Chapter 2
Cultivation Effects of Television Broadcasting and Online Media

Hey Yeung Lau

Abstract In the era of social media, Online Media is so popular that everyone can use their electronic devices to access in anytime and anywhere. At the same time, although Television is named as traditional media, it is still influential owing to its popularity and attractiveness. In the past few decades, Cultivation Theory was developed by George Gerbner which examined the long-term effects of Television. Since Online Media has similar function as Television, it is important to find out the possibility of Online Media having cultivating effect. Besides, it is crucial to examine the application of cultivating effects of Television. This study is under quantitative analysis with using a survey questionnaire administered to a sample of 258 undergraduate students. The results indicate that TV Viewing is an important determinant of Changes of Concept of Social Realities, with beta = .296 ($p < 0.001$) and $R^2 = 0.114$. Also, Use of Online Media is an important determinant of Behavioral Intention, with beta = 0.379 ($p < 0.001$) and $R^2 = 0.141$.

Keywords Television • Online media • Social realities • Intention • Behavior

2.1 Introduction

Cultivation Theory is significant in mass communication. It states if a heavy viewer is exposed to more violence content eventually effected by the Mean World Syndrome, an idea that the world is worse than it actually is (Gerbner and Gross 1976). It showed that after a prolonged exposure to television will affect the concept of social realities of the viewer. "In general, the relation between viewing and various types of judgments is modest but reliable (Shrum et al. 2011)."

Until now, the emergence of Internet has changed people concepts of media usage. As Internet can also perform the function of TV, it is possible for Internet having cultivation and worth to be discussed.

H.Y. Lau (✉)
Online Communication Research Centre, Department of Journalism and Communication,
Hong Kong Shue Yan University, Hong Kong, China
e-mail: cyrus924@gmail.com

After reviewing of databases EBSCO in the last 8 years, studies concerning the cultivation effects of TV broadcasting are plenty, but examining of having cultivation effects in online media is very few, and it is even rare of discussing both cultivation effects of TV broadcasting and online media. Besides, researchers has called in question about there should be one or more factor which associated with the factor of heavy viewing. In order to come up with the results of shaping heavy viewers' concept on social realities, therefore, it comes up with two research questions:

1. What is/are the factor(s) affecting viewers in the concept of social realities?
2. Can frequent use of online media affect the users' concept of social realities?

This study extends previous research and provides an alternative perspective, with particular reference to "TV Viewing" and "Use of Online Media".

2.2 Literature Review

In this study, Behavioral Intention as a contingency factor is added to the research framework to find out the relationship between each factors regarding cultivation theory.

2.2.1 Changes of Concept of Social Realities

Firstly, Appel (2008) said that the self-reported frequency of watching fiction on television is positively related to the belief in a just real world, and at the same time, the general amount of television viewing was positively related to mean and scary world.

It is investigated that Flemish crime drama viewing predicted a higher perceived risk in sexual violence, the relationship is especially stronger in women who has a higher socioeconomic status and with no direct experience with crime. On the other hand, News Viewing predicted a lower perceived risk, since that the relative lack of exemplars in news and victim blaming giving viewers an impression of the risk of sexual victimization did not apply to themselves (Lee and Niederdeppe 2011).

It is found that after watching a violent television program, viewers with more vivid memories of blood and gore gave a higher prevalence estimate of real-world crime and violence (Riddle et al. 2011).

2.2.2 TV Viewing

It is examined that viewers watching a TV legal drama program were more likely to endorse to false beliefs than those viewers exposed to the program immediately (Jensen et al. 2011).

It is founded that a general television consumption has a significant relationship with first- and second-order rape myth beliefs among male and female. The study also indicated that soap opera viewing has a positive relationship with both rape myth acceptance and the overestimation of false rape accusations (Kahlor and Eastin 2011).

2.2.3 Use of Online Media

It is found that the perceptions of the quality of the content and empathy affect three benefit expectations of control, inclusion, and affection, and these three benefit expectations affected the forwarding intention of the users (Huang et al. 2012).

Lewis and Shewmaker (2011) found that the minor celebrities as the Internet users follow the same pattern seen in adult celebrities, in that the female presented sexualized dress and submissive posture as compared to demure dress and assertive posturing on the male website.

Some analysts has investigated that the heavy viewers of a particular program tend to visit the respective program's official website more than the light viewers, who building a better website loyalty. This loyalty leads to an increase in the use of Interactive Online Product Placement, which has a positive influence on the viewer's attitude toward the sponsor, and their purchase intentions (Lin and Cho 2010).

2.2.4 Contingency Factor: Behavioral Intention

Beullens and the colleagues (2011) found that adolescent's viewing music video is one of the significant marker risky driving behavior, and at the same time, this relationship is mediated through their attitudes and intention. At the same research, they have combined Cultivation Theory and the Theory of Planned Behavior or the Problem Behavior Theory to explain the above relationship of viewing music video and risky driving behavior. It is stated that the relationship is mediated through the viewer's attitudes and intentions. However, it is found that there is no association between music video viewing and Problem Behavior Theory. A conclusion has drawn that the combination of Cultivation Theory and Theory of Planned Behavior can provide a better framework for explaining the above relationship (Beullens et al. 2011).

With respect to the literature review, the hypotheses are as follow (see Fig. 2.1):

H_1: The level of Television Viewing has a direct and positive relationship with the Behavioral Intention.

H_2: The level of Use of Online Media has a direct and positive relationship with the Behavioral Intention.

Fig. 2.1 Hypothesized model for media effects
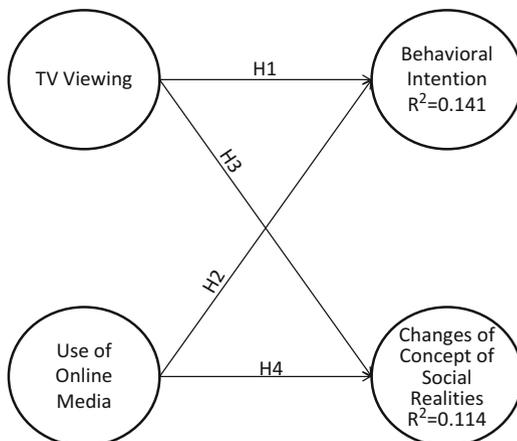
H_3: The level of Television Viewing has a direct and positive relationship with the Changes of Concept of Social Realities.

H_4: The level of Use of Online Media has a direct and positive relationship with the Changes of Concept of Social Realities.

2.3 Methodology

2.3.1 Background

One of the major local television broadcasting company, Television Broadcasts Limited (TVB), and two of the most popular online video sharing platform, Youtube and MyTV, would be used as referencing in the following study.

2.3.2 Subjects

The subjects in this study are the Local university students, major in Journalism and Mass Communication, who have a habit in viewing Television and using the online media. We focus on how these two media affect their concepts in social realities.

2.3.3 Data Collection

In order to reach our target, we conducted and distributed a paper questionnaire for students in campuses in Hong Kong Shue Yan University. 258 completed question-naires were collected. The data collection process took two weeks to complete (see Tables 2.1 and 2.2).

Table 2.1 Descriptive statistics of age group and gender ($n=258$)

	Number	Percent
Age group		
11–20	114	44.2
21–30	144	55.8
Gender		
Male	72	27.9
Female	186	72.1

Table 2.2 Descriptive statistics of watching TV and using online media

	Mean
Average hour(s) of watching TV per weekday	1.73
Average hour(s) of watching TV per day in weekend	2.79
Average day(s) of watching TV per week	4.42
Average hour(s) of using online media per day	4.10
Average day(s) of using online media per week	6.58

2.3.4   Measures

The subjects will be asked to report demographics data in the first half of the questionnaire, including ages, gender, the experience in watching TV and using online media, and then to answer the statements in responding to TV Viewing, Use of Online Media, Behavioral Intention and Changes of Concept of Social Realities in with Likert's scale ranged from 1 (*strongly disagree*) to 7 (*strongly agree*).

2.4   Findings

2.4.1   Descriptive Summary and Reliability Testing of the Observed Variables

The respondents had generally neutral between TV viewing and Use of Online Media to Behavioral Intention, Changes of Social Realities, Changes of Moral Value, and the behavioral changes, with the mean value range from 3.08 to 5.70.

2.4.2   Instrument Validation

The Cronbach's α values for each of the constructs exceeded the suggested threshold value of 0.7, with a range from 0.699 to 0.876. Although one of the construct, Changes of Concept of Social Realities—Moral Value, just get a Cronbach's $\alpha=0.699$, it is already very close to 0.7, which is acceptable to be used

Table 2.3 Descriptive Statistic of Each Constructs

	Minimum	Maximum	Mean	Std. deviation
TV viewing	1.00	7.00	4.3594	1.2272
Use of online media	1.00	7.00	4.8740	1.1547
Behavioral intention	2.00	7.00	5.4472	0.8995
Changes of concept of social realities	1.00	5.40	3.2581	0.9262

in further analysis. These findings indicate that the constructs were reliable and internally consistent.

Factor analysis is used after testing the reliability of the constructs. After several times of using principal component varimax rotation and removing some questions, and as a result, four components are clearly identified without lumping and no cross-loading among components. Besides, most of the values >0.7 or very close to 0.7, and they are consistent as well, exhibiting there is a convergent validity with high factor loadings.

2.4.3 Model Testing Results

The following table has shown the data of mean and standard deviation of the summed mean score of each constructs (see Table 2.3).

The corresponding constructs were examined using linear regression in several times.

First, the relations between TV Viewing and Use of Online Media with the dependent variable, Behavioral Intention has been examined, which indicated that the model has a R^2 of 0.141, and $p < 0.001$. All of these and the other indices exceeded the suggested values, indicating that the model fit the data well.

However, there is only one factor "Use of Online Media" which is supported, with the Beta=0.379, and $p < 0.001$. It indicates a relatively strong, direct, and significant relationship to Behavioral Intention. Since the other factor "TV Viewing" has no significance, it is not supported (see Tables 2.4 and 2.5).

Second, the relations between TV viewing and Use of Online Media with the dependent variable, Changes of Concept of Social Realities has been examined. The results indicated that the model has a R^2 of 0.114, and $p < 0.001$. All of these and the other indices exceeded the suggested values, indicating that the model fit the data well.

After examining the coefficient, only "TV Viewing" is supported, with the Beta=0.296, and $p < 0.001$. It reflects a relatively strong, direct, and significant relationship to political participation. All of the others have no significant so they are not supported (see Tables 2.6 and 2.7).

After model testing, a complete form of model is formed which exhibiting the relationships between constructs (see Fig. 2.2 and Table 2.8).

Table 2.4 Summary of model and ANOVA of TV viewing and use of online media with behavioral intention

Model				ANOVA	
R	R^2	Adjusted R^2	Std. error of the estimate	F	Sig.
0.376	0.141	0.134	0.8385	20.178	0.000

Table 2.5 Coefficients of TV viewing and use of online media with behavioral intention

| Model	Unstandardized coefficients		Standardized coefficients		
	B	Std. error	Beta	t	Sig.
Constant	4.075	0.279		14.624	0.000
TV viewing	−0.015	0.044	−0.021	−0.347	0.729
Use of online media	0.296	0.047	0.379	6.314	0.000

Table 2.6 Summary of model and ANOVA of TV viewing and use of online media on changes of social realities

Model				ANOVA	
R	R^2	Adjusted R^2	Std. error of the estimate	F	Sig.
0.338	0.114	0.103	0.86233	10.091	0.000

Table 2.7 Coefficients of TV viewing and use of online media on changes of social realities

Model		Unstandardized coefficients		Standardized coefficients		
		B	Std. error	Beta	t	Sig.
	Constant	1.815	0.408		4.450	0.000
	TV viewing	0.221	0.047	0.296	4.749	0.000
	Use of online media	0.095	0.053	0.120	1.801	0.073

Fig. 2.2 Model testing for the factors relating to behavioral intention and changes of concept of social realities
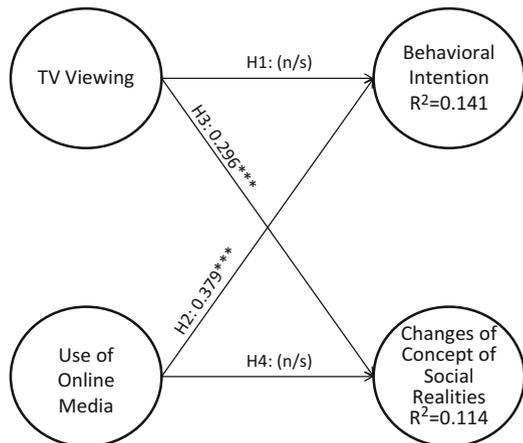
Table 2.8 Summary of model testing

Hypothesis	Causal paths	Coefficients	t-values	Results
H1	TV viewing → Behavioral intention	−0.21 ($n-s$)	−0.347	*Not supported*
H2	Use of online media → Behavioral intention	0.379 ($p<.001$)	6.314	*Supported*
H3	TV viewing → Changes of concept of social realities	0.296 ($p<.001$)	4.749	*Supported*
H4	Use of online media → Changes of concept of social realities	0.120 ($n-s$)	1.801	*Not supported*

2.5   Discussion

The findings of this study indicate a strong relationship between TV Viewing and Changes of the Concept of Social Realities. Thus, an individual who prolonged exposed in television, or in other words, being a heavy user of TV, his/her concept of social realities will be changed.

On the other hand, the findings also show that there is a strong relationship between Use of Online Media and Behavioral Intention, which means if an individual is a intensive user of Online Media, he/she would intended to act in some activities and after a period of time, altered and to become a kind of behavior.

In this study, the findings can only partially answer the research questions. With respect to "What is/are the factor(s) affecting viewers in the concept of social realities?", this study can only prove that the prolonged exposure of TV will lead to the changes of concept of social realities, however, cannot find any other factor. Besides, with against to the question "Is frequent use of online media can affect the users' concept of social realities?", this study found that there is no relationship between use of online media and social realities. This result may ascribe to the limitation, which is the term Online Media was narrowed to only for "Youtube and MyTV". It is possible to have a relationship between online media and social realities.

Conclusion

The effect of media is strong, especially TV broadcasting and Online Media, which they are the most popular in Hong Kong. Therefore, the senders and the receivers should use it carefully. As stated in Cultivation Theory, mean world syndrome is found on heavy TV users. Thus, TV station should take the responsibility to reduce the amount of sex and violence in shows, and the audiences should control in the time of watching TV. Besides, the consequence of intensive use of online media will lead to building up certain kind of intention. Therefore, using online media correctly and wisely can prevent building up negative and bad behavior.

References

Appel, M. (2008). Fictional narratives cultivate just-world beliefs. *Journal of Communication, 58*(1), 62–83.

Beullens, K., Roe, K., & Van den Bulck, J. (2011). The impact of adolescents' news and action movie viewing on risky driving behavior: A longitudinal study. *Human Communication Research, 37*(4), 488–508.

Gerbner, G., & Gross, L. (1976). Living with television: The violence profile. *Journal of Communication, 26*(2), 172–194.

Huang, J., Chen, R., & Wang, X. (2012). Factors influencing intention to forward short internet videos. *Social Behavior & Personality: An International Journal, 40*(1), 5–14.

Jensen, J. D., Bernat, J. K., Wilson, K. M., & Goonewardene, J. (2011). The delay hypothesis: The manifestation of media effects over time. *Human Communication Research, 37*(4), 509–528.

Kahlor, L., & Eastin, M. S. (2011). Television's role in the culture of violence toward women: A study of television viewing and the cultivation of rape myth acceptance in the United States. *Journal of Broadcasting & Electronic Media, 55*(2), 215–231.

Lee, C., & Niederdeppe, J. (2011). Genre-Specific cultivation effects: Lagged associations between overall TV viewing, local TV news viewing, and fatalistic beliefs about cancer prevention. *Communication Research, 38*(6), 731–753.

Lewis, S., & Shewmaker, J. (2011). Considering age and gender: A comparative content analysis of sexualization of teen celebrity websites. *The International Journal of Interdisciplinary Social Sciences, 5*(12), 215–224.

Lin, J., & Cho, C. (2010). Antecedents and consequences of cross-media usage: A study of a TV program's official web site. *Journal of Broadcasting & Electronic Media, 54*(2), 316–336.

Riddle, K., Potter, W., Metzger, M. J., Nabi, R. L., & Linz, D. G. (2011). Beyond cultivation: Exploring the effects of frequency, recency, and vivid autobiographical memories for violent media. *Media Psychology, 14*(2), 168–191.

Shrum, L. J., Lee, J., Burroughs, J. E., & Rindfleisch, A. (2011). An online process model of second-order cultivation effects: How television cultivates materialism and its consequences for life satisfaction. *Human Communication Research, 37*(1), 34–57.

New Media, Knowledge Practices and Multiliteracies
HKAECT 2014 International Conference
Ma, W.W.K.; Yuen, A.H.K.; Park, J.; Lau, W.W.F.; Deng, L.
(Eds.)
2015, XIII, 270 p. 30 illus., Hardcover