.032	–0.183	–2.137	0.034*
	Branded videos	0.014	0.015	0.067	0.937	0.350
	Video-sharing sites	–0.044	0.030	–0.127	–1.485	0.139
	Clips	0.054	0.040	0.098	1.346	0.180
	Constant	3.837	0.083		46.322	0.000***
$F(4, 210) = 4.147$, $p = 0.003$**, $R^2 = 0.073$, Adjusted $R^2 = 0.056$						
Model 4	User-generated videos	–0.067	0.032	–0.179	–2.086	0.038*
	Video-sharing sites	–0.043	0.030	–0.123	–1.438	0.152
	Clips	0.065	0.038	0.117	1.688	0.093
	Constant	3.854	0.081		47.709	0.000***
$F(3, 211) = 5.239$, $p = 0.002$**, $R^2 = 0.069$, Adjusted $R^2 = 0.056$						
Model 5	User-generated videos	–0.095	0.026	–0.252	–3.644	0.000***
	Clips	0.057	0.036	0.104	1.500	0.135
	Constant	3.834	0.080		48.045	0.000***
$F(2, 212) = 6.791$, $p = 0.001$**, $R^2 = 0.060$, Adjusted $R^2 = 0.051$						
Model 6	User-generated videos	–0.085	0.025	–0.224	–3.357	0.001**
	Constant	3.866	0.077		50.110	0.000
$F(1, 213) = 11.267$, $p = 0.001$**, $R^2 = 0.050$, Adjusted $R^2 = 0.046$						

$^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$ (two-tailed)

Viewership Overlap

RQ5 asked whether the Internet and television as video platforms reach mutually exclusive viewers. This study found that 57 percent (n = 221) of the survey participants used the Internet to watch video content, whereas 43 percent (n = 177) of them did not use the Internet to watch video content.

Viewership overlap between online video platforms and television was examined in three ways:

- how much the users of online video platforms and television overlap when the population consists of general consumers (i.e., Internet users in this study);
- how much the users of online video platforms and television overlap when the population consists of users of online video platforms; and
- how much the users of online video platforms and television overlap when the population consists of television users.

The findings:

- First, viewership overlap was examined among all the participants in this survey. The user overlap between online video platforms and television was 55.4 percent (Figure 1). That is, 55.4 percent of the respondents in this survey were using both television and the Internet to watch video content.

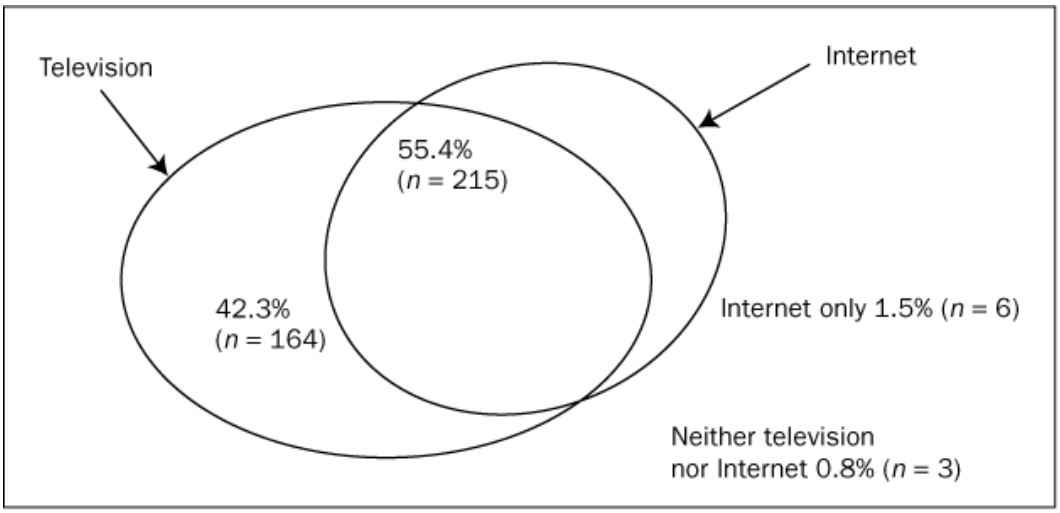

Figure 1 Viewership Overlap between Internet and Television as Video Platforms among All Respondents

With respect to television, 97.7 percent of the respondents said that they used television to watch video content. The other 2.3 percent of the respondents said that they did not use television to watch video content.

Also, 42.3 percent of the respondents used television, but they did not use the Internet to watch video content. Meanwhile, 1.5 percent of the respondents said they used the Internet only to watch video content in lieu of television. About .8 percent of the respondents used neither television nor the Internet to watch video content.

- Second, users of online video platforms were defined as a population. Of online video platform users (n = 221), nearly 97.3 percent also used television to watch video content. Only 2.7 percent of online video platform users relied solely on the Internet to watch video content.

There is a large viewership overlap between online video platforms and television when the population is restricted to the users of online video platforms (Figure 2).

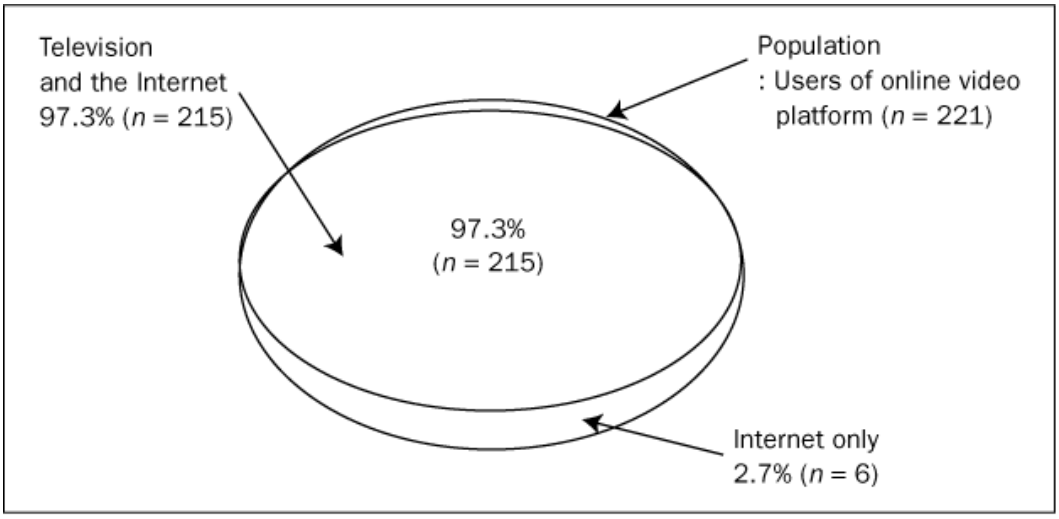

Figure 2 Viewership Overlap between Internet and Television as Video Platforms among Users of Online Videos

- Third, television users were defined as a population (*n* = 379). Of this population, 56.7 percent also used the Internet to watch video content. Another 43.3 percent of television users did not use the Internet to watch video content. Therefore, they used television exclusively for watching video content (Figure 3).

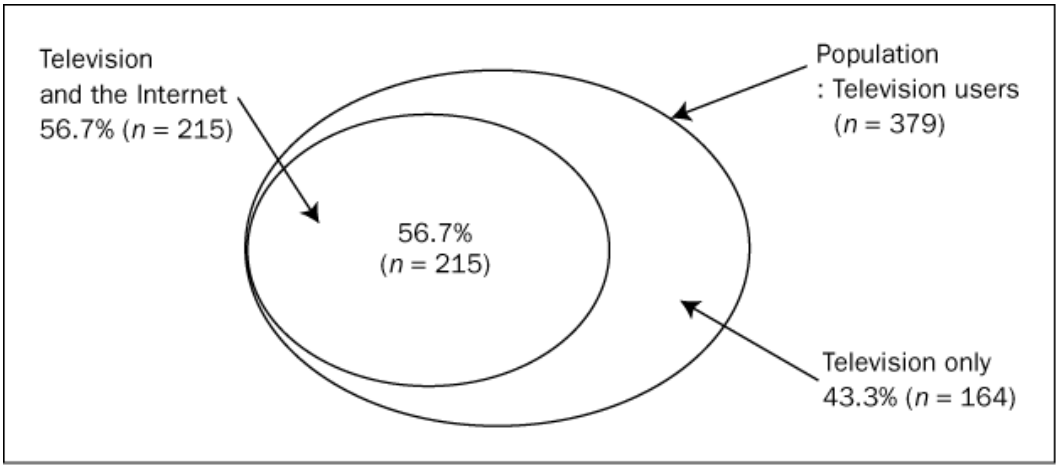

Figure 3 Viewership Overlap between Internet and Television as Video Platforms among Television Users

RQ6 addressed whether the viewership overlap differs according to the types of television service subscription (i.e., over the air only, cable subscription, and satellite subscription).

Descriptive statistics showed that, indeed, there were differences in viewership overlap among different types of television service subscribers. Specifically, the results indicated that people who had over-the-air broadcasting and did not have any fee-based television subscriptions were more likely than the other fee-based television service subscribers (i.e., cable, satellite, and other types) to solely use the Internet to watch video content (Table 3). They also were less likely than subscribers of pay television services to utilize both television and the Internet to watch video content.

TABLE 3

Differences inViewership Overlap According to Television Subscription Type

	Over-the-air only	Cable TV subscribers	Satellite TV subscribers	Other TV service
TV and Internet	50.0% (15)	58.7% (142)	50.5% (54)	66.7% (4)
TV only	36.7% (11)	30.9% (99)	46.7% (50)	33.3% (2)
Internet only	13.3% (4)	0.0% (0)	1.9% (2)	0.0% (0)
Neither TV nor Internet	0.0% (0)	0.4% (1)	0.9% (1)	0.0% (0)
Total	100.0% (30)	100.0% (242)	100.0% (107)	100.0% (6)

Cable television subscribers (58.7 percent) and other type of pay-television service (i.e., pay-television service other than cable television and satellite television) subscribers (66.7 percent) were more active than people who received broadcast networks over the air (50.0 percent) and satellite television subscribers (50.5 percent) in using both television and the Internet to watch video content.

Cable television subscribers also were less likely to use one medium (i.e., television only or Internet only) to watch video content than were satellite television subscribers and people who had over-the-air broadcasting signals. Satellite television subscribers (46.7 percent) were more likely than over-the-air only (36.7 percent), cable (30.9 percent), and other service subscribers (33.3 percent) to rely solely on television.

DISCUSSION

This study investigated whether the use of online video platforms has displaced television use.

Overall, the more people spend time using online video platforms, the less time they spend using television. More important, this study revealed that the existence of the time displacement effect depends on

- what type of online video venues consumers use;
- how much video content overlaps between online video platforms and television in general; and
- what type of video content consumers watch online.

Specifically, this study found that the time consumers spent using the Internet to watch user-generated video content reduced the time they spent watching television.

In fact, the people who spend a substantial amount of time watching user-generated videos may not be as attracted to television content in the first place. For them, online video platforms presumably act as an alternative that provides unique content that is different from television content. Therefore, they ended up reducing their time spent watching television once they started to use the Internet to watch user-generated video content.

Interestingly, this study found that the time spent using the Internet to watch branded-video content did not affect the amount of time spent on watching television. The heavy consumption of branded-video content via the Internet indicated that these viewers generally had positive attitudes toward branded content. They may even have felt loyalty to particular branded content. The limited accessibility of branded-video content online might explain why the time spent using the Internet to watch branded-video content did not influence the time spent watching television.

With respect to online-video venue types, this study found that the time consumers spent using video-sharing sites decreased the time they spent watching television. Conversely, the time spent using television-network Web sites to watch video content did not affect the amount of time spent watching television.

People who spend a great deal of time using video-sharing sites may not be partial to specific functions of television. Therefore, they appear to easily migrate from television to video-sharing sites to watch video content and, eventually, will spend more and more time using video-sharing sites while reducing the time spent watching television.

Prior studies have suggested that a new medium displaces traditional media as long as the new medium is functionally similar or more desirable to the traditional medium (Lin 1994, 2004). The results of the present study further suggest that the functional uniqueness of online video platforms compared to television is an important construct in understanding whether online video platforms displace television since the fundamental functional similarity between the two types of video platforms—delivering video content to consumers—already is confirmed.

Consumers who spend a great deal of time using television-network sites to watch video content essentially had a favorable attitude toward the video content offered by television networks and the services offered by television networks. They presumably also enjoy other aspects of television, such as comfort and minimal labor required to enjoy the content.

Television still appears to be the primary option for people who use television-network sites to watch video content. Therefore, the viewers still spend a customary amount of time watching television, regardless of the time they spend using television-network sites to watch video content.

The finding highlights that consumers who spent time using television-network sites to watch video content merely were using the sites to complement their television watching. They are likely to use television-network sites to view what they missed on television or to access video content that provides additional or in-depth information regarding their favorite television programs. The finding complements a previous study that found that people who use television-network sites are more likely to perceive television-network sites as complementary to the broadcasts found on television networks (Ha and Chan-Olmsted, 2001).

Typically, television networks do not air television programs on television and online simultaneously. Once a program has been broadcast on television, there is usually a period of time before that same program is posted online. The availability of television programs also is limited on television-network sites.

The availability and timeliness of television programs on television prevent people from reducing their time spent watching television, regardless of their time spent using television-network sites to watch video content. The lack of broadcast live events online is another possible reason why the time spent using television-network Web sites to watch video content does not reduce the time spent watching television.

Whenever a displacement effect of a new medium on traditional media is debated, the discussion on a zero-sum game, or the principal of relative constancy, ensues (McCombs and Eyal, 1980; Owen and Wildman, 1992; Picard, 2002). The results of the current study suggest that the zero-sum game and the principle of relative constancy might oversimplify the time displacement effect of a new medium on traditional media.

Although the press illustrates the rising popularity of online videos, this study indicated that there is a discrepancy between one-time watching of an online video and the regular use of the Internet as a video platform. In the current study, only 1.5 percent of Internet users employed online video platforms alone to watch video content. Of online video platform users, 97.3 percent employed television along with online video platforms. From a viewership standpoint, online video platforms still served as a complementary alternative to television at this stage. Nevertheless, it seems inevitable that television would share its role as a video platform with the Internet. It is noteworthy that the proportion of people who use both television and the Internet to watch video content (55.4 percent) is larger than the proportion of people who solely rely on television (42.3 percent).

The cannibalization effect of online video platforms on television may be a more serious concern for broadcast networks. Internet users who have over-the-air broadcasting only are more likely than the other fee-based television service subscribers (i.e., cable, satellite, and other types) to solely use the Internet to watch video content. They also are less likely than subscribers of pay-television services to utilize both television and the Internet to watch video content.

Meanwhile, cable television subscribers are less likely to solely rely on one type of video platform to watch video content than are satellite television subscribers and people who watch video content over the air. Integrated with the findings of previous research (e.g., Chiyi and Lasorsa, 2002), the present study suggests that cable subscribers are more likely to use online video platforms to complement television. Instead of eschewing online platforms, cable-system operators should exploit both types of platforms to maximize consumer utility by allowing their subscribers more platform options to access their content.

This study also found that satellite-television subscribers are more likely than over-the-air only, cable, and other service subscribers to rely solely on television. A possible reason would be that satellite subscribers have more content selectivity than do people watching broadcasts over the air and cable subscribers. Satellite service content packages are more fragmented: they include international packages and Latino packages. Thus, they can target more niche markets than does cable service.

Given that little scholarly research has examined the interaction between online video platforms and television regarding consumer demand, this study can serve as a starting point. Nevertheless, it should be noted that with respect to the differences of viewership overlap between different types of television subscriptions, descriptive statistics were utilized without further investigation using inferential statistics, because there were only a few observations in some of the cells. Therefore, the generalization of the results regarding viewership overlap should call for caution. Future studies can expand the sample size and further investigate whether this study's results regarding viewership overlap are consistent.

This study delved into how specific online video-venue types and video content overlap between online video platforms and television, influencing the time spent watching television. In addition to the factors this study examined, there might be other considerations that influence the choice of a particular video platform and the time spent using the video platform. For instance, the amount of time people spend using online video platforms inside and outside the home might affect the time they spend watching television.

Future studies could take these other possible factors into consideration. As a starting point, this study broadly categorized video content into branded content and user-generated content without delving into specific content genres. One fruitful approach for future studies would be to address how specific video content genre preference is related to the consumption of favorite genres through the use of the Internet and television.

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