Television Continues to Cultivate Attitudes toward Homosexuality, but Only Among Politically Conservative Individuals and Women: Evidence from U.S. General Social Survey Data

LIK SAM CHAN[♦1]
The Chinese University of Hong Kong, China

ZURONG LIANG
Zhejiang University, China

Despite the legalization of same-sex marriages in the United States, public attitudes toward homosexuality is still divided. Therefore, it remains imperative to study the factors that contribute to favorable attitudes toward homosexuality in society. In this study, we applied cultivation theory to data from the 2022 U.S. General Social Survey to examine the associations between television viewing and attitudes toward homosexuality. Our findings revealed that among politically conservative individuals, television viewing was positively associated with the perceived morality of same-sex behaviors and support for same-sex marriage. However, we did not observe any associations between moderates and liberals. We found that among women, television viewing was positively associated with the perceived morality of same-sex behaviors, whereas no such association was observed among men. We discuss the implications of such cultivation amid the increase in television networks and programs and audience fragmentation.

Keywords: cultivation, mainstreaming, resonance, television, homosexuality, same-sex behavior, same-sex relationship, same-sex marriage

Although the U.S. Supreme Court in 2015 ruled that same-sex marriage was constitutional and that all 50 states in the country were to allow legal marriages between same-sex couples, public support for same-sex marriage remains far from unanimous. The Pew Research Center found that 37% of its survey respondents in the United States considered same-sex marriage a bad thing for their society (Borelli, 2022). Support for same-sex marriage differs based on factors such as people's age, political ideology, religiosity, and education (Borelli, 2022). Furthermore, as of September 2021, same-sex marriage has been legalized in only 29 countries/regions around the world (The International Lesbian, Gay, Bisexual, Trans and Intersex

Association, 2020). More than 60 countries—many in Africa and the Middle East—continue to criminalize same-sex sexual activities ("Homosexuality," 2021). According to Pew's Global Attitudes Survey, more than 80% of survey respondents in countries such as Lebanon, Kenya, and Nigeria said that society should not accept homosexuality (Poushter & Kent, 2020).

With these global trends in mind, research on what drives favorable attitudes toward homosexuality remains relevant today. Following the tradition of cultivation theory (Gerbner, 1977, 1998; Gerbner & Gross, 1976; Gerbner, Gross, Morgan, Signorielli, & Shanahan, 2002), we considered the role of television in shaping public support for homosexuality. Cultivation theory, which was developed from the Cultural Indicators project in the United States during the 1960s, postulates that television provides its viewers with messages about society that contribute to the viewers' perceived social reality (Gerbner, 1977, 1998; Gerbner & Gross, 1976; Gerbner et al., 2002). In first-order cultivation, television viewing shapes viewers' factual beliefs, and in second-order cultivation, television viewing shapes viewers' evaluative beliefs (Busselle & Van den Bulck, 2020). Cultivation theory argues that television serves as a "gravitational process" that "pulls" viewers' worldviews toward what is reflected on the television, or the so-called television answers (Gerbner, 1998, p. 182). Based on a subset of data from the 2022 U.S. General Social Survey (GSS), we assessed the associations between television viewing and two attitudinal measures—the perceived morality of same-sex behaviors and support for same-sex marriage. Although television viewing was not directly associated with these measures in the full sample, we found associations among specific subgroups. Specifically, there were positive associations between television viewing and the two attitudinal measures among people who were politically conservative; there was also a positive association between television viewing and the perceived morality of same-sex behaviors among women. These findings suggest that television plays a role in shaping favorable attitudes toward homosexuality, a lesson from which television producers and media watchdogs within and beyond the United States can learn.

Cultivation: Critiques and Supports

As a canonical communication theory, it is unsurprising that cultivation theory has generated many critiques. We summarize two of the most significant critiques of the theory and research. First, the theory assumes that "viewers are relatively nonselective in terms of their viewing habits" (Shrum, 2017, p. 3). Shrum (2017) pointed out that with the rise and popularity of cable television in the United States, television viewers are no longer limited to only a few major broadcast networks. Second, early cultivation research failed to control for multiple demographic attributes. For example, in Hirsch's (1980) reanalysis of the GSS data used by Gerbner, Gross, Jackon-Beeck, Jefferies-Fox, and Signorielli (1978), the association between television viewing and viewers' beliefs about city safety disappeared once multiple control variables were considered simultaneously. Hirsch (1980) went so far as to claim that "acceptance of the cultivation hypothesis as anything more than an interesting but unsupported speculation is premature and unwarranted" (p. 404).

Despite such criticism, cultivation theory has received empirical support from many studies (Busselle & Van den Bulck, 2020). Morgan and Shanahan (2017) examined the relationships between television viewing, authoritarian values, and support for Donald Trump in the United States. They were keenly aware of the critiques surrounding cultivation theory, as evidenced by the witty subtitle to their—"A

return visit from an unexpected friend" (Morgan & Shanahan, 2017). They found that while television viewing had no direct relationship with support for Trump, it was indirectly associated with Trump's support through the endorsement of authoritarianism. Specifically, heavy television viewers were more likely to endorse authoritarian values than light television viewers, and those who endorsed authoritarian values were more likely to support Trump than those who did not espouse such values. Furthermore, the authors found that this indirect relationship was stronger among liberals and women than among other groups. In a recent meta-analysis of 372 cultivation studies published between 1975 and 2019, Hermann, Morgan, and Shanahan (2021) found that the average effect size of cultivation was .11 and that it had remained constant for five decades amid the transformation of the television industry.

Two caveats arise when applying cultivation theory to empirical research. First, while the term "cultivation effect" has sometimes been used by cultivation researchers, the term "effect" in cultivation research is only used in a "purely statistical sense" (Morgan & Shanahan, 2017, p. 439). Earlier, we quoted Gerbner (1998), who described cultivation as a "gravitational process" that "pulls" viewers' worldviews toward the "television answers" (p. 182). These ideas of "gravitational process" and "pulling" should be treated only as heuristics because cultivation research rarely investigates changes in attitudes at the individual level. Cultivation theory does not assume that media consumption has a unilateral impact on people's values and beliefs; instead, it stresses the dynamic relationship between media consumption, value reinforcement, and the overall social context. In their study of authoritarianism and the support for Trump, Morgan and Shanahan (2017) argued that in a society that is increasingly accepting of authoritarian values, people will be drawn to television content that reflects this social reality. Then, the values that these people absorb from television will be reinforced, leading to heavier television viewing.

Second, some cultivation studies have explicated a link between viewers' attitudes and the viewing of particular genres of television (Busselle & Van den Bulck, 2020). Hermann et al. (2021) referred to this approach as the "reformist" view (versus the "traditional" view, under which the overall exposure to television is measured). However, this view violates the basic tenets of the theory, as Signorielli and Morgan (1996) noted:

> Cultivation analysis is not concerned with the "impact" of any particular television program, genre, or episode. . . . Rather, cultivation researchers approach television as a *system* of messages, made up of aggregate and repetitive patterns of images and representations to which entire communities are exposed . . . over long periods of time. (p. 112; emphasis in original)

In fact, the meta-analysis of Hermann et al. (2021), which covered 372 cultivation studies, concluded that *overall* television viewing predicted cultivation better than *specific* genre viewing, although the difference in effect sizes between overall viewing and specific genre viewing decreased over time. Their results "confirm[ed] Gerbner's insistent focus on overall exposure" (Hermann et al., 2021, p. 538). On certain occasions, a genre-based approach is consistent with the original tenet of cultivation. For instance, it has been argued that viewers watching their preferred genres will experience a greater sense of "transportation" than when watching other genres, which may amplify cultivation (Bilandzic & Busselle, 2012). Nonetheless, Morgan, Shanahan, and Signorielli (2015) urged researchers not to overlook the overall

system of messages conveyed by television. Therefore, this study adopts the "traditional" view to assess overall television viewing.

Cultivation of Intolerance and Tolerance of Homosexuality

At different points in time, various scholars have examined the relationship between television viewing and attitudes toward homosexuality. Gross (1984), who conducted his study when lesbian, gay, and bisexual (LGB) characters either did not appear on-screen or were negatively stereotyped, expected television viewing to be negatively related to attitudes toward homosexuality. Using data from the 1980 GSS, Gross (1984) found that among light television viewers, homosexuality was considered "always wrong" by 74% of the self-designated conservatives and 46% of the self-designated liberals (a 28% difference). However, among heavy television viewers, these figures were 86% and 77%, respectively (only a 9% difference). That is, with heavy television viewing, the views of liberals were similar to those of their conservative counterparts. This pattern, in which heavy television viewing overcomes the differences in attitudes because of individual attributes, is known as *mainstreaming* (Gerbner, 1998; Gerbner et al., 2002).

With the increase in positive images of LGB characters on television over the past two decades, one would expect television to change from cultivating the intolerance of homosexuality to cultivating tolerance. Evidence of such a shift was found in a study of 1,761 U.S. undergraduate students by Calzo and Ward (2009), the second study noted above. They created a six-item measure to capture respondents' attitudes toward homosexuality. Four of the six items related to the respondents' attitudes toward same-sex sexual behaviors (i.e., "Homosexuality is a question of sexual orientation, not morality," "Homosexuality is perverse and unnatural," "Homosexual behavior is an acceptable form of sexual preference," and "Homosexuality is not sinful") and the remaining two items related to the respondents' attitudes toward same-sex marriage (i.e., "Same-sex marriages are morally offensive" and "The love between two same-sex partners is not different than the love between a man and a woman"; Calzo & Ward, 2009, p. 287). They found a positive relationship between *prior* consumption of prime-time comedy/drama (those that were popular four years before data collection, i.e., before the participants started college) and the overall attitudinal measure. Although prime-time comedy/drama was a specific genre of media, it represented the prime-time television programs on which Gerber and others focused in their original cultivation studies. Therefore, the measure of prime-time comedy/drama viewing was close to the measure of overall television viewing, as opposed to a measure of the viewing of specific genres, such as "romantic comedies" or "reality shows."[2]

In addition, Calzo and Ward (2009) observed mainstreaming across sexual and religious divides. First, the research team observed that "several significant associations between media use and men's attitudes toward homosexuality were found, and all of these were *positive* associations" (Calzo & Ward, 2009, pp. 292–293; emphasis in original). In contrast, there were only a few significant associations between media use and women's attitudes toward homosexuality, and these associations were *partly positive* and *partly negative*. Second, whereas students of low religiosity were more accepting of homosexuality than their more religious counterparts, heavy viewing of prime-time situation comedies/dramas was associated with *lower* acceptance of homosexuality among students of low religiosity

---

[2] This viewpoint was suggested by a reviewer of this article. We are grateful for their insights.

but *higher* acceptance among students of high religiosity. These results illustrate how television can serve as a "gravitational" force that "pulls" viewers with different worldviews together (Gerbner, 1998).

More recently, Nisbet and Myers (2012) analyzed 16 different cross-sectional GSS data sets from 1972 to 2008. In addition, they considered the number of LGB characters on prime-time broadcast television. They developed a measure of tolerance toward homosexuals based on a summative score of three yes–no questions in the GSS: (1) Should an admitted homosexual be allowed to speak in one's community?; (2) Should an admitted homosexual be allowed to teach in a college?; and (3) Should a book written by an admitted homosexual in favor of homosexuality be removed from one's local public library? Using hierarchical linear modeling, Nisbet and Myers (2012) found that although television viewing in itself had no significant direct relationship with tolerance toward homosexuals, it moderated the association between such tolerance and the number of LGB characters on television in a particular year. Specifically, the association between the number of LGB characters in a particular year and tolerance toward homosexuals was stronger for heavy television viewers than for light television viewers.

In short, although the results from these studies are not identical, they are complementary. Both Calzo and Ward (2009) and Gross (1984) demonstrated that mainstreaming existed across demographic divides. The absence of direct relationships between television viewing and tolerance toward homosexuals in Nisbet and Myers (2012) could be the result of combining GSS data sets from 1972 to 2008, a period during which the portrayals of homosexuality on television underwent fundamental changes. We discuss these changes in the following section and propose our hypotheses and research questions.

Changing Representation of Homosexuality in Contemporary U.S. Television

In the United States, the media representation of homosexuality has undergone significant changes since the late 1990s. Some scholars have even proposed that the increasingly favorable representation of lesbian, gay, bisexual, transgender, and queer (LGBTQ) people on television partially contributed to winning the public opinion war on same-sex marriage and to its legalization in the United States (Albertson, 2018). In 1998, NBC launched *Will & Grace* (Kohan & Mutchnick, 1998–2020), the first prime-time television program with a gay lead character. From 2001 to 2005, it was the most popular sitcom among television viewers aged 18 to 49 years (Deschamps & Singer, 2017). Another game changer was *Queer Eye for the Straight Guy* (Williams, Metzler, & Collins, 2003–2007), a makeover show broadcast by the cable network Bravo from 2003 to 2007. This was the first reality television series to portray gay men in a consistently positive fashion (Hart, 2004), and the show broke the rigid definition of hegemonic masculinity. Its second series, aired on Netflix, won the outstanding reality program award at the GLAAD Media Awards in 2019 for its "fair, accurate, and inclusive representations of LGBTQ people and issues" (Nordyke, 2019, para. 2).

The number of LGBTQ characters on television has been increasing. GLAAD publishes an annual *Where We Are on TV* report that analyzes the representation of LGBTQ characters on prime-time scripted television shows. During the 2006/2007 season, only 1.3% of television characters were identified as LGBTQ. This figure doubled to 3% in 2009/2010 and reached 9.1% in 2020/2021 (GLAAD, 2021). Since the 2015/2016 season, GLAAD has monitored the representation of LGBTQ characters on streaming services

(Amazon, Hulu, and Netflix). The number of LGBTQ characters jumped from 59 in the 2015/2016 season to 141 in the 2020/2021 season (GLAAD, 2016, 2021).

However, increased representation does not always mean better representation (Albertson, 2018). Scholars have warned that stereotypes of LGBTQ people remain on television. For example, gay men have continued to be portrayed as flamboyant on many television series (Raley & Lucas, 2006). Conversely, same-sex parents have been portrayed as "domestic, responsible, upwardly mobile citizens who are devoted to their children" (Cavalcante, 2015, p. 467) on television, and their potential queerness has been erased (Cavalcante, 2015). Further, a content analysis that compared how print news and broadcast news (including ABC, CBS, CNN, FOX, MSNBC, and NBC) reported the 2015 U.S. Supreme Court's landmark decision to legalize same-sex marriage revealed that the tone of coverage of the broadcast news was significantly more negative than that of the print news (Colistra & Johnson, 2021).

Overall, despite the abovementioned rigid and some negative depictions of homosexuality on contemporary television, depictions today have tended to be more favorable than when Gross (1984) undertook his study. Therefore, cultivation theory predicts that heavy television viewing is associated with a more accepting attitude toward homosexuality. Consequently, we propose the following hypothesis:

H1:   Television viewing is positively associated with attitudes toward homosexuality.

Moreover, Gross (1984) found that mainstreaming existed across sex, age, educational, religious, and political divides based on the 1980 GSS, and Calzo and Ward (2009) observed mainstreaming across the two sexes and among people of different levels of religiosity in their sample of college students. Mainstreaming exists when heavy television viewers from different demographic subgroups converge around a similar level of attitude toward homosexuality. Research has found that people's support for homosexuality differs based on sex, age, race, political orientation, and religiosity (Haney, 2016; Pew Research Center, 2019; Schnabel & Sevell, 2017; Sherkat, Powell-Williams, Maddox, & De Vries, 2011). We explore the demographic divides across which mainstreaming may exist in the following research question.

RQ1:   Across which demographic divides—sex, race, age, education level, political orientation, or religiosity (Christianity)—does mainstreaming of attitudes toward homosexuality by television viewing exist?

Methods

Data Set and Sample Characteristics

We used the data from the 2022 GSS Cross-Section Study (Davern, Bautista, Freese, Herd, & Morgan, 2023), which is a nationally representative survey of U.S. adults. The data were collected from May 2022 to December 2022.

The 2022 GSS consisted of 3,544 respondents. However, not every respondent was asked the same set of questions. For example, only 2,352 respondents were asked and answered questions about their television viewing. In this study, we focused on a subset of 1,017 respondents who were asked to provide answers to our questions of interest. Among these 1,017 respondents, 70.8% identified as White, 13.7% as Black, 1.2% as Native American, 3.9% as Hispanic, 3.3% as Asian and Pacific Islanders, and 7.1% as other or mixed races. The sample consisted of 48.6% males and 51.4% females. The average age and the average number of years of education of the respondents were 47.89 years (range = 18–89, SD = 17.98) and 14.26 years (range = 2–20, SD = 2.79), respectively. The GSS questions about political orientation allowed the respondents to choose a response ranging from 1 = *extremely liberal* to 7 = *extremely conservative*. The mean of the data set was 3.91 (SD = 1.56). Regarding religiosity (Christianity), 22.1% of the respondents believed that the Bible is "the actual word of God and is to be taken literally."[3]

Measures

The key independent variable in this study was television viewing. The GSS asked, "On the average day, about how many hours do you personally watch television?" The respondents reported the number of hours based on their self-perceptions. The data ranged from zero to 24 hours. The mean of the sample was 3.29 (SD = 3.50).

Two dependent variables that reflect respondents' attitudes toward homosexuality were considered. First, to capture how the respondents perceived the morality of same-sex behaviors, the following question was asked in the GSS: "What about sexual relations between two adults of the same sex—do you think it is always wrong, almost always wrong, wrong only sometimes, or not wrong at all?" The response *always wrong* was coded as 1, *almost always wrong* as 2, *wrong only sometimes* as 3, and *not wrong at all* as 4. The answer to this question was a continuous variable (M = 3.08, SD = 1.30). Second, the GSS asked whether the respondents agreed that "Homosexual couples should have the right to marry one another." The respondents replied using a 5-point Likert scale ranging from 1 = *strongly agree* to 5 = *strongly disagree*. This item was reverse-coded in this study so that a larger number meant more support for same-sex marriage. This item was also considered a continuous variable (M = 3.88, SD = 1.36). Although these two attitudinal variables were single-item

---

[3] The sex ratio of this subset of 2022 GSS (51.4% being female) is comparable with that of the U.S. population, where around 51.5% of the people aged 18 years and older were female in the 2020 Census (U.S. Census Bureau, 2023a). The percentage of people aged 45 years and older in the sample (51.4%) is similar to that in the census (around 54.1%, based on people aged 18 years and older). Regarding race, a straightforward comparison between the U.S. Census and GSS data is not feasible because, in the U.S. Census, Hispanic is not regarded as a race. According to the 2020 Census (U.S. Census Bureau, 2023b), 16.6% of people aged 18 years and older reported Hispanic origins. These people can be of any race (i.e., White, Black, etc.). Regardless of having Hispanic origins or not, 77.3% of the people aged 18 years and older were White; 13.1% were Black; 1.2% were Native American; 6.4% were Asian and Pacific Islanders; and 2.3% were of mixed race. The U.S. Census does not ask participants about their religions and political affiliations.

measures, studies have demonstrated that such questions have adequate validity in studies of attitudes toward homosexuality (Gromadzki, 2019; Liang, Huang, Chen, & Chan, 2022).[4]

Analysis

The sample of 1,017 respondents was analyzed using SPSS 29. To test our hypothesis, the two dependent variables—perceived morality of same-sex behaviors and support for same-sex marriage—were each regressed on television viewing using linear regressions. To avoid the pitfall of statistical spuriousness, we controlled for sex, race, age, education level, political orientation, and religiosity (Christianity) simultaneously in all analyses (Hirsch, 1980). Sex was dichotomized. Using White as the reference group, five dummy variables were created for the following races: Black, Native American, Hispanic, Asian and Pacific Islander, and other races and mixed race. Age (range = 18–89), education level (range = 2–20), and political orientation (range = 1–7) were considered continuous variables. Finally, religiosity (Christianity) was dichotomized: Those who believed that the Bible is "the actual word of God and is to be taken literally" were considered highly religious in this study.

Our research question was answered using a two-step procedure. In the first step, a linear regression was conducted for each of the dependent variables. In addition to television viewing and demographic attributes, 10 interaction terms—each a product between television viewing and a demographic variable—were added to the regressions using stepwise methods. Stepwise methods have generally been discouraged for *explanatory* studies (Harrell, 2015; Keith, 2019). However, they provide an efficient means of examining possible combinations of predictors in *exploratory* studies, such as this one (Cohen, Cohen, West, & Aiken, 2003; Ruengvirayudh & Brooks, 2016). Only significant interaction terms were retained in the analysis.

In the second step, for every significant interaction retained, the association between the respective dependent variable and television viewing was assessed at the conditional values of the demographic attribute with 5,000 bootstrap samples using the PROCESS macro (Hayes, 2017). The conditional values were chosen depending on the nature of the demographic attribute: dichotomous values were used for dichotomous variables and the 16th, 50th, and 84th percentiles for continuous variables. All other demographic attributes were used as covariates in this step. The results were visualized for ease of detecting mainstreaming patterns.

Results

Table 1 presents the results of the linear regressions. Respondents who were female, White (compared with Black), younger, more liberal, and less religious (where religion referred to Christianity) respondents had a more favorable perception of same-sex behaviors and were more supportive of same-

---

[4] Previous GSSs asked respondents whether they would allow an admitted homosexual to speak in their community and teach in a college, and whether they would remove a book written by an admitted homosexual from their local public library. These three questions, however, were not included in the 2022 GSS Cross-Section Study data set.

sex marriage. Our hypothesis proposed that television viewing is positively associated with attitudes toward homosexuality. The association between television viewing and the perceived morality of same-sex behaviors was not significant, $b = .01$, $p = .30$; neither was the association between television and support for same-sex marriage, $b = .01$, $p = .21$. Therefore, our hypothesis was not supported.

Our research question asked where the mainstreaming of attitudes toward homosexuality existed. Table 2 presents the results of the linear regressions with the retained interaction terms from the stepwise procedure. In the first model, which predicted the perceived morality of same-sex behaviors, the interactions between television viewing and sex ($b = .05$, $p < .05$) and between television viewing and political orientation ($b = .02$, $p < .05$) were significant and retained in the analysis.

For the interaction between television viewing and sex, further probing did not reveal a mainstreaming pattern, as shown in Figure 1. Among the male respondents, the association between television viewing and the perceived morality of same-sex behaviors was not significant ($b = −.01$, $p = .33$). However, among the female participants, this association was positive ($b = .03$, $p < .05$). That is, the perceived morality of the same-sex behaviors of heavy television viewers across the two sexes did not converge. The observed pattern is the opposite of mainstreaming.

For the interaction between television viewing and political orientation, further probing revealed a mainstreaming pattern (Figure 2). For the participants whose political orientation was liberal, the association between television viewing and the perceived morality of same-sex behaviors was not significant ($b = −.02$, $p = .22$). For the participants whose political orientation was moderate, the association was not significant either ($b = .01$, $p = .32$). However, for the participants whose political orientation was conservative, the association was positive ($b = .04$, $p < .05$). The perceived morality of same-sex behaviors among heavy television viewers converged regardless of their political orientation.

In the second model, which predicted the support for same-sex marriage, only the interaction between television viewing and political orientation ($b = .02$, $p < .01$) was significant and retained in the analysis. Further probing reveals that for the participants whose political orientation was liberal, the association between television viewing and support for same-sex marriage was not significant ($b = −.03$, $p = .12$). For the participants whose political orientation was moderate, the association was not significant either ($b = .01$, $p = .22$). However, for the participants whose political orientation was conservative, the association was positive ($b = .05$, $p < .01$). The support of heavy television viewers for same-sex marriage converged regardless of their political orientation, demonstrating a mainstreaming pattern (Figure 3).

Discussion

Despite the legalization of same-sex marriages in the United States, public attitudes toward homosexuality is still divided. Therefore, it remains imperative to study the factors that contribute to favorable attitudes toward homosexuality in society. Television, which Gross (2003) referred to as the "informal curriculum" (p. 262), continues to provide its viewers with knowledge, opinions, and sentiments about various social issues and public affairs. Based on cultivation theory and the 2022 GSS data, we sought to evaluate the extent to which television viewing was associated with attitudes toward homosexuality. In

particular, we assessed the associations between television viewing, the perceived morality of same-sex behaviors, and support for same-sex marriage.

Table 1. Summary of Linear Regression.

Variable	Predicting perceived morality of same-sex behaviors		Predicting the support for same-sex marriage	
	b	p	b	p
Television viewing	.01	.301	.01	.205
Female (reference: Male)	.28	< .001	.19	.007
Race (reference: White)				
Black	−.28	.007	− .32	.003
Native American	−.00	.994	.34	.295
Asian and Pacific Islanders	.03	.886	−.29	.146
Hispanic	.01	.953	−.11	.567
Other and mixed races	−.08	.555	−.07	.611
Age	−.01	< .001	−.02	< .001
Education level	.02	.166	.00	.769
Political orientation	−.23	< .001	−.28	< .001
High religiosity (reference: Low religiosity)	−1.09	< .001	−1.05	< .001
F value	45.46	< .001	48.54	< .001
R^2	.33		.35	
Adjusted R^2	.33		.34	

Note. Unstandardized coefficients were reported.

Table 2. Summary of Linear Regression With Interaction Terms.

Variable	Predicting perceived morality of same-sex behaviors		Predicting the support for same-sex marriage	
	b	p	b	p
Television viewing	−.12	.004	−.07	.031
Female (reference: Male)	.12	.186	.19	.008
Race (reference: White)				
Black	−.25	.015	−.31	.004
Native American	.03	.921	.36	.265
Asian and Pacific Islanders	.06	.759	−.26	.178
Hispanic	.04	.822	−.09	.608
Other and mixed races	−.07	.594	−.08	.573
Age	−.01	< .001	−.02	< .001
Education level	.02	.154	.00	.753

Political orientation	−.27	< .001	−.35	< .001
High religiosity (reference: Low religiosity)	−1.09	< .001	−1.06	< .001
Television viewing × Female	.05	.017	---	
Television viewing × Political orientation	.02	.035	.02	.007
F value	39.61	< .001	45.39	< .001
R^2	.34		.35	
Adjusted R^2	.33		.34	

Note. Unstandardized coefficients were reported. Interaction terms were entered in a stepwise fashion. Only significant interaction terms were retained in the models.
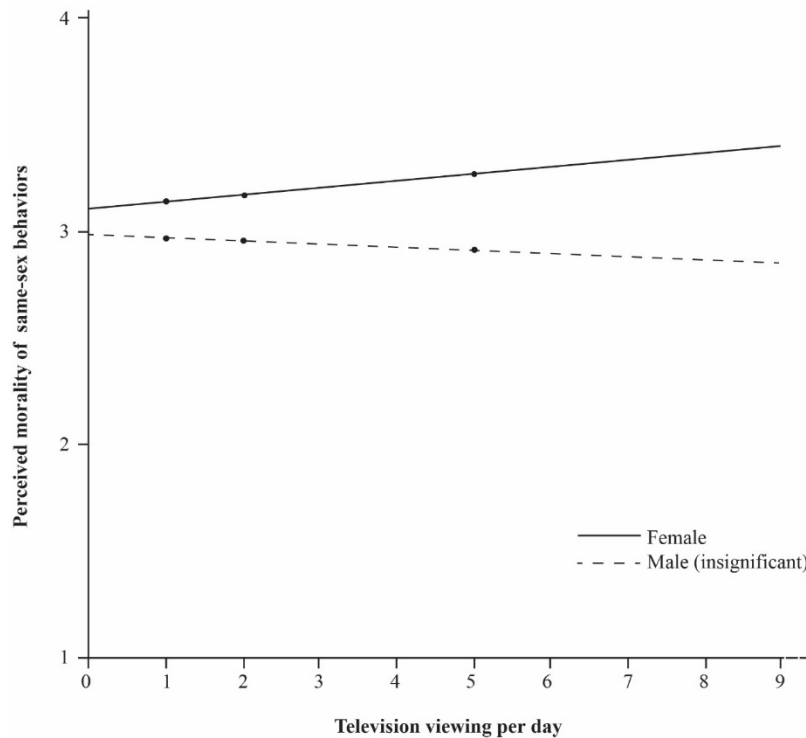

Figure 1. The association between television viewing and the perceived morality of same-sex behaviors, moderated by sex.

Because representations of homosexuality in contemporary U.S. television tend to be favorable overall, we hypothesized a positive association between overall television watching and the two attitudinal measures toward homosexuality. However, similar to Calzo and Ward (2009), our hypothesis was not supported: Neither the perceived morality of same-sex behaviors nor the support for same-sex marriage was associated with television viewing.
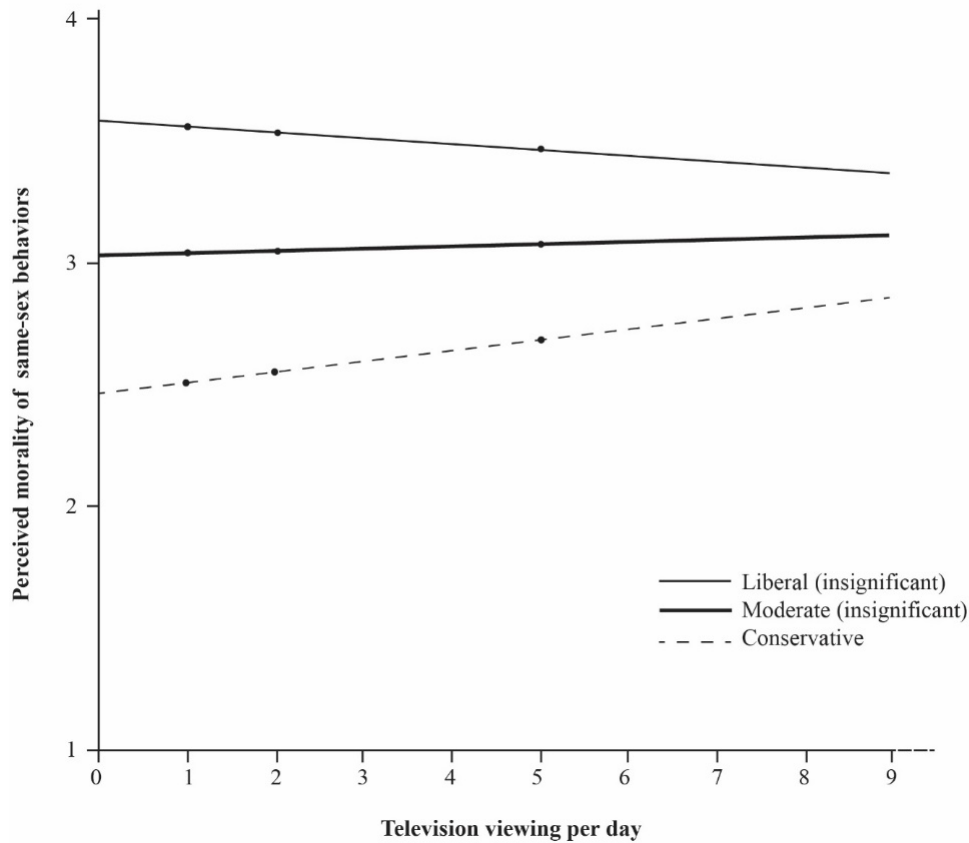
Figure 2. The association between television viewing and the perceived morality of same-sex behaviors, moderated by political orientation.

Can the absence of direct associations constitute evidence for rejecting cultivation outright? Our answer is "no." Gerbner et al. (2002) remarked that cultivation is not a short-term media effect but may take years to manifest. Indeed, Calzo and Ward (2009) found an association between attitudes toward homosexuality and *prior* consumption of prime-time comedy/drama, not between attitudes and *current* consumption of these media. Custers and Van den Bulck (2011) even suggested that "there is no reason to expect a large relationship in a cross-sectional study that does not measure a lifetime of exposure" (p. 613).
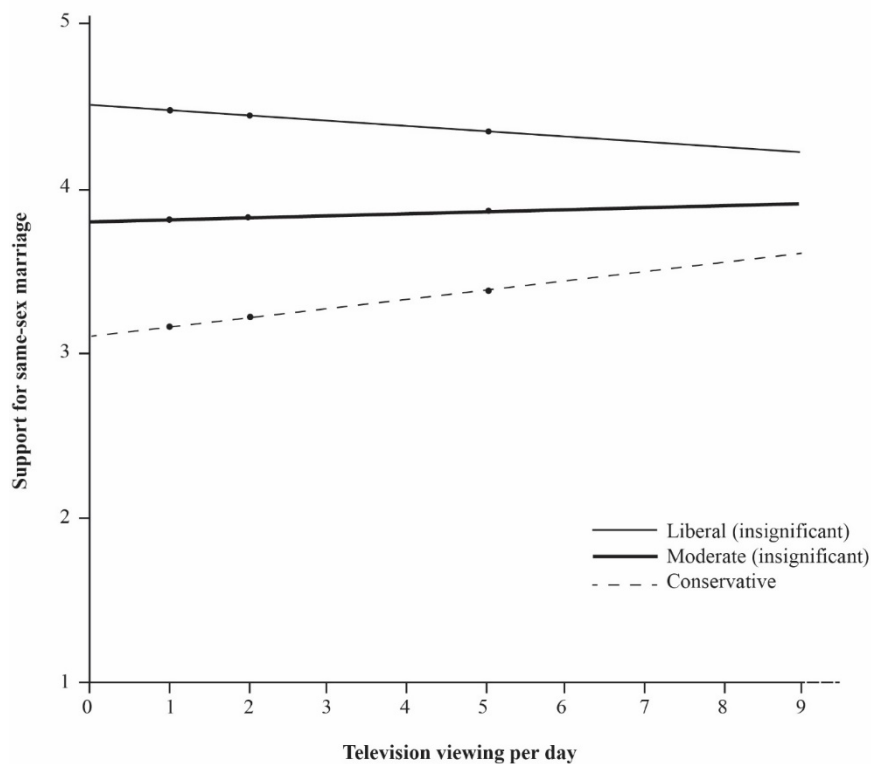
Figure 3. The association between television viewing and support for same-sex marriage, moderated by political orientation.

Moreover, cultivation theory does not rule out scenarios in which cultivation exists only among specific subgroups. It is entirely possible that television viewing is positively associated with the view in question for certain subgroups of the population but is not associated (or negatively associated) with the view for other subgroups. In some cases, the different effects across the subgroups may cancel each other, thus manifesting as no association for the entire population. Therefore, our research explored the demographic divides across which mainstreaming existed. To reiterate, mainstreaming refers to the pattern in which the views of heavy television viewers converge, regardless of differences in their demographic backgrounds.

Our analysis revealed a mainstreaming pattern across the political divide. For both the perceived morality of same-sex behaviors and support for same-sex marriage, we noticed consistent and positive associations between television viewing and these two attitudinal measures among more politically conservative respondents but no such association among respondents who self-identified as more liberal. In other words, television viewing had a "liberalizing effect" on the former, "pulling" the conservative respondents closer to their liberal counterparts. This finding presents a striking difference from Gross (1984), who found that the negative representation of homosexuality had a stronger negative association with liberal respondents than with conservative respondents. The mainstreaming pattern observed in our study is consistent with our understanding of the contemporary television landscape. In contrast to the

television content of the late 1970s and early 1980s, which was negative about homosexuality (Gross, 1984), media representations of homosexuality have become positive since the late 1990s, and the number of LGBTQ characters on television has surged in the last decade. Therefore, for people who are politically conservative, watching more television can cultivate more accepting attitudes toward homosexuality, a view reflected on television.

The reason that there were no significant differences in the two attitudinal measures between light and heavy television viewers who were politically liberal may be because of the statistical ceiling effect. Among the respondents who self-identified as extremely liberal, the average score for the perceived morality of same-sex behaviors was 3.74 (of 4), and that for support for same-sex marriage was 4.59 (of 5). Among the respondents who self-identified as liberal, the corresponding average scores were 3.69 (of 4) and 4.58 (of 5), respectively. Given that their scores were so close to the maximum, it is unsurprising that the cultivation of television was not prominent.

Our study also revealed an interaction between sex and television viewing on the perceived morality of same-sex behaviors. We found that female heavy television viewers had a more favorable perception of same-sex behaviors than their light television-viewing counterparts, but this perception remained unchanged for male light and heavy television viewers. Figure 3 shows that television viewing "pulled" female respondents away from male respondents. This observed pattern is not mainstreaming but is referred to as *resonance*. According to cultivation literature, resonance refers to a situation in which cultivation is stronger for one subgroup than for other subgroups when the television portrayal resonates with the everyday reality of this particular subgroup (Gerbner, 1998). Although cultivation studies on attitudes toward homosexuality have not observed resonance (Calzo & Ward, 2009; Gross, 1984), Shrum and Bischak (2001) found that a positive relationship between television viewing and risk estimates existed only among people with high direct experience of crime.

Evidence has suggested that women's life experiences may amplify the cultivation of television on their perceptions of same-sex behaviors. Surveys and meta-analyses have found that women have more LGBT friends than men (Lewis, 2011; Rosentiel, 2007). Therefore, it is not unreasonable to assume that in their everyday lives, women are exposed to more displays of affection between same-sex couples than men are. This congruence between women's direct experiences of witnessing same-sex affection and their exposure to television constitutes what Gerbner (1998) referred to as a "double dose of messages" (p. 182), which enhances cultivation. Another possible reason why cultivation existed only among women may be that women have a more fluid view of gender (Smiler & Gelman, 2008). As a result, women may be more accepting of sexual behaviors outside the heteronormative framework than men when probed by positive television representations. Conversely, men tend to hold stronger gender essentialist views than women do. Therefore, even when they were exposed to positive representations of homosexuality on television, their perceptions of same-sex behaviors were not cultivated by this exposure. This speculation can be tested in further studies that include gender essentialist beliefs as a predictor. If the association between respondents' sex and their attitudes toward same-sex behaviors dissipates once their gender essentialist belief is considered, we can conclude that stronger gender essentialism, rather than being male, is the "obstacle" in cultivating favorable attitudes toward same-sex relationships. Extending this conclusion, it may be more

challenging to cultivate a favorable attitude toward same-sex relationships among people from cultures with strong gender essentialist beliefs. More cross-cultural research is needed in this area.

Overall, the 2022 GSS data offered some support for cultivation theory on attitudes toward homosexuality. This study used two sets of attitudinal measures (the perceived morality of same-sex behaviors and support for same-sex marriage) and controlled for demographic attributes to strengthen the rigor of the analysis. Instead of demonstrating straightforward associations between television viewing and attitudes toward homosexuality, the data demonstrated mainstreaming across the political divide and resonance across the sexual divide. These results suggest that the cultivation of general television watching continues to manifest if subgroups are analyzed separately (i.e., if a moderation analysis is conducted).

Cultivation theory makes strong assumptions about television content and viewing habits (Gerbner, 1998; Gerbner et al., 2002). At the time it was developed, television viewing of U.S. households was dominated by three broadcast networks (NBC, CBS, and ABC), and television was the primary source of information and entertainment for most people (Shrum, 2017; Webster, 2005). However, the contemporary television scene differs fundamentally from the scene that existed when cultivation theory was formulated. With the popularity of cable television in the United States, television viewers are no longer limited to the three major broadcasters (Shrum, 2017; Webster, 2005), and the rise of streaming services, such as Netflix, has brought more international content to U.S. households than was available in the 1960s (Nielsen, 2021).

Despite the structural changes in the television market, this study's finding of the existence of cultivation among certain subgroups implies that messages about homosexuality on television still matter. Therefore, increasing the production of positive media content about homosexuality remains a feasible way to shape favorable views among some demographic subgroups and increase the inclusiveness of society. This suggestion may also apply to television producers and media watchdogs beyond the U.S. market. For instance, the increasing popularity of boys' love content in East Asia (Kwon, 2021) may present an opportunity to cultivate more favorable attitudes toward homosexuality in the region. Despite being criticized as "Netflix imperialism" (Davis, 2023), the global growth of this streaming service may bring some positive representations of homosexuality to some regions where homosexuality-themed content is limited in traditional mass media.

Although the findings of this study demonstrate the cultivation of television, the study is not without limitations. First, all major variables in this study were assessed using single-item measures. This limitation was because of the design of the GSS questionnaire. Although Gromadzki (2019) and Liang et al. (2022) demonstrated the usefulness of single-item measures, future studies should use multiple-item scales to capture different dimensions of television viewing and attitudes toward homosexuality. Relatedly, this study followed the "traditional" view of cultivation, which assesses overall exposure to television. Although Morgan et al. (2015) pointed out that studies that *solely* measure exposure to specific media genres (the "reformist" view) violate the tenets of cultivation theory, they agreed that measuring exposure to specific media genres *alongside* overall exposure to television does not constitute a violation. As Bilandzic and Busselle (2012) suggested, some genres may produce a greater sense of transportation to subsets of audiences, thus amplifying cultivation. In fact, Hermann et al. (2021) found some empirical support for the "reformist" view. For example, they found that soap operas had a significantly larger effect size than general television

viewing. Therefore, future studies should consider measuring exposure to various genres alongside overall exposure to television (similar to Calzo & Ward, 2009). Third, today's definition of television is debatable. Streaming services such as Netflix offer television shows; therefore, companies and organizations regard streaming services as television (GLAAD, 2021; Nielsen, 2021). Nonetheless, we are uncertain whether the participants in the GSS considered streaming services to be television. In future studies, the meaning of "television" should be clearly defined for research participants. Fourth, this study was based on a cross-sectional data set, and thus, it could only identify associations, not causations. Future studies should adopt a longitudinal design. Finally, we focused on attitudes toward homosexuality in this study. How television viewing shapes people's attitudes toward transgender and non-binary people has yet to be explored. As support for transgender and non-binary people's rights is less consensual worldwide than support for homosexuality, further research should examine the extent to which television can cultivate support for these communities.

Cultivation theory was developed in the 1960s, when three major broadcasters dominated the U.S. television market. Despite the increase in television networks and programs and audience fragmentation, this study revealed television's cultivation of favorable attitudes toward homosexuality among some subgroups, suggesting the continued utility of this canonical theory. As Hermann et al. (2021) concluded in their meta-analysis, "Understanding [television's] role in shaping our views of culture, society, and the world may be more complicated now, but it may also be more essential than ever" (p. 539).

References

Albertson, C. (2018). *A perfect union? Television and the winning of same-sex marriage*. New York, NY: Routledge.

Bilandzic, H., & Busselle, R. (2012). A narrative perspective on genre-specific cultivation. In M. Morgan, J. Shanahan, & N. Signorielli (Eds.), *Living with television now: Advances in cultivation theory & research* (pp. 261–285). New York, NY: Peter Lang.

Borelli, G. (2022, November15). *About six-in-ten Americans say legalization of same-sex marriage is good for society*. Pew Research Center. Retrieved from https://www.pewresearch.org/short-reads/2022/11/15/about-six-in-ten-americans-say-legalization-of-same-sex-marriage-is-good-for-society/

Busselle, R., & Van den Bulck, J. (2020). Cultivation theory, media, stories, processes, and reality. In M. B. Oliver, A. A. Raney, & J. Bryant (Eds.), *Media effects: Advances in theory and research* (4th ed., pp. 69–82). New York, NY: Routledge.

Calzo, J. P., & Ward, L. M. (2009). Media exposure and viewers' attitudes toward homosexuality: Evidence for mainstreaming or resonance? *Journal of Broadcasting & Electronic Media, 53*(2), 280–299. doi:10.1080/08838150902908049

Cavalcante, A. (2015). Anxious displacements: The representation of gay parenting on *Modern Family* and *The New Normal* and the management of cultural anxiety. *Television & New Media, 16*(5), 454–471. doi:10.1177/1527476414538525

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum.

Colistra, R., & Johnson, C. B. (2021). Framing the legalization of marriage for same-sex couples: An examination of news coverage surrounding the US supreme court's landmark decision. *Journal of Homosexuality, 68*(1), 88–111. doi:10.1080/00918369.2019.1627128

Custers, K., & Van den Bulck, J. (2011). The relationship of dispositional and situational fear of crime with television viewing and direct experience with crime. *Mass Communication and Society, 14*(5), 600–619. doi:10.1080/15205436.2010.530382

Davern, M., Bautista, R., Freese, J., Morgan, S. L., & Smith, T. W. (2023). *General Social Survey 1972–2022* [Machine-readable data file]. NORC. Retrieved from https://gss.norc.org/documents/stata/GSS_stata.zip

Davis, S. (2023). What is Netflix imperialism? Interrogating the monopoly aspirations of the "World's largest television network." *Information, Communication & Society, 26*(6), 1143–1158. doi:10.1080/1369118X.2021.1993955

Deschamps, D., & Singer, B. (2017). *LGBTQ stats: Lesbian, gay, bisexual, transgender, and queer people by the numbers*. New York, NY: The New Press.

Gerbner, G. (1977). Comparative cultural indicators. In G. Gerbner (Ed.), *Mass media policies in changing cultures* (pp. 199–205). New York, NY: Wiley.

Gerbner, G. (1998). Cultivation analysis: An overview. *Mass Communication and Society, 1*(3–4), 175–194. doi:10.1080/15205436.1998.9677855

Gerbner, G., & Gross, L. (1976). Living with television: The violence profile. *Journal of Communication, 26*(2), 173–199. doi:10.1111/j.1460-2466.1976.tb01397.x

Gerbner, G., Gross, L., Jackon-Beeck, M., Jefferies-Fox, S., & Signorielli, N. (1978). Cultural indicators: Violence profile No. 9. *Journal of Communication, 28*(3), 176–207. doi:10.1111/j.1460-2466.1978.tb01646.x

Gerbner, G., Gross, L., Morgan, M., Signorielli, N., & Shanahan, J. (2002). Growing up with television: Cultivation processes. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (2nd ed., pp. 43–67). Mahwah, NJ: Lawrence Erlbaum.

GLAAD. (2016). *Where we are on TV, 2015–2016*. Retrieved from https://www.glaad.org/whereweareontv15

GLAAD. (2021). *Where we are on TV, 2020–2021*. Retrieved from https://www.glaad.org/whereweareontv20

Gromadzki, J. (2019). Measurement of attitudes towards homosexuality: Testing measurement invariance across European countries. *Quality & Quantity, 53*(6), 2685–2694. doi:10.1007/s11135-019-00880-y

Gross, L. (1984). The cultivation of intolerance: Television, blacks and gays. In G. Melischek, K. E. Rosengren, & J. Stappers (Eds.), *Cultural indicators: An international symposium* (pp. 345–363). Vienna, Austria: Verlag der Osterreichischen Akademie der Wissenschaften.

Gross, L. (2003). The gay global village in cyberspace. In N. Couldry & J. Curran (Eds.), *Contesting media power: Alternative media in a networked world* (pp. 259–272). Lanham, MD: Rowan & Littlefield.

Haney, J. L. (2016). Predictors of homonegativity in the United States and the Netherlands using the fifth wave of the World Values Survey. *Journal of Homosexuality, 63*(10), 1355–1377. doi:10.1080/00918369.2016.1157997

Harrell, F. E. (2015). *Regression modeling strategies with applications to linear models, logistic and ordinal regression, and survival analysis* (2nd ed.). New York, NY: Springer.

Hart, K. P. R. (2004). We're here, we're queer—And we're better than you: The representational superiority of gay men to heterosexuals on *Queer Eye for the Straight Guy. The Journal of Men's Studies, 12*(3), 241–253. doi:10.3149/jms.1203.241

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford.

Hermann, E., Morgan, M., & Shanahan, J. (2021). Television, continuity, and change: A meta-analysis of five decades of cultivation research. *Journal of Communication, 71*(4), 515–544. doi:10.1093/joc/jqab014

Hirsch, P. M. (1980). The "scary world" of the nonviewer and other anomalies: A reanalysis of Gerbner et al.'s findings on cultivation analysis Part I. *Communication Research, 7*(4), 403–456. doi:10.1177/009365028000700401

Homosexuality: The countries where it is illegal to be gay. (2021, May 12). BBC News. Retrieved from https://www.bbc.com/news/world-43822234

The International Lesbian, Gay, Bisexual, Trans and Intersex Association. (2020). *State-sponsored homophobia*. Retrieved from https://ilga.org/downloads/ILGA_World_State_Sponsored_Homophobia_report_global_legislation _overview_update_December_2020.pdf

Keith, T. Z. (2019). *Multiple regression and beyond: An introduction to multiple regression and structural equation modeling* (3rd ed.). New York, NY: Routledge.

Kohan, D., & Mutchnick, M. (Executive Producers). (1998–2020). *Will & Grace* [Television series]. Burbank, CA: KoMut Entertainment.

Kwon, J. (2021). The past, present, and future of boys love (BL) cultures in East Asia. In S. Hong & D. Y. Jin (Eds.), *Transnational convergence of east Asian pop culture* (pp. 96–112). New York, NY: Routledge.

Lewis, G. B. (2011). The friends and family plan: Contact with gays and support for gay rights. *Policy Studies Journal, 39*(2), 217–238. doi:10.1111/j.1541-0072.2011.00405.x

Liang, Z., Huang, Y. T., Chen, Y. C., & Chan, L. S. (2022). "Pattern matters": A latent class analysis of Internet use and users' attitudes toward homosexuality in China. *Sexuality Research and Social Policy, 19*(4), 1572–1585. doi:10.1007/s13178-021-00680-w

Morgan, M., & Shanahan, J. (2017). Television and the cultivation of authoritarianism: A return visit from an unexpected friend. *Journal of Communication, 67*(3), 424–444. doi:10.1111/jcom.12297

Morgan, M., Shanahan, J., & Signorielli, N. (2015). Yesterday's new cultivation, tomorrow. *Mass Communication and Society, 18*(5), 674–699. doi:10.1080/15205436.2015.1072725

Nielsen. (2021, June). *The gauge shows streaming is taking a seat at the table*. Retrieved from https://www.nielsen.com/insights/2021/the-gauge-shows-streaming-takes-a-seat-at-the-table/

Nisbet, E., & Myers, T. (2012). Cultivating tolerance of homosexuals. In M. Morgan, J. Shanahan, & N. Signorielli, N. (Eds.), *Living with television now: Advances in cultivation theory & research* (pp. 61–80). New York, NY: Peter Lang.

Nordyke, K. (2019, March 28). GLAAD Media Awards: "Love, Simon," "Vida," "Queer Eye" among winners. *The Hollywood Reporter*. Retrieved from https://www.hollywoodreporter.com/lists/glaad-media-awards-complete-list-winners-2019-1191276/

Pew Research Center. (2019). *Attitudes on same-sex marriage: Public opinion on same-sex marriage*. Retrieved from https://www.pewforum.org/fact-sheet/changing-attitudes-on-gay-marriage/

Poushter, J., & Kent, N. (2020). *The global divide on homosexuality persists*. Pew Research Center. Retrieved from https://www.pewresearch.org/global/2020/06/25/global-divide-on-homosexuality-persists/

Raley, A. B., & Lucas, J. L. (2006). Stereotype or success? Prime-time television's portrayals of gay male, lesbian, and bisexual characters. *Journal of Homosexuality, 51*(2), 19–38. doi:10.1300/J082v51n02_02

Rosentiel, T. (2007, May 22). *Four-in-ten Americans have close friends or relatives who are gay*. Pew Research Center. Retrieved from https://www.pewresearch.org/2007/05/22/fourinten-americans-have-close-friends-or-relatives-who-are-gay/

Ruengvirayudh, P., & Brooks, G. P. (2016). Comparing stepwise regression models to the best-subsets models, or, the art of stepwise. *General Linear Model Journal, 42*(1), 1–14. Retrieved from http://www.glmj.org/archives/articles/Pornchanok_v42n1.pdf

Schnabel, L., & Sevell, E. (2017). Should Mary and Jane be legal? Americans' attitudes toward marijuana and same-sex marriage legalization, 1988–2014. *Public Opinion Quarterly, 81*(1), 157–172. doi:10.1093/poq/nfw050

Sherkat, D. E., Powell-Williams, M., Maddox, G., & De Vries, K. M. (2011). Religion, politics, and support for same-sex marriage in the United States, 1988–2008. *Social Science Research, 40*(1), 167–180. doi:10.1016/j.ssresearch.2010.08.009

Shrum, L. J. (2017). Cultivation theory: Effects and underlying processes. In P. Rössler, & C. A. Hoffner, & L. van Zoonen (Eds.), *The international encyclopedia of media effects* (pp. 1–12). Hoboken, NJ: John Wiley & Sons.

Shrum, J., & Bischak, D. (2001). Mainstreaming, resonance, and impersonal impact. Testing moderators of the cultivation effect for estimates of crime risk. *Human Communication Research, 27*(2), 187–215. doi:10.1111/j.1468-2958.2001.tb00780.x

Signorielli, N., & Morgan, M. (1996). Cultivation analysis research and practice. In M. B. Salwen & D. W. Stacks (Eds.), *An integrated approach to communication theory and research* (pp. 111–126). Mahwah, NJ: Lawrence Erlbaum.

Smiler, A. P., & Gelman, S. A. (2008). Determinants of gender essentialism in college students. *Sex Roles, 58*(11–12), 864–874. doi:10.1007/s11199-008-9402-x

U.S. Census Bureau. (2023a). *Age and sex composition: 2020*. Retrieved from https://www2.census.gov/library/publications/decennial/2020/census-briefs/c2020br-06.pdf

U.S. Census Bureau. (2023b). *Median age and age by sex, race, and Hispanic origin*. Retrieved from
        https://www2.census.gov/programs-surveys/popest/tables/2020-2022/national/asrh/nc-
        est2022-asr6h.xlsx

Webster, J. G. (2005). Beneath the veneer of fragmentation: Television audience polarization in a
        multichannel world. *Journal of Communication, 55*(2), 366–382. doi:10.1111/j.1460-
        2466.2005.tb02677.x

Williams, M., Metzler, D., & Collins, D. (2003–2007). *Queer eye for the straight guy* [Television series].
        New York, NY: Bravo Original Production.