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Socio-Demographic Differences in Parental Monitoring of Children in Late Childhood and Adolescents' Screen-Based Media Use

Namik Top

According to a social cognitive theory, children may learn to function through processes of modeling and observational learning, with parents and the media being the significant sources of socialization and learning in the home environment. Adolescence is a period when children progressively look for autonomy and independence. One of the important research questions is whether adolescents utilize screen-based media with or without parental monitoring and limit-setting. This exploratory study examines socio-demographic factors associated with parenting (i.e., co-using, limit setting on the amount, limit setting on contents, and active mediation) in regards to television and video game usage during adolescence. Participants were 799 adolescents (5th to 12th graders) and their parents. Results indicate no gender differences in parental monitoring, but age/grade differences were found with less parental monitoring (more autonomy or independence) of older children. Parental monitoring also differed by ethnicity and by household income. Asian parents were the most restrictive while Hispanic parents were the least restrictive. Parents also reported more active mediation or engagement in families with higher household income. Findings initiate consideration of parenting styles in adolescent media usage, which have implications for adolescent adjustment and developmental outcomes.

Introduction

There is burgeoning concern over high levels of exposure to screen-based media in young people, including concerns over sedentary lifestyles and risks for childhood obesity as well as exposure to developmentally inappropriate or harmful content. Not every household affords adolescents access to personal computers or the Internet, however, the majority of households has at least one television. And adolescents can

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easily access video games on a variety of devices including gaming consoles, computers, and smartphones. While the number of hours spent watching television does not appear to have increased over the past 50 years, what has changed is the number of television sets per household, including television sets in children's bedrooms (Marshall, Gorely, & Biddle, 2006). Furthermore, television programming and content has changed in the past 50 years, including television advertising, which has been shown to influence the behaviors such as food choices or eating habits of young children (Borzekowski & Robson, 2001; Lewis & Hill 1998). Ethnic and household income differences have been observed as effective in childhood obesity, as well as more televisions in children's bedrooms, higher intake of sugar-sweetened beverages, and higher intake of fast food for Black and Hispanic families (Taveras, Gillman, Kleiman, Rich-Edwards, & Rifas-Shiiman, 2013). Parental monitoring is also a moderator of the effects of game violence (Bickham et al., 2003). In addition, children are less likely to have generalized problematic internet usage when perceived parental knowledge of media usage is higher (Ang, Chong, Chye, & Huan, 2012).

Previous studies indicate that computer usage is higher for Whites compared to Black or Hispanic children, for boys compared to girls, and for children in families with higher parental education and income (Subrahmanyam, Greenfield, Kraut, & Gross, 2001). As children get older, parents provide less monitoring of television viewing (Roberts, Foehr, & Rideout, 2005; Rosen, Cheever, & Carrier, 2008; Schmitt, 2000), and parents are more likely to ignore parental monitoring of television viewing in a high TV orientation houses (Roberts et al. 2005). White adolescents were found to be more likely to have a television in their bedrooms and were monitored less by their parents (Jackson, Brown, & Pardun, 2008). However, a previous study found that there was no significant difference between Black and White parents regarding the parental involvement in media usage (Ward, Day, & Thomas, 2010). Another study discovered that adolescents living outside parents' home reported less usage of video games than the ones living with parents (Padilla-Walker, Nelson, Carroll, & Jensen, 2010). Given such socio-demographic differences in media usage, a very little is known regarding socio-demographic differences among parenting styles (natural interventions) in adolescent media usage. Thus, the present study examines socio-demographic differences in parental monitoring of adolescents' use of television and video games to better comprehend parenting styles in adolescent media usage that may have implications for adolescent adjustment and developmental outcomes.

Theoretical Framework

While social cognitive theory was used to ground the theoretical framework for this study, relevant literature on 1) social cognitive theory, 2) parental monitoring during late childhood and adolescence, 3) natural interventions in media literacy, 4) the predictors of parental monitoring of media usage, and 5) the originality of the current study, were used to develop the "skeletal structure of justification" (Eisenhart 1991) that guides this study.

Social Cognitive Theory

The social cognitive theory defines how processes of modeling and observational learning might lead how human learning occurs (Ormrod, 2012). Two important factors that might strengthen messages and provide both negative and positive models of behaviors are parents and media. Parental monitoring, a developing and promising dyadic specialty of the parent-child relationship (Crouter, MacDermid, McHale, & Perry-Jenkins, 1990), is generally considered a domestic factor that reduces adolescent problematic social behaviors, including sexual activity, unsafe sex, gambling, and illegal substance use (Borawski, levers-Landis, Lovegreen, & Trapl, 2003; Magoon & Ingersoll, 2006). For example, in a meta-analytic review that examined the relationship between parental monitoring and marijuana use among adolescents, the authors discovered a strong link between lower marijuana consumption in adolescents and parental monitoring of adolescents (Lac & Crano, 2009).

Moreover, prior studies demonstrated that lower parental monitoring of adolescence was associated with several accidental injuries such as accidental poisoning (Brayden, MacLean, Bonfiglio, & Altemeier, 1993), household safety dangers (Glik, Greaves, Kronenfeld, & Jackson, 1993), and playground accidents (Buck, 1988). Furthermore, poor parental monitoring was linked with smoking (Radziszewska, Richardson, Dent, & Flay, 1996). When parents also monitor their adolescents' media usage, there might be some behavioral and developmental improvements during late childhood and adolescence. In this respect, to examine socio-demographic differences in parental monitoring of adolescents' use of screen media might be crucial to better comprehend parenting types in adolescent media usage that may have implications for adolescent adjustment and developmental outcomes.

Parental Monitoring During Late Childhood and Adolescence

Since media use is introduced at a very young age (Vandewater et al., 2007), parental monitoring becomes more and more crucial. Especially during late childhood and adolescence, children and adolescents start to decide their identity, and how their future is going to be (Santrock, 2008). In late childhood, children start to interact with a social world behind their parents. Relational aggression increases in late childhood (Dishion & Piehler, 2009). During this period of life, the relationship between parents and children changes (Bakken & Brown, 2010; Keijsers & Laird, 2010). Evidence demonstrates that parental monitoring is related to the safety of young children (Peterson, Ewigman, & Kivlahan, 1993). Some recent studies also illustrated that adolescents can acquire the ability to control their behaviors and attain autonomy through proper adult reactions (Duncan & Sawyer, 2010; Sher-Censor, Parke, & Coltrane, 2011). Adolescents do generally report their personal information to friends rather than to parents (Buhrmester, 1998).

Adolescents are also keenly sensitive about managing what their parents know about their usual schedules & activities (Marshall, Tilton-Weaver, & Bosdet, 2005). Another study illustrated that “what parents know is more a function of what youths tell them” (Kerr, Stattin, & Burk, 2010, p. 57). Adolescents are also more likely to perform risk-taking behaviors in this transitional period from childhood to adulthood (Galvan, Hare, Voss, Glover, & Casey, 2007). In addition, adolescence is the life period in which considerable time is spent on dating or thinking about dating; the development of romantic relationships grows both in the earlier and the later years of adolescence (Connolly & McIsaac, 2009).

In terms of broad socio-demographic variables such as gender or age, there are few existing studies. Several studies have discovered that one of the natural interventions, restrictive mediating, seems to diminish as children get older (Greenberg & Dominick, 1969; Lin & Atkin, 1989; Padilla-Walker & Coyne, 2011). The rationale for reducing restrictive mediating in older adolescents might be that “parents are more likely to use deference with older adolescents, actively trusting their adolescents to make their own choices regarding the media as they mature” (Padilla-Walker & Coyne, 2011, p. 713). Evidence also showed that girls were given less independence than boys (Bumpus, Crouter, & McHale, 2001); girls were also monitored and protected more than boys by Latino parents (Updegraff, Kim, Killoren, & Thayer, 2010). However, it was also found that parents proportionately monitor media for girls and boys (Desmond, Hirsch, Singer, & Singer, 1987). Another study indicated that parental monitoring did not differ significantly by ethnicity; it did, however, differ by child’s gender. Girls were monitored more than boys (Dishion, Li, Spracklen, Brown, & Haas, 1998).

As a result, media consumption may have especially important consequences during these developmental periods. Potentially negative and positive role models of behavior might be provided and certain messages are reinforced via televised content and video game playing. In this respect, investigating socio-demographic differences in parental monitoring of screen media usage during late childhood and adolescence might help understand appropriate demographical needs of parental monitoring types for taking prior actions to prevent possible dangerous consequences.

Natural Interventions in Media Literacy

Three primary forms of parental monitoring of media usage in the present study were restrictive mediation, social-co-viewing, and instructive or active mediation, which are also called natural interventions in media literacy (Valkenburg, Krcmar, Peeters, & Marseille, 1999). Acknowledging the forms are also vital to know the effectiveness of parental monitoring as the agents of these interventions. In addition, they are described as the interventions “that are motivated, planned, and delivered by people in the target’s everyday lives” (Potter & Byrne, 2009, p. 349). Parents, who are interested in protecting their children are the fundamental agents for natural interventions.

When the authority directly prohibits the target from media usage, this type is called restrictive mediation. However, it might actually have some negative outcomes. Cheng et al., (2004) noted “the majority of parents, limit violent television viewing but acknowledge that their children still view television violence at least weekly” (p. 97). They examined only parental monitoring of violent television. When parents and children utilize the media tool together such as watching TV together, this action is the technique of social co-viewing. Although, there are not sufficient studies about social co-viewing, there is evidence that when parents co-view educational programs on television with their children, these children grasp additional knowledge from the material compared to other children with whom parents do not co-view (Salomon, 1977). Instructional mediation is generally carried out when parents utilize verbal actions while being exposed to their children.

Although there are various results stemming from natural intervention studies, to some extent, natural interventions are influential in various features like cognitions, attitudes, perceptions, behaviors, etc. (Nathanson, 2001). Understanding socio-demographic differences in parental monitoring types of media usage might indicate which kind of natural intervention in late childhood and adolescence is needed in which demographic for taking proper action.

The Predictors of Parental Monitoring of Media Usage

Previous research has explored various characteristics of both children and parents as predictors of parental media monitoring. The body of work has aimed to improve the accuracy of predictions regarding the outcomes of parental monitoring. The studies concerning child characteristics have intensely focused on child sex and child age. As for parent characteristics, much of the work has focused on education and income. The following literature is important to interpret and understand the outcomes of the current study.

Child Sex. Previous work has also examined whether or not parental monitoring of media usage differs with the sex of the child. Several kinds of research found that girls were more likely to be restricted in television viewing than boys (Gross & Walsh, 1980; Warren, 2003; Weaver & Barbour, 1992). Nikken and Jansz (2006) also replicated this finding in video games. On the other hand, only one study found that parents monitored their sons’ children television viewing more than their daughters. A few studies discovered no disparity between parental monitoring and child sex (Van der Voort, Nikken, & van Lil 1992; Warren, 2001).

Child Age. Parents usually believe that they need to protect their younger children more than their older ones. Unsurprisingly, evidence consistently illustrates that parents monitor their younger children’s televisions and media usage more than they monitor their older children (Hoffner & Buchanan, 2002; Nikken & Jansz, 2006). In

addition, parents are more likely to provide restrictive mediation (Atkin, Greenberg, & Baldwin, 1991; Austin, Bolls, Fujioka, & Engelbertson, 1999; Valkenburg et al., 1999; Warren, 2001) and active mediation (Barkin et al., 2006) to their younger children. Some studies indicated that social co-viewing was negatively correlated with child age (Austin et al., 1999; St. Peters, Fitch, Huston, Wright, & Eakins, 1991); however, a study showed a positive correlation of parental monitoring with child age (Dorr, Kovacic, & Doubleday, 1989).

Income and Education. The prior research remains unclear about whether or not parents' income and education level are associated with the types of parental monitoring. Several studies failed to find a significant relation between parental monitoring and either income or education (Gross & Walsh, 1980; Hoffner & Buchanan, 2002; Lin & Atkin, 1989), and one found no relationship between income and active mediation (Austin et al., 1999). Restrictive mediation is only preferred by low-income parents (Nikken & Jansz, 2006; Warren, 2005). Evidence also showed that less educated parents are more likely to engage in social co-viewing (Austin et al., 1999; Warren, 2001).

The Originality of the Current Study

Although encouraging, former literature has left several parts unclear. Firstly, research has focused more on young children (Desmond, Singer, Singer, Calam, & Colimore, 1985; Warren, 2005), and middle childhood (Buijzen & Valkenburg, 2005; Gentile, Nathanson, Rasmussen, Reimer, & Walsh, 2012; Lee & Chae, 2007). Although some prior studies have included adolescents in their samples (Austin, 1993; Lin & Atkin, 1989), no research exclusively concentrated on this period and why comprehending media use and parental monitoring of media usage during this time is vital. Secondly, no study focused on both late childhood and adolescence together (5th–12th grade). Third, as stated above, there were two studies that used adolescents in their samples; however, one of them focused on only one type of natural intervention, active mediation, (Austin, 1993); and the other one only focused on viewing and utilized 7th and 10th graders in the sample. Finally, there was no precise explanation in the prior manuscripts related to ethnicity and parental monitoring.

The purpose of the current study is to address these limitations in prior literature so that the outcomes might enlighten future studies related to the effectiveness of parental monitoring of media usage. Using a larger sample of 5th to 12th graders' parents, we examined in detail various socio-demographic factors as predictors of parental monitoring of both television and video games during late childhood and adolescence. Consequently, we sought to replicate prior studies by using generally the same predictors, and extend it by looking at their relations with not only one type of natural intervention but also all four types. We have also focused on two various developmental periods, late childhood and adolescence (5th–12th grades). In the current study, the fundamental research question is as follows:

RQ₁: To what extent do four aspects of parental monitoring of media usage, such as co viewing, limit setting on the amount, limit setting on content, and active mediation about media differ by demographics such as gender, grade, ethnicity, and socio-economic status (SES) of 5th through 12th grade students' parents in Texas?

Method

Participants and Procedure

A sample of 799 fifth- ($n = 157$), sixth- ($n = 198$), seventh- ($n = 170$), eighth- ($n = 103$), ninth- ($n = 78$), tenth- ($n = 60$), eleventh- ($n = 20$), and twelfth- ($n = 13$) grade children and their parents participated in this study. Participants (53% female, 24% White, 21% African-American, 34% Hispanic, & 20% Asian) were from 38 open-enrollment charter schools in Texas. An Institutional Review Board approved the study on June 6, 2013. Children's demographics was gathered from their schools such as gender, race, free lunch status, etc. Parents completed the survey designed via Qualtrics and e-mailed to them during spring 2013.

After getting IRB approval, we initially got in contact with the central office of an open-enrollment charter school system in Texas. We shared the link of the survey, the Adult Involvement in Media survey (AIM), with the central office to distribute to the parents. Parents were informed about the importance of study via e-mail with the survey link; those who volunteered to join the study took the Adult Involvement in Media survey (AIM) in the 2013 spring semester. They were asked to fill out their children's student ID's to be able to match them with their parents. While some of the parents took the survey in their adolescents' schools, some took the survey at their homes. Demographic variables such as, genders, grades, ethnicities, and 2013 spring semester free, reduced, and paid lunch status to determine their socio-economic status (SES), were already collected by the school system. Thus, 5th–12th-grade students' demographics were provided by the school system.

Design and Analysis. Descriptive study design method was used in this study. A simple descriptive study was conducted. Parents of grade 5 through 12 students at open-enrollment charter schools in Texas reported on four aspects of monitoring for TV and video games: co-using, limit setting on amount, limit setting on content, and active mediation.

MANOVA was used to explain the demographic differences of gender, grade, socio-economic status (SES), and ethnicity on the parental monitoring of media usage with its four aspects such as parental co-viewing, limit setting on amount, limit setting on content, and active mediation.

Independent (or Predictor) Variables. Ethnicity, Gender, Grade, and SES were the independent variables. Ethnicity was coded as White (1), African-American (2), Hispanic (3), Asian (4); Gender was coded as Female (1), Male (2); and Socio-Economic Status (SES) was coded Free Lunch (1), Reduced Lunch (2), and Paid Lunch (3).

Control Variable(s). The schools were the control variables so that any possible effect of schools was excluded.

Dependent Variables. Parental Monitoring of Media with its four aspects such as parental co-viewing, limit setting on the amount, limit setting on content, and active mediation about media were the dependent variables.

Measures. The Adult Involvement in Media Scale (AIM) (Anderson, Gentile, & Buckley, 2007; Gentile, Lynch, Linder, & Walsh, 2004) was the measurement, with some modifications to recognize to what extent parents monitored their children. This scale had four aspects of parental monitoring such as co-viewing, limit setting on the amount, limit setting on content, and active discussion about media. The total item number was 17. There were 3 items in co-viewing, 5 in limit setting on the amount, 6 in limit setting on content, and 3 items in active discussion about media. A 5-point scale, with choices of “never” (1), “rarely” (2), “sometimes” (3), “most of the time” (4), or “all of the time” (5) was used in most of the items.

Results

To examine the demographic differences of gender, grade, SES, and ethnicity on the parental monitoring of media usage with its four aspects, such as parental co-viewing, limit setting on amount, limit setting on content, and active mediation, MANOVA was conducted. Descriptive statistics and bivariate correlations amongst subscales of the AIM were provided (see Table 1). The results section was divided into four socio-demographics: child sex, child grade, SES, and ethnicity. Under each section, the differences among four aspects of parental monitoring of media usage including co-viewing, limit setting on the amount, limit setting on content, and active mediation were discussed. Overall, findings showed no gender differences in parental monitoring, but age/grade differences were found with less parental monitoring (more autonomy or independence) of older children. Parental monitoring also differed by ethnicity and by household income. Asian parents were the most restrictive while Hispanic parents were the least restrictive. Parents with higher household income also reported more active mediation or engagement.

Table 1
Cronbach's Alpha Values, Descriptive Statistics and Bivariate Correlations Between
Subscales Parental Monitoring of Media Usage

Scale		<i>a</i>	<i>M</i>	<i>SD</i>	<i>Skew</i>	1	2	3	4
1	PCOVIEW	.65	2.8754	0.60921	0.162	–			
2	PLAMOUNT	.95	3.6848	1.0418	–0.619	0.20**	–		
3	PLCONTENT	.89	3.5398	0.99656	–0.545	0.32**	0.62**	–	
4	PACTIVEMEDIATE	.86	3.2712	0.92316	–0.011	0.46**	0.29**	0.49**	–

Note. **. Correlation is significant at the 0.01 level (2-tailed)

Child Sex

Parents did not report significant differences in three types of natural interventions: Co-viewing, limits on content, and active mediation according to their child(ren)'s gender ($F(4, 794) = 1.793, p = .128$; Wilk's $\Lambda = 0.991$). However, they did report a statistically significantly higher limitation on amount. The report explored that parents limit their sons on the amount of TV and video usage more than their daughters ($F(1, 797) = 5.023, p < .05$). Or, a daughter might not need that much parental monitoring of media usage compared to sons.

Child Grade

Parents' reports indicated that all types of natural interventions, co-viewing, limit setting on the amount, limit setting on content, and active mediation, and have statistically significant differences with grades. ($F(28, 2843) = 3.728, p < .0001$; Wilk's $\Lambda = 0.878$). Children of different ages are monitored distinctively by their parents in terms of co-viewing, limit setting on the amount, limit setting on content, and active mediation. That is, parental monitoring of media usage generally varies according to different age groups.

Social Co-Viewing

Social co-viewing of media tools, TV, and video games, was negatively related to grade levels, parents watch TV and play video games together with lower grade children the most ($r = -.17, F(7,791) = 3.54, p < .001$). Or, the higher the grades children are in, the lower the monitoring of media usage their parents carry out.

Limits on Amount

Similar to Co-viewing, there was an adversarial correlation between parental limitation on the amount of watching TV and playing video games and grade levels ($r = -.23$). As parents reported, they put fewer limitations when their children get older and their grade levels get higher ($F(7,791) = 7.82, p < .0001$). Or, parents limit their younger children more on the amount of watching TV and playing video games.

Limits on Content

Parental monitoring of content was negatively related to grade levels ($r = -.27$). When it comes to the content watched, the difference became more obvious. That is, the higher the grade children were in, the more the limitations their parents put on the content they watched ($F(7,791) = 9.67, p < .0001$). It could also easily be illustrated through means of 5th grade and 12th grade (3.810, 2.776). In other words, parents might not need to limit their younger children more on the amount of the content watched.

Active Mediation

As explained previously, active mediation occurs while children and parents use the media tool together. Since parents informed their children about the content disseminated, it was also related to parental monitoring of content ($r = .49$). There was also a negative correlation between active mediation and grade levels ($r = -.13$). Children in higher grades were not much interfered with by parents while watching TV and playing video games ($F(7,791) = 2.83, p < .01$). Or, younger children were intervened with more by parents while watching TV and playing video games. It is judicious to consider that parents want to acquaint their children with the things shown in media when they are in late childhood. On the other hand, they are also cognizant that when they get to be late adolescents, that they are almost young adults, and it is not easy to deal with and teach them about the media contents because their identity has already developed.

Socio-Economic Status (SES)

Parental socio-economic status was measured through lunch status of children. It was classified into three groups and coded as 0 for Free Lunch, 1 for Reduced Lunch, and 2 for Paid (Regular) Lunch. Parent reports showed that there is a significant difference in active mediation by SES. Parents whose children take reduced lunch mediate their children actively the most during the exposure ($M: 3.542$); and low-

income parents were the ones who monitored their children actively the least during the exposure ($M: 3.216$), $F(2,796) = 4.43$, $p < .05$. Quite interestingly, the highest-income parents mediated their children actively during the exposure less than the middle-income parents ($M: 3.242 < M: 3.542$). Perhaps, they considered that they did not need to mediate them because they thought schools already informed them about it. The reports did not show any significant difference in other three types of natural interventions by SES.

Ethnicity

As stated previously, participants' ethnicities were classified into four groups: 24% White, 21% African-American, 34% Hispanic, and 20% Asian. The reports from parents revealed a significant difference between ethnicity and parental monitoring of media usage, ($F(16, 2417) = 2.273$, $p < .005$; Wilk's $\Lambda = 0.955$). When we looked at the data, we noticed that the significant difference occurred only in parental limitation in amount. That is, Asian parents limited their children about the amount of time they spend with TV and video games the most ($M: 3.845$), and Hispanic parents limited their children about the amount they spend with TV and video games the least ($M: 3.595$), ($F(4,794) = 2.83$, $p < .05$).

Discussion

This study was designed to replicate and extend previous research on parental monitoring of media usage by studying a large sample of parents and children in late childhood and adolescence, two crucial developmental periods in which media becomes increasingly central. Since little work has explored the periods of late childhood and adolescence, considering the importance of these periods, knowing socio-demographic differences in parental monitoring of media usage might shed more light on how the social cognitive theory (Bandura, 2001) and the ecological systems theory (Bronfenbrenner, 1997) should be approached. In addition, no research has been conducted on ethnicity; the present study also extended previous research by including 5th–12th graders, and their ethnicities. By studying some of variables studied in prior work, but in a large sample, the current study has provided a more comprehensive snapshot of which of those predictors are significantly different on the subscales of parental media monitoring. We specifically examined the extent of four aspects of parental monitoring of media usage: co-viewing, limit setting on the amount, limit setting on content, and active mediation about media differ by demographics, such as gender, grade, ethnicity, and SES of 5th through 12th grade students' parents in Texas. Our study revealed that there were no significant differences among three types of natural interventions, namely co-viewing, limits on content, and active mediation, but there was significant difference between parent's limitations on amount by students' gender. There were also significant differences

between students' ages. Ethnicity and SES were other variables that came out significant in terms of parental monitoring of students. As households' income increased, their active mediation and/or engagement increased with their children's media use.

Our analysis on the demographic predictors of parental monitoring provided several stimulating trends. We found that parents did not intervene in areas like watching TV or playing video games together, nor did they limit content watched in these tools, and inform them during the exposure. This might mean that parents don't limit the content of the movie or video game as long as they are aware of the content of those. Because they know the content or watch together, they did not treat their children differently in terms of gender. This may also stem from the fact that children's routines of watching a movie/TV or playing a game can be a great learning opportunity for them when they do these things together with parents (Salomon, 1977). It was not surprising to see that there was a significant difference between parental media monitoring and the amount students watch or play because that may be a determining factor for student success. Those who spend more time with watching or playing games may study less, thus fail to pass classes or succeed in other academic endeavors. Surprisingly, one of our findings tells a different story in limiting amount of media usage between genders in media use than previous research (Desmond et al., 1985; Gentile et al., 2012; Warren, 2003). Our study discovered that parents were more likely to limit their sons on TV and video game's amount more than their daughters. Parents' beliefs and the culture they live in might be factors that shape the way they monitor the media usage. This is congruent with the overall design in the macro systems of Bronfenbrenner's (1997) ecological systems model. For example, girls were monitored and protected more than boys by Latino parents (Updegraff et al., 2010). It might be reasonable in a patriarchal family to have more control over males than on females. In this respect, if parental reports come from a patriarchal family, it makes sense for them to restrict boys more than girls.

The age group ranged from students attending the 5th–12th-grade; late childhood and adolescence. It was found that the differences between grades and four subscales of parental monitoring such as co-viewing, limits on the amount, limits on content, and active mediation were statistically significant. As stated previously, all subscales of parental monitoring of media usage were negatively correlated with children's grades. That is, overall parents are more likely to naturally interfere with their younger children's media use than their older children's media use. The results were consistent with the prior work that utilized different age groups (Bybee, Robinson, & Turov, 1982; Gentile et al., 2012; Hoffner & Buchanan, 2002; Nikken & Jansz, 2006). Consequently, all of the results replicated the previous ones and extended that parental monitoring of media usage decreased while the children's age increased gradually. Since relational aggression, which means to harm others jealously and deliberately, started to increase in late childhood, and reached the peak in late adolescence (Dishion & Piehler, 2009), the findings also illustrated the idea that parents might want to prevent such behaviors when they are about to

start. In addition, as the aforementioned studies (Bakken & Brown, 2010; Keijsers & Laird, 2010) showed, the relationship between parents and their children altered during adolescence because adolescents, as they grew, tried to control their behaviors and attain autonomy through proper adult reactions (Sher-Censor et al., 2011; Duncan & Sawyer, 2010). Thus, the adversarial correlation between child grade or age and parental monitoring of media use was reasonably supported by the prior research.

As for SES, parents' reports showed that there was no significant difference in co-viewing and restrictive mediating (limits on amount and limits on content) between parental incomes. This result was not congruent with the former study (Gentile et al., 2012) exploring that parents with lower incomes co-viewed more than parents with higher incomes did; and parents with higher incomes used more restrictive mediation. The same study did not find any difference between active mediation and parental incomes. However, in the present study, reports showed that there was a significant difference in active mediation by SES. Our study indicated that middle-income parents informed their children most actively during the exposure, but low-income parents were the ones who have mediated actively least during the exposure. These results are critical to take into consideration because families with less income are typically heavier consumers of media (Rideout, Foehr, & Roberts, 2010; Roberts & Foehr, 2008). In this respect, children of low-income parents were more likely to be exposed and affected by what was shown through media tools especially TVs and video games.

When it comes to the final point, ethnicity was found to be a significant predictor in only one aspect of parental monitoring: limitation in amount. That is, Asian parents were more likely to limit their children on the amount they spend with TV and video games. On the other hand, Hispanic parents limited their children on the amount they spend with TV and video games the least. At first glance, these findings can be explained with each ethnic group's general stereotype in education. Asian students are known for their high performances in education, whereas Hispanic students are known for their low performances in education. So superficially, we may assume that those who are more careful about watching TV and playing games are more likely to have more time to study, thus be more successful. Another thing is that cultures and beliefs might have influenced parental monitoring reports, which is coherent with the overall pattern in the macro systems of Bronfenbrenner's (1977) ecological systems model.

Conclusion and Implications

It can be concluded that gender was not found as a significant predictor in three aspects of natural interventions, namely co-viewing, limits on content, and active mediation, but was a significant predictor in one aspect, namely, limits on the amount. That is, parents are more inclined to limit their sons in the amount of media usage compared to their daughters. In addition, age was a significant factor

in all the aspects of natural interventions. Specifically, parents are less likely to monitor naturally their older children's media use than their younger children's media use. Considering the significant difference in the limits on amount between gender and in all aspects by school grade (age), schools that struggle with grade-specific and gender-variant problematic school behaviors and focusing on finding proper solutions might try to cooperate with parents and provide proper training regarding parental monitoring of media usage.

Also, study findings related to SES showed that SES was not found as a significant predictor in co-viewing, limits on content, and limits on the amount, but is significant in active mediation. That is, middle-income parents informed their children actively most during the exposure, but low-income parents were the ones who have mediated actively least during the exposure. Moreover, like gender, ethnicity was also found as a significant factor only in one aspect of parental monitoring, limits on the amount. Particularly, although Hispanic parents were the ones who limited their children about the amount they spend with TV and video games the least, Asian parents were the ones who limited the most. Exploring ethnicity and socio-economic status of parents in parental mediating helped us comprehend the importance of a culture and parental income in terms of monitoring media usage. This might be beneficial for parents from various ethnic groups and socio-economic status to figure out to what extent they need to monitor their adolescents. For example, they might look for some useful monitoring systems to implement by themselves to improve the effectiveness of media usage.

Limitations and Future Research

One of the limitations of this research is its scope. This study used only parental level data. Including student surveys that measures child reports about their parents' monitoring of media usage to compare with parental reports would be a proper way to check this research from another valid source. Also, conducting student and parent focus group interviews would add two more dimensions to investigate success and failures of applications of parental monitoring. This type of research is critical to helping us get the understanding of how parents monitor their children's media use. Another future research direction would be to investigate children of different ethnicities to see how their cultures affect their parental monitoring practices and children's media usage. This might help teachers know their students consumption habits better and further their success in school.

References

- Anderson, C. A., Gentile, D. A., & Buckley, K. E. (2007). *Violent video game effects on children and adolescents: Theory, research, and public policy*. New York, NY: Oxford University.

- Ang, R. P., Chong, W. H., Chye, S., & Huan, V. S. (2012). Loneliness and generalized problematic internet use: Parents' perceived knowledge of adolescents' online activities as a moderator. *Computers in Human Behavior*, 28, 1342–1347.
- Atkin, C., Greenberg, B., & Baldwin, T. (1991). The home ecology of children's television viewing: Parental mediation and the new video environment. *Journal of Communication*, 41, 40–52.
- Austin, E. W. (1993). Exploring the effects of active parental mediation of television content. *Journal of Broadcasting & Electronic Media*, 37, 147–158.
- Austin, E. W., Bolls, P., Fujioka, Y., & Engelbertson, J. (1999). How and why parents take on the tube. *Journal of Broadcasting & Electronic Media*, 43, 175–192.
- Bakken, J. P., & Brown, B. B. (2010). Adolescent secretive behavior: African American and Hmong adolescents' strategies and justifications for managing parents' knowledge about peers. *Journal of Research on Adolescence*, 20, 359–388.
- Bandura, A. (2001). Social cognitive theory of mass communication. *Media Psychology*, 3, 265–299.
- Barkin, S., Ip, E., Richardson, I., Klinepeter, S., Finch, S., & Krcmar, M. (2006). Parental media mediation styles for children aged 2 to 11 years. *Archives of Pediatric Adolescent Medicine*, 160, 395–401.
- Bickham, D. S., Vandewater, E. A., Huston, A. C., Lee, J. H., Caplovitz, A. G., & Wright, J. C. (2003). Predictors of children's electronic media use: An examination of three ethnic groups. *Media Psychology*, 5, 107–137.
- Borawski, E. A., levers-Landis, C. E., Lovegreen, L. D., & Trapl, E. S. (2003). Parental monitoring, negotiated unsupervised time, and parental trust: The role of perceived parenting practices in adolescent health risk behaviors. *Journal of Adolescent Health*, 33, 60–70.
- Borzekowski, D. L., & Robinson, T. N. (2001). The 30-second effect: an experiment revealing the impact of television commercials on food preferences of preschoolers. *Journal of the American Dietetic Association*, 101, 42–46.
- Brayden, R. M., MacLean, W. E., Bonfiglio, J. F., & Altemeier, W. (1993). Behavioral antecedents of pediatric poisonings. *Clinical Pediatrics*, 32, 30–35.
- Bronfenbrenner, U. (1997). Ecological models of human development. In M. Gauvain & M. Cole (Eds.), *Readings on the development of children*. New York, NY: Worth Publishers.
- Buck, D. J. (1988). Safe on playgrounds? The nature and causes of children's playground accidents and opportunities for prevention. *Public Health*, 102, 603–611.
- Buhrmester, D. (1998). Need fulfillment, interpersonal competence, and the developmental contexts of early adolescent friendship. In W. M. Bukowski & A. F. Newcomb (Eds.), *The company they keep: Friendship in childhood and adolescence*. New York, NY: Cambridge University Press.
- Buijzen, M., & Valkenburg, P. M. (2005). Parental mediation of undesired advertising effects. *Journal of Broadcasting & Electronic Media*, 49, 153–165.
- Bumpus, M. F., Crouter, A. C., & McHale, S. M. (2001). Parental autonomy granting during adolescence: Exploring gender differences in context. *Developmental Psychology*, 37, 163.
- Bybee, C., Robinson, D., & Turow, J. (1982). Determinants of parental guidance of children's television viewing for a special subgroup: Mass media scholars. *Journal of Broadcasting*, 26, 697–710.
- Cheng, T. L., Brenner, R. A., Wright, J. L., Sachs, H. C., Moyer, P., & Rao, M. R. (2004). Children's violent television viewing: are parents monitoring? *Pediatrics*, 114, 94–99.
- Connolly, J. A., & McIsaac, C. (2009). Romantic relationships in adolescence. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology*. (3rd ed.). New York, NY: Wiley.
- Crouter, A. C., MacDermid, S. M., McHale, S. M., & Perry-Jenkins, M. (1990). Parental monitoring and perceptions of children's school performance and conduct in dual- and single-earner families. *Developmental Psychology*, 26, 649.
- Desmond, R. J., Hirsch, B., Singer, D., & Singer, J. (1987). Gender differences, mediation, and disciplinary styles in children's responses to television. *Sex Roles*, 16, 375–389.

- Desmond, R. J., Singer, J. L., Singer, D. G., Calam, R., & Colimore, K. (1985). Family mediation patterns and television viewing: Young children's use and grasp of the medium. *Human Communication Research, 11*, 461-480.
- Dishion, T. J., Li, F., Spracklen, K., Brown, G., & Haas, E. (1998). Measurement of parenting practices in research on adolescent problem behavior: A multimethod and multitrait analysis. *Drug abuse prevention through family interventions*, 260-293.
- Dishion, T. J., & Piehler, T. F. (2009). Deviant by design: Peer contagion in development, interventions, and schools, (pp. 589-602). *Handbook of peer interactions, relationships, and groups*. New York, NY: Guilford.
- Dorr, A., Kovacic, P., & Doubleday, C. (1989). Parent-child coviewing of television. *Journal of Broadcasting & Electronic Media, 33*, 35-51.
- Duncan, R. E., & Sawyer, S. M. (2010). Respecting adolescents' autonomy (as long as they make the right choice). *Journal of Adolescent Health, 47*, 113-114.
- Eisenhart, M. (1991). Conceptual frameworks for research circa 1991: Ideas from a cultural anthropologist; implications for mathematics education researchers (Plenary address), in Proceedings of the Thirteenth Annual Meeting of PMENA, Blacksburg, Virginia.
- Galvan, A., Hare, T., Voss, H., Glover, G., & Casey, B. J. (2007). Risk-taking and the adolescent brain: Who is at risk? *Developmental Science, 10*, F8-F14.
- Gentile, D. A., Lynch, P. J., Linder, J. R., & Walsh, D. A. (2004). The effects of violent video game habits on adolescent hostility, aggressive behaviors, and school performance. *Journal of Adolescence, 27*, 5-22.
- Gentile, D. A., Nathanson, A. I., Rasmussen, E. E., Reimer, R. A., & Walsh, D. A. (2012). Do you see what I see? Parent and child reports of parental monitoring of media. *Family Relations, 61*, 470-487.
- Glik, D. C., Greaves, P. E., Kronenfeld, J. J., & Jackson, K. L. (1993). Safety hazards in households with young children. *Journal of Pediatric Psychology, 18*, 115-131.
- Greenberg, B. S., & Dominick, J. R. (1969). Racial and social class differences in teen-agers' use of television. *Journal of Broadcasting & Electronic Media, 13*, 331-344.
- Gross, L. S., & Walsh, R. P. (1980). Factors affecting parental control over children's television viewing: A pilot study. *Journal of Broadcasting & Electronic Media, 24*, 411-419.
- Hoffner, C., & Buchanan, M. (2002). Parents' responses to television violence: The third-person perception, parental mediation, and support for censorship. *Media Psychology, 4*, 231-252.
- Jackson, C., Brown, J. D., & Pardun, C. J. (2008). A TV in the bedroom: Implications for viewing habits and risk behaviors during early adolescence. *Journal of Broadcasting & Electronic Media, 52*, 349-367.
- Keijsers, L., & Laird, R. D. (2010). Introduction to special issue. Careful conversations: Adolescents managing their parents' access to information. *Journal of Adolescence, 33*, 255-259.
- Kerr, M., Stattin, H., & Burk, W. J. (2010). A reinterpretation of parental monitoring in longitudinal perspective. *Journal of Research on Adolescence, 20*, 39-64.
- Lac, A., & Crano, W. D. (2009). Monitoring matters meta-analytic review reveals the reliable linkage of parental monitoring with adolescent marijuana use. *Perspectives on Psychological Science, 4*, 578-586.
- Lee, S. J., & Chae, Y. G. (2007). Children's internet use in a family context: Influence on family relationships and parental mediation. *CyberPsychology & Behavior, 10*, 640-644.
- Lewis, M. K., & Hill, A. J. (1998). Food advertising on British children's television: a content analysis and experimental study with nine-year olds. *International Journal of Obesity and Related Metabolic Disorders: Journal of the International Association for the Study of Obesity, 22*, 206-214.
- Lin, C. A., & Atkin, D. J. (1989). Parental mediation and rulemaking for adolescent use of television and VCRs. *Journal of Broadcasting & Electronic Media, 33*, 53-67.
- Magoon, M. E., & Ingersoll, G. M. (2006). Parental modeling, attachment, and supervision as moderators of adolescent gambling. *Journal of Gambling Studies, 22*, 1-22.

- Marshall, S. J., Gorely, T., & Biddle, S. J. (2006). A descriptive epidemiology of screen-based media use in youth: a review and critique. *Journal of Adolescence*, 29, 333–349.
- Marshall, S. K., Tilton-Weaver, L. C., & Bosdet, L. (2005). Information management: Considering adolescents' regulation of parental knowledge. *Journal of Adolescence*, 28, 633–647.
- Nathanson, A. I. (2001). Mediation of children's television viewing: Working toward conceptual clarity and common understanding. *Communication Yearbook*, 25, 115–152.
- Nikken, P., & Jansz, J. (2006). Parental mediation of children's videogame playing: A comparison of the reports by parents and children. *Learning, Media and Technology*, 31, 181–202.
- Ormrod, J. E. (2012). *Human learning* (6th ed.). Upper Saddle River, NJ: Pearson Education.
- Padilla-Walker, L. M., & Coyne, S. M. (2011). "Turn that thing off!" parent and adolescent predictors of proactive media monitoring. *Journal of Adolescence*, 34, 705–715.
- Padilla-Walker, L. M., Nelson, L. J., Carroll, J. S., & Jensen, A. C. (2010). More than a just a game: Video game and internet use during emerging adulthood. *Journal of Youth and Adolescence*, 39, 103–113.
- Peterson, L., Ewigman, B., & Kivlahan, C. (1993). Judgments regarding appropriate child supervision to prevent injury: The role of environmental risk and child age. *Child Development*, 64, 934–950.
- Potter, W. J., & Byrne, S. (2009). Media literacy. *The Sage handbook of media processes and effects*, (pp. 345–357). Thousand Oaks, CA: Sage
- Radziszewska, B., Richardson, J. L., Dent, C. W., & Flay, B. R. (1996). Parenting style and adolescent depressive symptoms, smoking, and academic achievement: Ethnic, gender, and SES differences. *Journal of Behavioral Medicine*, 19, 289–305.
- Rideout, V., Foehr, U., & Roberts, D. (2010). *Generation M2: Media in the lives of 8- to 18-year-olds*. Menlo Park, CA: Kaiser Family Foundation.
- Roberts, D. F., & Foehr, U. G. (2008). Trends in media use. *The Future of Children*, 18, 11–37.
- Roberts, D. F., Foehr, U. G., & Rideout, V. (2005). *Generation M: Media in the lives of 8–18 year-olds*. Menlo Park, CA: Kaiser Family Foundation.
- Rosen, L. D., Cheever, N. A., & Carrier, L. M. (2008). The association of parenting style and child age with parental limit setting and adolescent MySpace behavior. *Journal of Applied Developmental Psychology*, 29, 459–471.
- Salomon, G. (1977). Effects of encouraging Israeli mothers to co-observe *Sesame Street* with their five-year-olds. *Child Development*, 48, 1146–1151.
- Santrock, J. W. (2008). *Essentials of life-span development*. New York, NY: McGraw Hill Higher Education.
- Schmitt, K. L. (2000). *Public policy, family rules and children's media use in the home*. Philadelphia, PA: University of Pennsylvania, Annenberg Public Policy Center.
- Sher-Censor, E., Parke, R. D., & Coltrane, S. (2011). Parents' promotion of psychological autonomy, psychological control, and Mexican-American adolescents' adjustment. *Journal of Youth and Adolescence*, 40, 620–632.
- St. Peters, M., Fitch, M., Huston, A. C., Wright, J. C., & Eakins, D. J. (1991). Television and families: What do young children watch with their parents? *Child Development*, 62, 1409–1423.
- Subrahmanyam, K., Greenfield, P., Kraut, R., & Gross, E. (2001). The impact of computer use on children's and adolescents' development. *Journal of Applied Developmental Psychology*, 22, 7–30.
- Taveras, E. M., Gillman, M. W., Kleinman, K. P., Rich-Edwards, J. W., & Rifas-Shiman, S. L. (2013). Reducing racial/ethnic disparities in childhood obesity: the role of early life risk factors. *JAMA Pediatrics*, 167, 731–738.
- Updegraff, K. A., Kim, J. Y., Killoren, S. E., & Thayer, S. M. (2010). Mexican American parents' involvement in adolescents' peer relationships: Exploring the role of culture and adolescents' peer experiences. *Journal of Research on Adolescence*, 20, 65–87.
- Valkenburg, P. M., Krckmar, M., Peeters, A. L., & Marseille, N. M. (1999). Developing a scale to assess three styles of television mediation: "Instructive mediation," "restrictive mediation," and "social viewing." *Journal of Broadcasting & Electronic Media*, 43, 52–66.

- Van der Voort, T., Nikken, P., & van Lil, J. (1992). Determinants of parental guidance of children's television viewing: A Dutch replication study. *Journal of Broadcasting & Electronic Media*, 36, 61-74.
- Vandewater, E. A., Rideout, V. J., Wartella, E. A., Huang, X., Lee, J. H., & Shim, M. S. (2007). Digital childhood: Electronic media and technology use among infants, toddlers, and preschoolers. *Pediatrics*, 119, e1006-e1015.
- Ward, L. M., Day, K. M., & Thomas, K. A. (2010). Confronting the assumptions: Exploring the nature and predictors of black adolescents' media use. *Journal of Broadcasting & Electronic Media*, 54, 69-86.
- Warren, R. (2001). In words and deeds: Parental involvement and mediation of children's television viewing. *Journal of Family Communication*, 1, 211-232.
- Warren, R. (2003). Parental mediation of preschool children's television viewing. *Journal of Broadcasting & Electronic Media*, 47, 394-417.
- Warren, R. (2005). Parental mediation of children's television viewing in low-income families. *Journal of Communication*, 55, 847-863.
- Weaver, B., & Barbour, N. (1992). Mediation of children's televiewing. *Families in Society*, 73, 236-242.



Educational TV Consumption and Children's Interest in Leisure Reading and Writing: A Test of the Validated Curriculum Hypothesis

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Educational TV Consumption and Children's Interest in Leisure Reading and Writing: A Test of the Validated Curriculum Hypothesis

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and Chelsea Ratcliff

The relationship between children's TV consumption and literacy outcomes is currently unclear, as past research has identified both linear and curvilinear trends. One explanation for the contradictory results is the varying content children consume; specifically, researchers have argued that research-based educational TV programming should be positively related to literacy outcomes whereas non research-based programming should be negatively related to literacy outcomes (what we refer to as the validated curriculum hypothesis). To test this hypothesis, students in grades 4 and 5 ($N = 120$) completed a survey assessing educational TV consumption and leisure reading/writing behaviors. The results upheld the validated curriculum hypothesis and revealed several key moderators including composite TV consumption and parents' reading behavior.

Learning to read and write is a fundamental goal of education; yet many students graduate unable to function beyond the minimum standards of literacy (Nueman, Copple, & Bredekamp, 2000). Thus, experts agree that the United States is experiencing a literacy crisis (see Haynes, 2011; Nueman et al., 2000). As a result, the methods used to teach reading and writing have become the subjects of controversy (Pinkham & Neuman, 2012). Noticeably absent from this debate about teaching methods, however, is a consideration of the environmental factors that might nurture reading and writing among children. For example, cultivating children's motivation to read and write for pleasure, a key predictor of literacy ability in

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adulthood (e.g., Sanacore, 2002), is a valuable step toward ensuring they will have strong literacy skills.

One environmental factor that may cultivate leisure reading and writing behavior in children is the mass media. To date, research has yielded conflicting results on this issue with studies finding both linear (positive and negative) and curvilinear trends (e.g., Ennomoser & Schneider, 2007). Despite ambiguity in the research literature, discussions on the effects of television on children's literacy have often focused on the negative (e.g., Huston, Wright, Marquis, & Green, 1999). Far less attention has been paid to potential positive effects of educational media on children's literacy behavior (e.g., Fisch, 2009). This is unfortunate as many television programs posit educational benefits, and both parents and researchers are interested in the impact such programming has on children.

The current study engages this question by examining the impact of two forms of educational TV content: research-based (RB) programming and non research-based (NRB) programming. RB programming is created specifically to teach children by using an educational curriculum developed by a team of experts (e.g., *Between the Lions*) whereas NRB programming is labeled educational but lacks the same curricula support (e.g., *Boohbah*). It has been suggested that this distinction may explain conflicting results as RB and NRB programming are thought to be positively and negatively related to literacy outcomes, respectively (Kirkorian, Wartella, & Anderson, 2008). Henceforth, we refer to this idea as the validated curriculum hypothesis. To date, no study has directly compared RB and NRB programming on children's literacy activities; thus, the veracity of the validated curriculum hypothesis is currently unknown.

Leisure Reading and Writing

Leisure reading is reading that is done out of one's own free will, and typically involves materials that reflect one's own choice, at a time and place that suits the individual reader (Clark & Rumbold, 2006). Children who read for fun have increased vocabulary skills (McKool, 2007) and more positive attitudes toward reading (Guthrie & Alvermann, 1999). More favorable attitudes are linked to reading achievement (McKenna & Kear, 1990) and pleasure reading later in life (Aarnoutse & van Leeuwe, 1998). Thus, becoming a lifetime reader is predicted by developing a love of reading at a young age (Sanacore, 2002).

Despite these benefits, evidence indicates that few children engage in leisure reading. In a seminal study on children's reading for pleasure, Walberg and Tsai (1984) asked 2,890 thirteen-year-olds how much time they spent leisure reading the day before. The study showed that nearly half of the sample (44%) marked "none" whereas only 5% indicated they read for more than three hours the previous day. A more recent study provides similar results: Juster, Ono, and Stafford (2004) surveyed more than 3,000 children aged 6–17 about how they spent their leisure time via 24-hour time-use diaries. The study showed that

children engaged in leisure reading for about one hour and 17 minutes per week. To put this statistic into context, this amount represented less than 9% of children's total television viewing time, which occupied nearly 15 hours per week at the time the study was conducted. The results also showed that leisure reading declines over time. When the authors averaged the weekly time expenditures across four different age groups (6–8, 9–11, 12–14, 15–17), they found that older teens engaged in leisure reading the least averaging 50 minutes per week, or 7–10 minutes per day.

Less is known about leisure writing. Much of the literature concerning children's literacy focuses on the importance of reading. The assumption here is that developing a child's ability to read produces better readers *and* writers. Nonetheless, children do write for pleasure. Moje, Overby, Tysvaer, and Morris (2008) surveyed more than 1,000 students in 6th–10th grade in a predominately Latino community. The study found that adolescents do write outside of school; however, they do not write texts that adults typically value. For example, students in this study reported that when they wrote "outside of school" they did so most often by emailing, chatting, and blogging. When asked if they wrote short stories or poetry (i.e., creative writing), most students reported that they engaged in these kinds of activities less than once per week.

If we consider blogging a form of leisure writing, then some evidence indicates that this may be a popular leisure activity among youth. A study by Herring, Kouper, Scheidt, and Wright (2004) suggests that a significant portion of the total blog population is inhabited by writers younger than 20 years of age. What is unknown is the trajectory of leisure writing over time, and whether environmental factors, such as parental influences or the media, can encourage leisure writing.

Television and Literacy

Much research attention has been devoted to unpacking the relationship between television viewing and reading. Yet published studies offer contradictory results. For example, some researchers have found a negative linear relationship between television viewing and reading, such that television displaces time children could have spent reading and/or engaging in other activities that are thought to promote reading skills (see Beentjes & van der Voort, 1988). Other researchers have argued that the relationship between television viewing and reading is curvilinear (Ennomoser & Schneider, 2007). In her classic study, Neuman (1988) synthesized eight statewide assessments of the National Assessment of Educational Progress, and noted that differences in reading scores were minimal among children who watched less than four hours of television per day. However, reading scores dropped sharply among children who watched more than four hours. Some researchers even report a positive relationship, arguing that reading skills actually improve as a result of reading subtitles on the screen (Koolstra, van der Voort, & van der Kamp, 1997).

The likely culprit for these contradictory findings concerns the measure of television exposure used in these studies. The majority of the research conducted in this

arena has focused on time spent with the television and not on the content that was watched. Content is of crucial importance to this debate, because *educational* programming is correlated with learning outcomes in children, whereas exposure to entertainment content is associated with poorer cognitive development and lower academic achievement (see Kirkorian et al., 2008 for a review).

To date, the most researched children's educational television program is *Sesame Street*. In the short-term, studies of three- to five-year-olds show that heavy viewers of *Sesame Street* have higher skills related to the alphabet, numbers, and shapes than do lighter viewers (Fisch & Truglio, 2001). In the long run, longitudinal studies show that exposure to educational programs like *Sesame Street* in preschool is associated with significantly higher grades in English, math, and science in high school, even after statistically controlling for other known predictors of academic performance (e.g., language skills, family background). Of particular import to the current study, these studies also found that educational television viewing in preschool is associated with more leisure reading in high school (Fisch & Truglio, 2001).

Sesame Street is a model for success because of the way it is produced and created. The creation of every episode of *Sesame Street* is a collaborative one, involving a team of educators, producers, and researchers. Moreover, each program is designed to teach a specific curriculum goal, and each program is tested and refined before it is aired to ensure that viewers learn the intended lesson (i.e., it is an example of RB programming). It should come as no surprise, then, that other shows that have used similar production models have demonstrated parallel effects. For example, *Between the Lions* is another PBS series that teaches concepts of print, phonemic awareness, and letter-sound correspondence among early readers. Linebarger (2000) presented 17 half-hour episodes to children in kindergarten and first grade over a period of 3–4 weeks. Using an experimental pretest/posttest design, viewers' and non-viewers' reading performance was assessed on several levels: specific program content, emergent literacy skills such as letter naming, and more generalized reading ability via a standardized test. The study showed that kindergarten viewers performed significantly better than non-viewers across all three measures, even after statistically controlling for a variety of background variables. However, there were no significant differences among first graders, largely due to a ceiling effect; that is, first graders already possessed the bulk of skills that *Between the Lions* teaches. Thus, when programs are designed to teach a specific educational skill rather than merely entertain, they often produce the intended results among the target child audience (Kirkorian et al., 2008).

Yet many programs that claim to be educational are not RB programming. For example, *The New Adventures of Winnie the Pooh* was labeled as a literacy program because it was based on a popular children's book series (Fisch, 2009). However, the program was not created, written, or produced in the same way that programs such as *Between the Lions* are. Research supports the idea that not all educational programs are cut from the same cloth. In their study of infants' and toddlers' television viewing and learning outcomes, Linebarger and Walker (2005) found that early exposure to programs like *Blue's Clues* was positively related to subsequent language

vocabulary and expressive language, whereas viewing *Teletubbies* was negatively related to these outcomes. The authors concluded that the loose narrative structure and “baby talk” modeled in *Teletubbies* was likely responsible for the negative effect.

Although several studies have examined the relationship between educational programming and school readiness (Fisch, 2009), there are far fewer studies that have attempted to link educational television to children’s motivation to read and write for pleasure. Linebarger’s (2000) study provides some evidence that educational programming can stimulate motivation to read and write for fun. In that study, first grade viewers of *Between the Lions* were significantly more likely than non-viewers to read books alone or write during free time. To our knowledge, the only program created specifically to encourage leisure reading and writing was *Ghostwriter*. *Ghostwriter* was a RB television series created for children aged 7–10 that aired from 1992–1995. The program featured a team of children who effectively used reading and writing to solve mysteries with the aid of Ghostwriter, an invisible ghost who could only communicate via reading and writing. A primary goal of the program was to provide compelling opportunities for the child viewer to read and write (Williams & Hall, 1994). Although the results of *Ghostwriter*’s effectiveness are proprietary, Fisch (2009) reports that the show was successful in meeting its mission. Not only did viewers choose to read the print that was shown on screen in *Ghostwriter*, but more than 500,000 children participated in *Ghostwriter* mail-in contests that required viewers to engage in activities like writing an original song or creating their own superhero. Thus, it seems this show was particularly effective in its ability to motivate children to read and write for pleasure.

Theoretical Explanations for the Relationship Between Educational TV and Literacy

Having established that exposure to educational programs is associated with positive learning outcomes such as school readiness and reading comprehension, what theoretical mechanisms are responsible for these effects? One theoretical explanation is Anderson, Huston, Schmitt, Linebarger, and Wright’s (2001) early learning model (ELM). This model accounts for the effects of exposure to educational television content over time, by positing that early educational television viewing influences pre-academic skills, motivation, readiness to learn, and social behavior patterns (e.g., absence of restlessness and distractibility) with which children enter the first years of schooling. The model further predicts that early educational television viewing results in an upward spiral, such that children who watch educational television come to school with the necessary skills for academic success. As a result, children who demonstrate good skills at the onset of their education are likely to be placed in higher aptitude groups, receive more attention from their teachers, and be academically motivated (Entwistle,

Alexander, & Olson, 1997). In addition, these early successes are correlated to the types of activities in which children choose to engage; for example, skilled readers may choose to read more on their own. Thus, ELM posits that early exposure to educational television is predictive of academic success, which in turn predicts successful long-term learning trajectories.

ELM also assumes that children who do *not* watch educational television will not experience the same long-term success. One explanation for this downward trajectory concerns the way NRB programs are produced. Fisch's (2009) argues that NRB programs tax the working memory of young viewers because they typically present narrative content and educational content at the same time. Indeed, this idea is supported by Lang's limited capacity model of motivated mediated message processing (LC4MP; Lang, 2000, 2006). A major assumption of LC4MP is that individuals have a limited amount of cognitive resources to dedicate to perception, understanding, and memory. The theory further assumes that because cognitive resources are limited, they may become depleted by complex messages. Applied in this context, viewers' mental resources become strained when trying to process not only the educational content but also the narrative in which it is fixed. Thus, educational programs are most successful when educational information and the narrative information are integrated (Fisch, 2009). When this happens, the mental resources available for understanding both types of content complement rather than compete with each other, and both types of information are processed equally well. This model is consistent with a large body of existing research on children's comprehension of television (for a review, see Fisch, 2009).

In summary, available research suggests that educational media may yield positive educational benefits. The early learning model would predict that exposure to RB programming may contribute to children's academic success by encouraging increased leisure reading (H_{1a}) and writing (H_{1b}). These early successes then impact the kinds of activities in which children choose to engage, such that good readers or writers may choose to read or write more during their free time. In contrast, LC4MP would predict that exposure to NRB programming may strain mental resources and hinder knowledge retention, a situation that decreases the odds children will engage in leisure reading (H_{2a}) or writing (H_{2b}). We refer to this pattern of findings as the validated curriculum hypothesis.

Moderating Variables

Exposure to educational television programming may not affect all children in the same way. The impact of educational television exposure depends on several factors that might make these shows more beneficial for some viewers than for others. One such factor is sex of the child. A comprehensive review of the research literature conducted by the National Endowment of the Arts (2007) noted that across age demographics, girls and women

spend more time leisure reading than boys and men. As a result, girls and women score higher on reading and writing tests than their male counterparts.

One explanation for this difference could be that boys spend more time with the media. A recent study by the Kaiser Family Foundation (Rideout, Foehr, & Roberts, 2010) reveals that boys spend about an hour more with the media than girls do each day (11 versus 10 hours, respectively). In contrast, girls are significantly more likely to read than boys each day (43 versus 33 minutes respectively). It follows that boys who watch more television spend less time reading, which is related to poorer academic performance and less motivation to read. However, there is no evidence of a sex difference when it comes to exposure to educational television. Thus, the sex gap in reading scores between boys and girls is not due to the fact that girls watch more educational television than boys do. Presumably, if girls and boys watch equal amounts of educational television, we should see similar effects on literacy. Given the role sex might play in the relationship between exposure to educational television and literacy outcomes, we asked whether the relationship between educational television consumption in early childhood and leisure reading (RQ₁) and writing (RQ₂) was moderated by sex.

A second variable that may moderate the relationship between educational TV consumption and literacy outcomes is overall time spent with television. Scholars have noted that too much television often results in poorer academic outcomes presumably due to displacement (see Kirkorian et al., 2008). In this case, it would not matter how much educational television a child is watching. If he or she is spending too much time with television overall, then there will be little opportunity to engage in leisure reading and writing activities. On the other hand, the aforementioned Kaiser Family Foundation study (Rideout et al., 2010) found that American children aged 8–18 years old are media multitaskers. That is, children use more than one medium at a time. In fact, the study showed that more than 50% of the adolescents sampled reported using another medium “most” or “some” of the time while they were reading. Thus, it could be that leisure reading and writing activities take place even if the TV is on. Therefore, we also asked whether the relationship between educational television consumption in early childhood and leisure reading (RQ₃) and writing (RQ₄) was moderated by current TV consumption.

A third variable to consider in the relationship between early educational television consumption and leisure reading and writing is family literacy habits. Evidence indicates that parental and sibling leisure reading is positively related to children’s interest in leisure reading (Lenhart & Roskos, 2003; McKool, 2007). For example, McKool (2007) examined children’s motivations to read for pleasure in a study of 199 fifth graders. The study showed that avid readers were more likely to report that their parents or siblings read books recreationally than were reluctant readers. McKool concluded that when recreational literacy activities are modeled regularly, the likelihood that children will engage in leisure literacy activities increases. However, whether family literacy habits moderate the relationship between early educational television exposure and childhood leisure reading (RQ₅) and writing (RQ₆) is unknown.

Methods

Sample

The survey was conducted in a mid-size town located in the Midwest. Past research has found that lifetime leisure reading and writing habits tend to solidify around the fifth grade (e.g., McKenna, Ellsworth, & Kear, 1995); thus, fourth and fifth graders ($N = 120$) were recruited to the study from two local schools. One of the schools was a public elementary school (kindergarten through fifth grade) and the other was a private Christian school (kindergarten through twelfth grade). Students were asked to complete a brief survey in exchange for a small reward (a \$3 yo-yo). The schools were also provided with compensation on a per student basis (\$5 per student). None of the relationships examined in this study varied by school (i.e., public versus private), so that variable is not included in the analyses.

Participants ranged in age from 8–12 years old ($M = 10.27$, $SD = .87$) and were evenly split in terms of sex (59 girls, 59 boys, 2 missing data). Slightly more fourth graders ($n = 67$) participated than fifth graders ($n = 49$). The sample was diverse compared to the U.S. population: 56.8% White, 9.3% Black, 17.8% Hispanic/Latino, 2.5% Asian/Pacific Islander, 0.8% Native American/American Indian, 5.9% other, and 6.8% checked multiple racial categories.

Procedure

Principals of elementary and middle schools in the area were contacted through mail. The mailings explained the purpose of the study, the benefits to the school, and the benefits to the students. Thirty-five letters were mailed out to local principals and two schools responded.

Once a suitable time had been established between the researchers and the teachers, researchers visited individual classrooms to recruit students. On the first visit, researchers provided all students with consent packets that needed to be taken home to their parents to be signed and then brought back to the school. A drop box was then left in the classroom for approximately one week to collect returned packets. After sufficient time had passed, the researchers contacted the teachers again to set up a second visit.

During the second visit, students with complete consent packets were allowed to participate in the study. Before beginning, students were informed that the study concerned reading and writing for fun and that they should think about non-school reading and writing when answering those questions. Surveys were then passed out to participating students. Researchers and homeroom teachers monitored participants and answered questions during the survey.

Outcome Variables

Leisure Reading/Writing. Participants responded to a question that asked, "How often do you do these things?" Several activities were located below the question. Participants indicated how often they did each of the activities using a four-point scale ("never," "a little," "a lot," "always"; scored 1–4). Two of the activities listed were "read books for fun" ($M = 2.47$, $SD = 1.04$) and "write stories for fun" ($M = 1.82$, $SD = .85$).

Predictor Variables

RB Programming Consumption. Participants were provided with a list of four children's programs that aired in the region of the study when the children were 3–6 years of age. That age range has been identified as crucial from a literacy and developmental standpoint (Wellman et al., 2011).

Early childhood consumption of two RB educational TV programs was measured with the question, "How much did you watch [*Between the Lions*, *Reading Rainbow*] growing up?" For each program, participants were provided with four response options: *never*, *a little*, *a lot*, *always*. Responses to the two items were combined into an RB programming consumption index ($M = 1.93$, $SD = .88$).

NRB Programming Consumption. Early childhood consumption of two NRB educational TV programs was measured with the question, "How much did you watch [*Boobah*, *Teletubbies*] growing up?" For each program, participants were provided with four response options: "never," "a little," "a lot," "always." Responses to the two items were combined into an NRB programming consumption index ($M = 1.74$, $SD = .79$).

Program selection was influenced by the Ready to Learn program funded for the past 15 years by the Department of Education, the Corporation for Public Broadcasting, PBS, local media stations, and other private donors. Ready to Learn capitalized on the research recommendations of the National Reading Panel to develop and refine children's educational programming that would "emphasize the fundamental skills necessary to raise a nation of readers" (Corporation for Public Broadcasting, 2011, p. 1).

Ready to Learn has supported research-based programming for PBS including *Between the Lions* and *Reading Rainbow*. These two programs were selected because (1) they specifically address literacy skills, (2) they are part of the Ready to Learn initiative, and (3) they were televised on local PBS stations when the participants of this study were in their formative years. *Boobah* and *Teletubbies* were selected as NRB programs because (1) they do not have research-based content, (2) they claim to be E/I (Educational/Informational) content, and (3) they were televised on area broadcast stations when the participants of this study were in their formative years.

Controls/Moderators

Demographics. Sex was measured with a close-ended item (*male, female*) and age was measured with an open-ended item ("How old are you?").

Parent/Sibling Leisure Reading Behavior. Children were asked to respond to the following statements, "My parents like to read for fun" and "I like reading books with my brothers and sisters" using 7-point response scales ranging from *strongly disagree* to *strongly agree* (Parents: $M = 3.26$, $SD = 1.33$; Siblings: $M = 2.73$, $SD = 1.33$).

TV Consumption—Composite Week. Children's current TV consumption was measured by asking their parents (in the consent packets) to report how many hours of TV their child watched on a typical weekday and on a typical weekend day. Responses to these two questions were transformed into a composite week: weekday hours $\times 5$ + weekend hours $\times 2$ ($M = 21.26$, $SD = 11.77$).

Power Analysis

G*Power was utilized to calculate the power of the design to detect an increase in R^2 in a linear multiple regression analysis ($\alpha = .05$, 4 tested predictors, 9 total predictors, $N = 120$). Three power analyses were conducted for three standard effect sizes, small ($f^2 = .02$), medium ($f^2 = .15$), and large ($f^2 = .35$) (Faul, Erdfelder, Buchner, & Lang, 2009). The design had excellent power to detect a large (.99) or medium effect (.94), and moderate power to detect a small effect (.63).

Results

To address the hypotheses and research questions, eight hierarchical regressions were carried out with leisure reading and writing as the dependent variables and the other variables entered by block: block 1 (age, sex, TV consumption—composite week, parent/sibling leisure reading behavior), block 2 (RB programming consumption, NRB programming consumption), block 3 (interactions). All continuous predictors were centered per the guidelines of Aiken and West (1991) (see Table 1).

Educational TV Consumption—RB/NRB and Reading/Writing

For leisure reading, the analysis was significant at block 1, $r = .40$, $R^2 = .16$, F change (5, 98) = 3.61, $p = .005$, and block 2, $r = .48$, $R^2 = .23$, F change (2, 96) = 4.33, $p = .016$. An examination of individual predictors at each block revealed that sibling reading and RB exposure were positively related to leisure

Table 1
Hierarchical Regression Analyses Predicting Children's Leisure Reading and Writing Behavior

	Reading			Writing		
	<i>b</i> (<i>SE</i>)	<i>t</i>	<i>R</i> ² Δ	<i>b</i> (<i>SE</i>)	<i>t</i>	<i>R</i> ² Δ
Block 1: Age	-.02 (.11)	-.20	.16**	.02 (.09)	.17	.08
Sex	.12 (.20)	.60		-.12 (.17)	-.70	
TV Consumption	-.12 (.10)	-1.17		.05 (.09)	.59	
Parent Reading	.03 (.10)	.29		.02 (.09)	.28	
Sibling Reading	.35 (.11)**	3.23		.24 (.09)**	2.68	
Block 2: Edu TV – RB	.31 (.11)**	2.80	.07*	.26 (.10)**	2.75	.07*
Edu TV – NRB	-.25 (.11)*	-2.18		-.08 (.09)	-.90	
Block 3a: RB × Sex	-.02 (.23)	-.10	.00	-.30 (.19)	-1.57	.03
NRB × Sex	-.13 (.23)	-.59		.26 (.19)	1.36	
Block 3b: RB × TV Consumption	.19 (.13)	1.46	.06*	-.15 (.11)	-1.32	.02
NRB × TV Consumption	-.46 (.17)**	-2.69		-.06 (.15)	-.38	
Block 3c: RB × Parent Reading	-.01 (.14)	-.07	.00	-.03 (.11)	-.29	.05†
NRB × Parent Reading	.03 (.12)	.27		.19 (.09)†	1.98	
Block 3d: RB × Sibling Reading	-.02 (.13)	-.12	.00	.12 (.11)	1.10	.02
NRB × Sibling Reading	.08 (.12)	.64		-.01 (.10)	-.03	
<i>N</i>		113			110	

Notes. Hierarchical regression analysis with $R^2\Delta$ reported for each block. To minimize power loss, separate regressions were carried out for each set of interaction variables, labeled 3a – 3d. All variables (except Age and Sex) were mean centered. † $p < .10$ * $p < .05$ ** $p < .01$

reading (support for H_{1a}) whereas NRB programming consumption was negatively related to leisure reading (support for H_{2a}) (see Table 1).

For leisure writing, the regression was significant at block 2, $r = .39$, $R^2 = .15$, F change (2, 93) = 3.92, $p = .023$, but not block 1, $r = .29$, $R^2 = .08$, F change (5, 95) = 1.72, $p = .138$. An examination of individual predictors at block 2 revealed that RB programming consumption was positively related to leisure writing (support for H_{1b}).

Moderator Analysis: Sex

RQ_1 – RQ_2 queried whether sex moderated the relationship between exposure and literacy behaviors. To minimize power loss, separate regressions were

conducted for each set of interactions (blocks 3a–3d in Table 1). Sex (block 3a) was not a significant moderator for leisure reading, $r = .48$, $R^2 = .23$, F change (2, 94) = .27, $p = .766$, or writing, $r = .43$, $R^2 = .18$, F change (2, 91) = 1.48, $p = .234$.

Moderator Analysis: TV Consumption—Composite Week

RQ₃–RQ₄ queried whether current TV consumption moderated the relationship between exposure and literacy behaviors. TV consumption – composite week (block 3b) was a significant moderator for leisure reading, $r = .53$, $R^2 = .28$, F change (2, 94) = 3.81, $p = .026$, but not for writing, $r = .42$, $R^2 = .18$, F change (2, 91) = 1.28, $p = .282$. An examination of block 3b revealed a significant interaction between educational NRB programming consumption and TV consumption for leisure reading. Per the guidelines of Hayes and Matthes (2009), the interaction was probed at one standard deviation above and below the mean of TV consumption—composite week.

NRB programming consumption was negatively related to leisure reading for individuals with TV consumption 1 standard deviation above the mean ($b = -.64$, $SE = .20$, $t = -3.17$, $p = .002$, 95% CI for b : -1.0393, -.2389) and at the mean ($b = -.25$, $SE = .11$, $t = -2.31$, $p = .023$, 95% CI for b : -.4729, -.0359), but not one standard deviation below the mean ($b = .13$, $SE = .20$, $t = .67$, $p = .507$, 95% CI for b : -.2575, .5179). In other words, NRB programming consumption was negatively related to leisure reading for those children who currently consumed average or more TV. Light TV consumers did not exhibit the negative effect (see Figure 1). The interaction explained approximately 4% of the variance in leisure writing behavior, R^2 change for the interaction = .04, $F(1, 95) = 5.43$, $p = .022$.

Figure 1
Interaction Between NRB Programming Consumption and TV Consumption

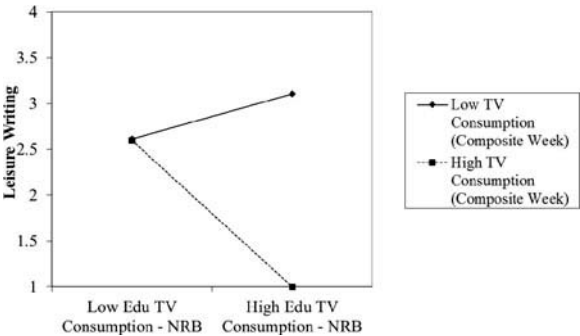
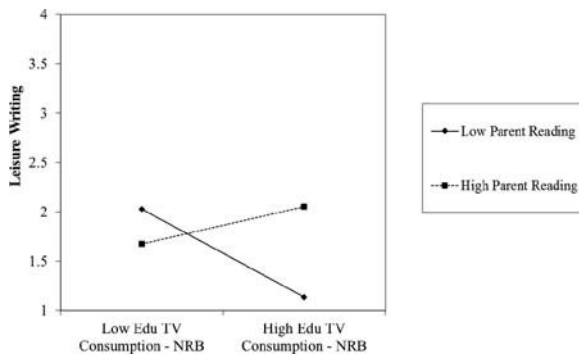


Figure 2
Interaction Between NRB Programming Consumption and Parent Reading Behavior



Moderator Analysis: Family Literacy Habits

RQ₅–RQ₆ queried whether family literacy habits (parent and sibling reading behavior) would moderate the relationship between exposure and literacy behaviors. Parent reading (block 3c) was not a significant moderator for leisure reading, $r = .48$, $R^2 = .23$, F change (2, 94) = .05, $p = .950$, but it was for leisure writing, $r = .46$, $R^2 = .21$, F change (2, 91) = 3.09, $p = .050$. For leisure writing, an examination of block 3c revealed a significant interaction between educational NRB programming consumption and parent reading. NRB programming consumption was significantly related to leisure writing for individuals with parent reading scores 1 standard deviation below the mean ($b = -.24$, $SE = .11$, $t = -2.15$, $p = .035$, 95% CI for b : $-.4556$, $-.0175$), but not at the mean ($b = -.07$, $SE = .09$, $t = -.75$, $p = .458$, 95% CI for b : $-.2511$, $.1140$), or one standard deviation above the mean ($b = .10$, $SE = .12$, $t = .84$, $p = .401$, 95% CI for b : $-.1347$, $.3336$). In other words, NRB programming consumption was negatively related to leisure writing for children with non-reading parents. Children with parents who liked to read did not exhibit the negative effect (see Figure 2). The interaction explained roughly 5% of the variance in leisure writing, R^2 change for the interaction = .05, $F(1, 92) = 6.17$, $p = .015$. Sibling reading (block 3d) was not a significant moderator of leisure reading, $r = .48$, $R^2 = .23$, F change (2, 94) = .25, $p = .783$, or writing, $r = .41$, $R^2 = .17$, F change (2, 91) = .85, $p = .433$.

Discussion

In line with the validated curriculum hypothesis, we found that exposure to RB educational television was positively related to children's leisure reading and writing behavior at a crucial juncture in literacy development (i.e., forth–fifth grade).

Alternatively, exposure to NRB programs was negatively related to children's leisure reading. The negative relationship between NRB consumption and literacy behaviors was larger for children with increased overall time spent watching television (increased displacement) and limited parental reading behaviors at home (limited modeling). Our findings have several important implications.

First, not all educational shows were positively related to literacy outcomes. We postulated that RB educational shows would be positively related to literacy outcomes because they are designed around a curriculum to teach a specific academic or socio-emotional lesson. Consistent with this idea, the work of Linebarger and colleagues has shown that *Between the Lions* promotes basic literacy skills for early readers (e.g., Linebarger, 2000; Linebarger, Kosanic, Greenwood, & Doku, 2003), and several studies have been published that show *Reading Rainbow* is effective at promoting literacy development (e.g., Moses, 2011; Moses & Duke, 2008). On the other hand, *Boohbah* and *Teletubbies* may be labeled as educational—indeed, both of these programs are/were rated as E/I (“educational/informational”) on PBS—but they are not produced and created in the same way as RB educational programs. It is no surprise, then, that exposure to programs like *Teletubbies* and *Boohbah* was negatively related to leisure reading. Indeed, the results presented here are similar to Linebarger and Walker's (2005) study that found that exposure to *Teletubbies* was negatively related to children's learning outcomes. Thus, this study extends past work on television, literacy, and young children by providing data, in a comparative context, that is consistent with the notion that the type of educational television children watch matters.

An alternative explanation to these findings concerns the target age of the NRB programs. *Teletubbies* is a program made for infants, and although *Boohbah* claims to be a show for children older than three, many experts argue that this program is clearly targeting a younger demographic (Zurawick, 2004). Yet there is a lack of evidence supporting the educational or developmental benefits to media exposure for children less than two years of age (see Kirkorian et al., 2008). In fact, screen time in infancy is associated with expressive language delays (Zimmerman, Christakis, & Meltzoff, 2007). Accordingly, we could see a downward spiral develop: children who were encouraged to watch television at an early age are now watching more television in general, which displaces leisure literacy activities.

The results of this study lend some support to Anderson and colleagues' (2001) early learning model. This model would predict that effects observed here were due to the influence that RB educational programming had on children's pre-academic skills and level of motivation. If we assume that the children in this study who watched RB programs began school with the literacy skills necessary to do well, then this early exposure may explain, at least in part, the correlation between exposure and the types of activities in which children choose to engage—in this case, leisure reading and writing. In contrast, exposure to NRB programs may strain mental resources and hinder knowledge retention, a situation that may negatively predict children's leisure reading. Of course, we did not specifically measure such

depletion in this study. Future research should examine the effects of NRB programming on children's cognitive resources and its relationship to academic success.

RQ₅ and RQ₆ concerned family literacy habits and the relationship between early educational television exposure and children's leisure reading and writing. Here, it seems that parental literacy habits (and not siblings) moderated the hypothesized relationship. These findings bolster existing research that has found that parental influences are among the most important predictors of children's early literacy (Duursma, Augustyn, & Zuckerman, 2008). For example, the benefits ascribed to RB programming in this study could be a byproduct of parents—notably those who are active readers—recommending more educationally oriented programming to their children and/or modeling leisure reading behavior. A related variable that should be considered is parental mediation. Parental mediation is the extent to which parents actively mediate children's consumption of TV (Valkenberg, Krcmar, Peeters, & Marseille, 1999). The current study did not measure parental mediation, but given the importance of parent's reading behavior—and past research suggesting the value of parental mediation (Nathanson, 2001, 2015)—future research should examine whether parental mediation is a significant moderator of the patterns observed herein. The lack of a significant finding for siblings is harder to explain. One explanation for this null finding is that the majority of the children in this sample either did not have a sibling or had siblings younger than them. Unfortunately, we did not ask children or parents to report this information. Future research should continue to examine the role of the family in conjunction with media use to glean a clearer picture of children's enduring literacy habits.

Finally, this study also found that NRB educational television consumption was negatively related to leisure writing for children with non-reading parents. For these children, it appears as though they are receiving a double dose of messages discouraging leisure literacy behaviors; that is to say that children's early exposure to non-research based programs likely discouraged them from literacy activities, and they live in a home where literacy activities like reading are not modeled for them. These children are arguably the most disadvantaged. Future work should continue to study parental leisure habits in addition to television habits to examine whether these factors mutually influence one another over time.

Limitations and Future Directions

The current study was an examination of educational television viewing in early childhood and its relationship with current leisure literacy activities, as reported by children. Given the correlational nature of this project, we are unable to determine causality. It could be that children who already had an interest in leisure literacy activities at a young age were seeking out programs like *Reading Rainbow* because it was mutually reinforcing for them. Future work that employs an experimental approach is needed to untangle causality.

A second limitation is that the current study only examines four programs. Future research should examine whether the pattern observed here is replicated for a larger subset of children's programming. For example, researchers could examine children's consumption of all PBS, ABC, CBS, NBC, Disney, and Nick Jr. programs that bear the E/I label.

A third limitation concerns the use of children's retrospective reporting of their educational program exposure. Asking children—or anyone for that matter—to recall the frequency of their behavior 3–10 years prior to the survey is an endeavor fraught with error. The differences observed in the present study, for example, could reflect differences in recall for programs watched at a younger age (e.g., *Boobah*). There is evidence to indicate that normal memory, despite its flaws, is a reliable source of reports about the past. In their review, Brewin, Andrews, and Gottlieb (1993) found that, in general, recall of straightforward events with minimal subjective judgment represents sufficiently reliable information. Yet, a study based on children's recall of television programming is more accurately viewed as preparation for a larger research effort than a definitive statement in and of itself. Indeed, the ideal study would track children's consumption of various programs across time and examine whether that consumption was related to literacy skills and behaviors. A longitudinal study of this nature will require significant time and resources as well as a body of literature supporting the logic of the inquiry. The current study serves the latter goal. Barring that, researchers could also develop and validate retrospective measures for assessing past viewing behavior. If researchers could decipher the error rate of such measures, then it would be possible to model that error and perhaps enhance the accuracy of retrospective analyses.

Despite these limitations, the current study makes an important contribution to the literature. Consistent with the validated curriculum hypothesis, this study has shown early exposure to RB educational programs positively predicts children's literacy activities in later childhood. Our findings support existing research that has found RB programs to be the most successful at advancing children's literacy skills, underscoring the value of designing and testing educational TV content for children.

References

- Aarnoutse, C., & van Leeuwe, J. (1998). Relation between reading comprehension, vocabulary, reading pleasure and reading frequency. *Educational Research and Evaluation*, 4, 143–166.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Anderson D. R., Huston A. C., Schmitt, K. L., Linebarger, D. L., & Wright, J. C. (2001). *Early childhood television viewing and adolescent behavior*. Boston, MA: Blackwell.
- Beentjes, J. W. J., & van der Voort, T. H. A. (1988). Television's impact on children's reading skills: A review of research. *Reading Research Quarterly*, 23, 389–413. doi:10.2307/747640
- Brewin, C. R., Andrews, B., & Gottlieb, I. H. (1993). Psychopathology and early experience: A reappraisal of retrospective reports. *Psychological Bulletin*, 113, 82–98.
- Clark, C., & Rumbold, K. (2006). *Reading for pleasure: A research overview*. London, UK: National Literacy Trust.

- Corporation for Public Broadcasting. (2011). Findings from Ready to Learn, 2005–2010. Retrieved from: <http://www.cpb.org/rtl/>
- Duursma, E., Augustyn, M., & Zuckerman, B. (2008). Reading aloud to children: The evidence. *Archives of Disease in Childhood*, 93, 554–7. doi:10.1136/adc.2006.106336
- Ennemoser, M., & Schneider, W. (2007). Relations of television viewing and reading: Findings from a 4-year longitudinal study. *Journal of Educational Psychology*, 99, 349–386. doi:10.1037/0022-0663.99.2.349
- Entwistle, D., Alexander, K., & Olson, L. (1997). *Children, schools, and inequality*. Boulder, CO: Westview Press.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149–1160.
- Fisch, S. M. (2009). Educational television and interactive media for children: Effects on academic knowledge, skills, and attitudes. In J. Bryant & M. B. Oliver (Eds.), *Media effects: Advances in theory and research* (3rd ed.; pp. 402–435). New York, NY: Routledge.
- Fisch, S. M., & Truglio, R. T. (2001). *"C" is for growing: Thirty years of research on children and Sesame Street*. Hillsdale, NJ: Erlbaum.
- Guthrie, J. T., & Alvermann, D. E. (1999). *Engaged reading: Processes, practices, and policy implications*. New York, NY: Teachers College Press.
- Hayes, A. F., & Matthes, J. (2009). Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations. *Behavior Research Methods*, 41, 924–936.
- Haynes, M. (2011). The federal role in confronting the crisis in adolescent literacy. *Education Digest: Essential Readings Condensed for Quick Review*, 76, 10–15.
- Herring, S. C., Kouper, I., Scheidt, L. A., & Wright, E. (2004). Women and children last: The discourse construction of weblogs. In L. J. Gurak, S. Antonijevic, L. Johnson, C. Ratliff, & J. Reyman (Eds.), *Into the blogosphere: Rhetoric, community, and culture of weblogs*. Minneapolis, MN: University of Minnesota.
- Huston, A. C., Wright, J. C., Marquis, J., & Green, S. B. (1999). How young children spend their time: Television and other activities. *Developmental Psychology*, 35, 919–925.
- Juster, T., Ono, H., & Stafford, F. (2004). Changing times of American youth, 1981–2003. Retrieved from the University of Michigan Institute for Social Research Child Development Supplement to the Panel Study for Income Dynamics: http://www.umich.edu/news/Releases/2004/Nov04/teen_time_report.pdf
- Kirkorian, H. L., Wartella, E. A., & Anderson, D. R. (2008). Media and young children's learning. *The Future of Children*, 18, 39–61.
- Koolstra, C. M., van der Voort, T. H. A., & van der Kamp, L. J. T. (1997). Television's impact on children's reading comprehension and decoding skills: A 3-year panel study. *Reading Research Quarterly*, 32, 128–152. doi:10.1598/RRQ.32.2.1
- Lang, A. (2000). The limited capacity model of mediated message processing. *Journal of Communication*, 50, 46–70.
- Lang, A. (2006). Using the limited capacity model of motivated mediated message processing to design effective cancer communication messages. *Journal of Communication*, 56, S57–S80. doi:10.1111/j.1460-2466.2006.00283.x
- Lenhart, L., & Roskos, K. (2003). What Hannah taught Emma and why it matters. In D. M. Barone & L. M. Morrow (Eds.), *Literacy and young children: Research-based practices*. New York, NY: Guilford Press.
- Linebarger, D. L. (2000). *Summative evaluation of "Between the Lions": A final report to WGBH Educational Foundation*. Boston, MA: WGBH.
- Linebarger, D. L., Kosanic, A. Z., Greenwood, C. R., & Doku, N. S. (2003). Effects of viewing the television program "Between the Lions" on the emergent literacy skills of young children. *Journal of Educational Psychology*, 96, 297–308. doi:10.1037/0022-0663.96.2.297
- Linebarger, D. L., & Walker, D. (2005). Infants' and toddlers' television viewing and language outcomes. *American Behavioral Scientist*, 48, 624–645. doi:10.1177/0002764204271505

- McKenna, M. C., Ellsworth, R. A., & Kear, D. J. (1995). Children's attitudes toward reading: A national survey. *Reading Research Quarterly*, 30, 934–957. doi:10.2307/748205
- McKenna, M. C., & Kear, D. J. (1990). Measuring attitude toward reading: A new tool for teachers. *The Reading Teacher*, 43, 626–639.
- McKool, S. S. (2007). Factors that influence the decision to read: An investigation of fifth grade students' out-of school reading habits. *Reading Improvement*, 44, 111–131.
- Moje, E. B., Overby, M., Tysvaer, N., & Morris, K. (2008). The complex world of adolescent literacy: Myths, motivations, and mysteries. *Harvard Educational Review*, 78, 107–154.
- Moses, A. M. (2011). Books are fun, books are great: The effects of television messages about literacy on young children's literacy attitudes in the U.S. *Journal of Children and Media*, 5, 164–180. doi:10.1080/17482798.2011.558268
- Moses, A., & Duke, N. K. (2008). Portrayals of print literacy in children's television programming. *Journal of Literacy Research*, 3, 251–289. doi:10.1080/10862960802502121
- Nathanson, A. I. (2001). Parent and children perspectives on the presence and meaning of parental television mediation. *Journal of Broadcasting & Electronic Media*, 45, 201–220.
- Nathanson, A. I. (2015). Media and the family: Reflections and future directions. *Journal of Children and Media*, 9, 133–139.
- National Endowment for the Arts (2007). *To read or not to read: A question of national consequence*. Washington, DC.
- Neuman, S. B. (1988). The displacement effect: Assessing the relation between television viewing and reading performance. *Reading Research Quarterly*, 23, 414–440. doi:10.2307/747641
- Neuman, S. B., Copple, C., & Bredekamp, S. (2000). *Learning to read and write: Developmentally appropriate practices for young children*. Washington, DC: NAEYC.
- Pinkham, A. M., & Neuman, S. B. (2012). Early literacy development. In B. H. Wasik (Ed.), *Handbook of family literacy* (2nd Ed.), (pp. 22–37). New York, NY: Routledge.
- Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2010). *Generation M2: Media in the lives of 8–18 year olds*. Menlo Park, CA: Kaiser Family Foundation.
- Sanacore, J. (2002). Struggling literacy learners benefit from lifetime literacy efforts. *Reading Psychology*, 23, 67–86. doi:10.1080/027027102760351007
- Valkenburg, P. M., Krcmar, M., Peeters, A. L., & Marseille, N. M. (1999). Developing a scale to assess three styles of television mediation: Instructive mediation, restrictive mediation, and social covieing. *Journal of Broadcasting & Electronic Media*, 43, 52–66.
- Walberg, H. J., & Tsai, S. (1984). Reading achievement and diminishing returns to time. *Journal of Educational Psychology*, 76, 442–451.
- Wellman, R. L., Lewis, B. A., Freebairn, L. A., Avrich, A. A., Hansen, A. J., & Stein, C. M. (2011). Narrative ability of children with speech sound disorders and the prediction of later literacy skills. *LSHSS*, 42, 561–579.
- Williams, M. E., & Hall, E. R. (1994). Creating educational television programs that are relevant to the lives of children. *Youth & Society*, 26, 243–255. doi:10.1177/0044118X94026002005
- Zimmerman, F. J., Christakis, D. A., & Meltzoff, A. N. (2007). Associations between media viewing and language development in children under age 2 years. *Journal of Pediatrics*, 151, 364–368. doi:10.1016/j.jpeds.2007.04.071.
- Zurawick, D. (2004). Bouncing blobs of energy, or new low in kids' shows? *The Baltimore Sun*. Retrieved from <http://articles.baltimoresun.com>



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Dialed In: Continuous Response Measures in Televised Political Debates and Their Effect on Viewers

**Jeremy Saks, Jordan L. Compton, Ashley Hopkins,
and Kareem El Damanhoury**

As a result of emerging debate formats and technological advancements over the years, the media started using continuous response measures (CRMs) in the form of on-screen trackers, allowing select audiences to rate candidate performances in political debates in 2004. Given the limited amount of scholarly research that has tackled this issue, this study aims to investigate the effect of CRMs on college students' voting choices and perceptions of political candidates. This experimental study has found that these trackers did influence the participants' evaluations of the political candidates shown in the debate regardless of previously stated political affiliation.

Introduction

Political debates and television have had an interesting historical significance for political elections that cannot be separated from one another. Starting with the first 1960 presidential debate between John F. Kennedy and Richard Nixon, scholars have examined the effects that debates have on the voting populace as well as the intermediating factors added by the medium of television (Druckman, 2003; Eveland, McLeod, & Nathanson, 1994; Hellweg, Pfau, & Brydon, 1992; McKinney & Carlin, 2004; Nagel, Maurer, & Reinemann, 2012; Scheufele, Kim, & Brossard, 2007; Schudson, 1995; Swanson & Swanson, 1978; Vancil & Pendell, 1987).

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Debates are often seen as a zenith of the election season in terms of the sheer opportunity for candidates to reach such a large audience thanks, in large part, to television (Carlin, 1992). Some argue that televised debates are the most influential direct channel of communication between candidates and the voting populace (Tauber & Seeber, 2014). The massive audience, and the hypothetical influence on them, has the potential to greatly shape the outcome of the election (Roper, 1960). Television adds dramatic and spectacle components to debates and presents a variety of “natural behavior that is influential in the communication process during an election campaign,” which could induce the short-term perceptions of candidates (Tauber & Seeber, 2014, p. 5). In addition, Davis, Bowers, and Memon (2011) argue that televised debates can result in significant shifts in voting choice. Prior to the first debate in the 2010 general election in the UK, 60% of respondents stated that the debates would help them in their voting choices (O’Grady, 2014). As a result, campaigning has become one of the principal occupations of politicians (Berlin & Prieto-Mendoza, 2014) as they aim to get elected. Televised debates have provided audiences with the means to draw comparisons and evaluate candidates while at home.

A recent development in political debates is the increased use of continuous response measurements (CRMs) lining the bottom of event coverage. CRMs have recently been used in televised debates in the U.S., U.K., New Zealand, and Australia (Davis et al., 2011). CRMs are usually averaged over a sample of around 20 to 30 viewers (Davis et al., 2011). The presentation of CRM data could result in intra-audience effect through generating “a group feeling among the viewers who realize the other viewers share the viewing experience with them” (Weaver, Huck, & Brosius, 2009, p. 50). Therefore, the impact of CRMs on the outcome of elections must be studied in order to determine whether the opinions of tens of participants could impact the perceptions of millions of people. Nonetheless, a limited amount of scholarly research engages with the effects and biases that may emerge from its usage. As CRMs appear as though they will remain an integral part of television coverage of political debates, we must gain a better understanding of how this new technology affects the viewers’ perceptions of the candidates and the issues under debate.

Emergence of Political Debates

Dating back to the first televised debate, scholars have been interested in how television shapes viewers’ perceptions of candidates. The day after the Nixon-Kennedy debate in 1960, a non-academic survey showed that those who listened to the debate on radio found that Nixon had won the debate, but television viewers felt that Kennedy had won. Subsequent studies (Vancil & Pendell, 1987; Schudson, 1995) questioned the validity of those survey results. In particular, basic data about how the survey was conducted were not disclosed nor were the relevant demographic data released. While critics argued that it was impossible to gauge if original researchers followed stringent guidelines, politicians feared any missteps that might be caught on camera, hindering their political futures. Another presidential debate

was not held for 16 years, when the political establishment began to see the potential effects of television on the outcomes of campaigns.

Much debate has surrounded how to determine the most effective medium in acquiring political knowledge. Some researchers argued that newspaper reading would result in higher levels of issue learning than television viewing (Druckman, 2005; Weaver & Drew, 2001). Others have argued that both television viewing and newspaper reading would have the same effect (Neuman, Just, & Crigler, 1992; Price & Zaller, 1993). Political debates provide viewers with the opportunity to watch and listen to candidates (Jamieson, 1987), and several debates have been televised since the Nixon-Kennedy presidential debate. Past research on political campaigns has focused on two main aspects: issue learning and "impression formation" (Scheufele, Kim, & Brossard, 2007, p. 4). Additionally, some studies highlighted the agenda setting impact of presidential debates, outlining how they may shape people's perceptions of important issues (Benoit, McKinney, & Holbert, 2010; Swanson & Swanson, 1978).

Effects of Political Debates on the Electorate

Many researchers have argued that presidential debates influence issue learning and perceptions of the candidates' characters, which are both reflected on voting decisions (Benoit & Hansen, 2004; Benoit et al., 2010; Hellweg, 1993; Sears & Chafee, 1979). Benoit and Hansen (2004) found that debate watchers were more knowledgeable about political candidates than non-watchers. Moreover, some researchers argued that debate effects increase among regular debate viewers, who typically tend to be more interested in politics (Chaffee, 1978). Roper (1960) suggested the Nixon-Kennedy debates altered the intentions of four million voters, but Benoit, Hansen, and Verser (2010) found that watching the Bush-Gore general presidential debate in 2000 did not result in a significant shift in voting preferences. It did, however, result in a significant increase in audiences' confidence in their voting choice. It has been argued that nonverbal cues such as "Nixon's visible perspiration" in the 1960 debate, George H. W. Bush's "quick glances at his wrist-watch" in the 1992 debate, and "Gore's clearly audible and exacerbated sighs" in the 2000 debate would have an effect on audiences' perceptions of the candidates (Scheufele et al., 2007, p. 4). Production choices, such as the use of split-screen shots (Scheufele et al., 2007) and post-debate coverage from "spin rooms," (Cho, Shah, Nah, & Brossard, 2009) could impact how the viewers frame what they witnessed.

Furthermore, swing voters, or moderates, have always been of high importance at election times, as uncertain voters can change the course of an election. McKinney and Carlin (2004) argued that election debates are most influential among undecided voters who are highly interested. However, few researchers have focused on studying that particular group (Kelley, 1983; Mayer, 2008; Schill & Kirk, 2014). Schill and Kirk (2014) used pretest and posttest questionnaires and registered participant responses via hand-held dials to measure how the 2008 and 2012 presidential

debates influenced swing voters. The authors found that “debates are capable of influencing undecided voters’ impressions of the candidates but any influence is highly dependent on the candidates’ performance in the debate” (Schill & Kirk, 2014, p. 550). Swing voters’ attitudes toward Mitt Romney improved after the first debate in 2012, yet President Barack Obama’s strong performance in the second and third debates resulted in more favorable attitudes among swing voters (Schill & Kirk, 2014). Internationally, Nagel et al. (2012) used hand-held dials to gather a sample of German viewers’ responses to visual, verbal, and vocal elements in a televised national debate in Germany between Angela Merkel and Gerhard Schroeder in 2005. The study showed that verbal message elements had the strongest impact on viewers’ positive responses to both candidates, as well as visual communication; for example, “gazing directly into the camera improved impressions of Merkel” but did not result in the same effect toward Schroeder (Nagel et al., 2012, p. 846). The vocal element resulted in positive attitudes that surpassed visual elements for Merkel (Nagel et al., 2012).

Druckman (2003) found that evaluating candidates is more dependent on viewers’ impressions of the candidate’s personality traits. Participants were more likely to use external evaluations, such as visual cues, stressing the importance of candidate appearance. The analysis showed that perceived integrity was a significant predictor for positive evaluations by television viewers, which was not the case for radio listeners. Similarly, participants who only heard audio were more likely to report positive evaluations in terms of issue agreement with the candidate, whereas this was not a significant predictor for the television audiences. Participants who viewed the televised debate correctly answered more questions related to coverage than those who only listened to the audio ($p < .01$). Together these findings add additional confounds to the potential effects that television has on debate viewers.

The Effects of Polling and the Bandwagon Effect

While much has been said about the effects of televised debates on the voting populace, substantial work has also been conducted surrounding the effects of political polling. Multiple studies (Marsh, 1985; Mehrabian, 1998; Rothschild & Malhorta, 2014) found that individuals may be affected by the results of public polling, as it is thought to have an effect on electoral outcome. Being privy to the opinions of others caused individuals who did not have preconceived attitudes to hop on the political bandwagon and support the contender who was deemed to have more popular support. That influence has been tested and supported specifically with television (Ansolabehere & Iyengar, 1994). Thus, merely publishing poll results may effect whether undecided voters move to support the underdog or the leader.

The so-called bandwagon affect, wherein individuals will rally around the supposedly popular choice, and the opposite underdog effect, in which individuals side with the candidate at a disadvantage, have been studied many times with a limited set of results leading to a lack of theoretical understanding for when and why one or

the other will occur (Rothschild & Malhorta, 2014). Many studies have found evidence supporting the potential for these effects (Ansolabehere & Iyengar, 1994; Ceci & Kain, 1982; Fleitas, 1971; Marsh, 1985; McAllister & Studlar, 1991; Mehrabian, 1998; Morwitz & Pluzinski, 1996; Rothschild & Malhorta, 2014) although the results have been mixed. For example, McAllister and Studlar (1991) found evidence for the bandwagon effect but not for the underdog effect whereas Fleitas (1971) suggested that underdogs had appeal in minimal-information environments. Each one of the studies has focused on unique scenarios or research designs that may or may not have impacted their outcomes. Moritz and Pluzinski (1996) suggested polling data interact with the cognitive dissonance one experiences in comparing one's expectation of who will win an election with the results of the poll and that can lead one changing one's ultimate vote choice. Other studies (Ansolabehere & Iyengar, 1994; Rothschild & Malhorta, 2014) have no expectation of prior knowledge or utilized fictional candidates so it is not possible to look for moderating variables in terms of past experience. Thus, if CRMs are viewed as polls, they may have an effect on audience perception and opinion similar to that of polling except in real time.

CRMs and Televised Debates

During the 1992 debates CNN polled 480 viewers to gauge their immediate reactions to what the candidates were saying and then displayed the average of these responses to the overall CNN debate audience in subsequent showings (Thalhimer & Federman, n.d.). The participants used touch-tone phones to indicate their approval or disapproval of the candidates. Later versions of this polling method would be more sophisticated.

CRM systems have been used since the 1930s (see Biocca, David, & West, 1994; Levy, 1982). Media and advertising researchers used CRMs to assess the likeability of television shows and commercials. As technology advanced and became less expensive during the 1980s, CRMs became more widespread. Following its first display in the 2004 U.S. presidential campaign, CRMs became a major part of political debates. Davis et al. (2011) mentioned that CRMs add "drama and interest to the debates" (p. 1); however, they only reflect the perceptions of about thirty people. In the 2004 presidential debate John Kerry's remarks about the homosexual lifestyle of Dick Cheney's daughter resulted in negative responses on the tracker line shown in *World News Tonight*, which was generated by 10 undecided Pennsylvania voters. (Weaver et al., 2009, p. 51). In the 2008 U.S. presidential debates CNN used a sample of 30 voters, and in the 2010 U.K. electoral debates, ITV and the BBC used a sample of 20 and 36 undecided voters respectively (Davis et al., 2011, p. 6).

Weaver and colleagues (2009) tested the effects of CRM on-screen overlays with a non-political media (music videos) to see if on-screen presence could bias viewers' perceptions of what they were watching. The groups viewed either a positive, negative, or neutral response to the music video in question, via CRM. The main effect of

evaluation change was seen in participants who were exposed to negative on-screen CRM graphics. Compared to the positive and neutral groups, the negative group rated the music videos as significantly lower quality than the ratings by the other groups. Weaver and colleagues (2009) concluded that CRMs could manipulate audiences and argued that undecided voters might be more influenced by CRMs in political debates. Schill and Kirk (2009) suggest that displaying CRMs on-screen is empowering, as it presents debate viewers with additional information that could influence their opinions.

Fein, Goethals, and Kugler (2007) conducted an experiment in which participants watched segments of the second Reagan-Mondale 1984 presidential debate. The authors found that participants who were shown the pro-Reagan stimulus rated Reagan's performance as better than Mondale's, while participants who were shown the pro-Mondale feedback rated Mondale's performance as better. Although not explicitly mentioned in the study, the bandwagon effect could provide explanation for the outcomes. Of note, the participants were told that CRM overlays could influence their responses, limiting the study's findings.

A study conducted in the U.K. in which two groups of 75 college students each watched the third 2010 U.K. electoral debate between incumbent Prime Minister Gordon Brown, Democratic leader Nick Clegg, and Labor Party leader David Cameron (Davis et al., 2011). The authors found that 47% of the participants who were shown the pro-Brown stimulus thought he won the debate ahead of Clegg (35%) and Cameron (13%); 79% of participants who were shown the pro-Clegg stimulus thought Clegg won the debate ahead of Brown (9%) and Cameron (4%). Davis et al. (2011) concluded that CRMs influence viewers' perceptions and voting choices. However, this study was limited in that participants were only shown manipulated stimuli and there was no control group. These studies each had unique features that are important to consider moving forward, such as issue relevance, candidate knowledge, lack of control conditions, and temporal relation. The present study seeks to account for previous limitations.

Based on the aforementioned literature, this study poses the following hypotheses:

- H_{1a}: Individuals who are shown negative ratings will evaluate the candidate that corresponds with those ratings more negatively on their dial ratings.
- H_{1b}: Individuals who are shown positive ratings will evaluate the candidate that corresponds with those ratings more positively on their dial ratings.
- H_{2a}: Individuals who are shown negative ratings will evaluate the candidate that corresponds with those ratings more negatively on the post-stimulus questionnaire.
- H_{2b}: Individuals who are shown positive ratings will evaluate the candidate that corresponds with those ratings more positively on the post-stimulus questionnaire.
- H_{3a}: Individuals who report strong political leanings will be less influenced by positive/negative dial ratings than those with moderate views.
- H_{3b}: Individuals who report moderate political leanings will be more influenced by positive/negative dial ratings than those with strong views.

Method

This experimental study attempts to understand how the use of CRMs and the on-screen display of those type of data can modify how participants view a political debate. This study uses a Dialsmith Perception Analyzer system. The basic setup for the equipment includes 50 handheld dials for the participants, software for data collection and analysis, and hardware overlays to display the results on screen. As the participants view the debate footage, they were instructed to use the handheld dials to indicate their level of agreement with the candidate currently speaking.

Stimulus

Prior to showing the participants the debate footage, the researchers created three stimuli, one for each condition. The stimuli included the same footage but with different types of data displayed on-screen (Figure 1). One condition indicated positive evaluations of one candidate while showing negative evaluations for the other. The second condition reversed the evaluations so that the first candidate is negatively evaluated while the second is positively evaluated. Finally, there was a control condition that showed a neutral display throughout the debate. While viewing those on-screen data, the participants had a handheld dial ranging from 0 to 100, with 0 representing complete disagreement with what is being seen and heard from the video, 50 being neutral, and 100 representing complete agreement with the video. Participants were asked to use the dials to correspond with their agreement/disagreement with the candidates during the debate viewing. The stimulus picked for this study was a 5-minute video from the New Mexico 2012 Senate race on the topic of health care policy in the United States. This particular video was selected so that the participants would not likely be familiar with either of the candidates. Neither of them were incumbents, as the previous senator retired. In the video both candidates, Democrat Martin Heinrich and Republican Heather Wilson, speak for similar amounts of time, with each having two opportunities to talk on the subject.

The stimulus was not entirely similar to those shown during broadcasts by major news networks. The typical display for the CRMs is subtler and below the video as opposed to the CRMs used in this experiment, which were overlaid in front of the candidates. However, studies such as this are perhaps best started by maximizing the potential of the stimulus to see if an effect is elicited (Sundar, 1999).

Prior to seeing the stimuli, participants answered a questionnaire about their political attitudes. The pre-survey measured several variables, such as the participant's political identification ranging from liberal, moderate, to conservative; political participation in terms of voting in municipal, provincial, and federal elections, as well as political activity on campus or in political campaigns; exposure to news media vehicles; and engagement in demonstrations. After

Figure 1
Sample Image of Stimulus Materials Showing Positive Evaluations of the Republican Candidate



the completion of the pre-survey, participants were told that the responses of previous study groups will be featured in the form of a line running across the screen within the video they will be watching. In actuality, the research team created the data.

Additionally, after viewing the stimuli, participants answered another set of questions outlining their general evaluations of the candidates. The post survey used a 7-point scale to measure the participant's perception of the candidates' arguments, their degree of alignment with the participant's views, and how likely they were to vote for one candidate versus the other. Participants were asked to pick which of the two candidates he/she would vote for in a forced choice scenario.

Participants

For this study, the population of interest was anyone aged 18 or over, the legal voting age in the United States. As our study focuses on process inferences as opposed to population inferences, we argue that a student sample for this study is appropriate. The sample was composed of undergraduate students from a midwestern university. Researchers accessed a strategic communications class participant pool, as students are required to participate in three experiments for course credit. To

ensure random selection, participants signed up for a three-hour block of time on one of two days but were only asked to report at specific increments within a single block after they were randomly assigned. The final sample included 94 participants across three conditions. Due to random assignment and to some participants not showing up for the experiment, the number of participants was 33, 29, and 32 for the pro-Republican, pro-Democrat, and control conditions, respectively. Of those 94 participants, 69 identified themselves as female while 25 identified as male. There was no significant difference in how those genders were distributed throughout the conditions.

Questionnaire

The main component in the study was the participants' opinion of the candidates during the debate. Participant opinion was measured by pre/post questionnaires and moment-to-moment dial data collection during the viewing of the debate video. The pre/post questionnaires were based on two separate studies measuring political participation to control for previous knowledge that the participants may have had prior to viewing the debate (Andolina, Keeter, Zukin, & Jenkins, 2003; Stockemer, 2012). The first study was published as part of a scholarly consortium between multiple universities with a full methodological breakdown for maximum transparency. The Stockemer (2012) study focused specifically on the political participation of college students at Ottawa University, and so included variables that were specific to the same type of population included in this study's sample.

Procedure

When the participants showed up for their experimental session, they were given a consent form and an opportunity to look the form over prior to signing. The participants were able to ask questions regarding the consent forms before turning them in. Once in the hall, participants were given one of the wireless dial handsets. Once everyone was seated, the pre-stimulus questionnaire appeared on screen. All of the questions were numerical so that they could use their dials to answer the questions. After the beginning of the experiment, the participants self-reported their political ideologies as liberal, slightly liberal, moderate, slightly conservative, and conservative, in addition to other question types. After researchers administered the questionnaire participants were briefed on what they would see and shown the stimulus. Once the stimulus was complete, the participants answered a post-stimulus questionnaire from the dial. Finally, the participants were thanked and debriefed.

In terms of reliability and validity, the control condition was used as a baseline for understanding how the participants viewed the stimulus without the on-screen data. The experimental method can pose issues for reliability, but having a large enough

sample made it possible to identify outliers, issues with data collection, and the general distribution of values.

Analysis

The moment-to-moment data collected by each participant's handheld dial was captured on a second-by-second basis. In order to understand how the different conditions affected the participants' evaluations, the video was analyzed according to four separate parts, each of which was slightly different in terms of length. Those parts were: 1) when the Republican candidate, former Representative Heather Wilson, was asked the first question (75 seconds), 2) when her opponent, Representative Martin Heinrich, was allowed to respond (80 seconds), 3) when Wilson was able to rebut (45 seconds), and 4) when Heinrich was allowed to respond again (28 seconds). Repeated measures analyses of variance were run in SPSS for each of these four sections to compare the participant ratings across the three conditions.

Results

The results of the previously outlined experiment focus on two types of data: the dial values among the participants and their responses to the post-experimental survey, which focused mostly on how the participants evaluated the two candidates. In both cases, the most relevant findings come when the data are compared among the three groups. The dial values show how the participants rate the candidates on a second-by-second basis so it shows their immediate reactions, with regard to the on-screen data which they saw. The questionnaire data allow the researchers to see how on-screen CRM data influenced the participants once they had some time to consider the entirety of what they had been shown.

With regard to the dial values across all four sections of the stimuli, there is not a significant difference when comparing the three conditions. However, when looking at only the pro-Democrat group ($M = 56.371$, $SD = 8.344$) and the pro-Republican group ($M = 56.147$, $SD = 5.432$), there is essentially no difference over the course of the entire video ($p = .995$). With the differences being similar, this gives evidence that each condition was proportional in relation to one another and ultimately averaged out to similar value. The average dial values across the totality of the stimulus do not show how the participants were influenced, as the on-screen data differed for each speaker. When comparing the conditions for each of the sections, the comparisons produced mixed results.

Highlighting some of the differences, in the first part of the video (where the speaker was Republican candidate Heather Wilson), the pro-Republican group had average ratings ($M = 56.384$, $SD = 5.852$) that were higher than that of the pro-Democrat group ($M = 50.566$, $SD = 4.240$) and the control group ($M = 48.821$, $SD = 1.938$),

although the ANOVA did not produce significant results ($F(2,91) = 1.952, p = .148$). In contrast, within the second section of the video (for which the speaker was Democratic candidate Martin Heinrich), the average rating for the pro-Democrat group was 65.505 ($SD = 4.035$) whereas the pro-Republican and control groups' mean ratings were 58.709 ($SD = 5.672$) and 55.907 ($SD = 3.399$), respectively. The ANOVA did produce significant results ($F(2,91) = 3.828, p < .05$) with a Tukey HSD post hoc test showing the significant difference between the pro-Democrat and control groups ($p < .05$) and a non-significant difference between the pro-Democrat and pro-Republican groups ($p = .137$). Neither of the final two sections of the video produced significant results. These data do not support H_{1a} and H_{1b} .

When comparing the conditions on a forced question asking for whom the participants would vote, there was a significant difference of selected candidate within a one-way ANOVA ($F(2,91) = 3.672, p < .05$). A Tukey HSD post-hoc showed that those in the pro-Republican condition were more likely to select the Republican candidate and those in the pro-Democrat condition were more likely to select the Democratic candidate ($p < .05$). There was not a significant difference between the control and either of the two other conditions. Based on these data, there is evidence to support both H_{2a} and H_{2b} , which state that those viewing the positive and negative ratings would evaluate the candidates accordingly on the post-stimulus questionnaire. Additional analyses show that the participants were more likely to state that the candidate that was positively rated on-screen shared their views on the issue more than the opponent. On a seven-point scale with one meaning strongly disagree and seven meaning strongly agree, those in the pro-Democrat group indicated that the Democratic candidate's views were more in line with their own ($M = 4.759, SD = 1.455$) than those in the pro-Republican condition ($M = 3.578, SD = 1.786$), which was significant ($t(60) = -2.834, p < .01$). A similar result was found within the pro-Republican group, who indicated views more in line with the Republican candidate ($M = 4.515, SD = 1.661$) than those in the pro-Democrat condition ($M = 3.345, SD = 1.421$), which was also significant ($t(60) = 2.960, p < .01$). These data give additional support to the H_{2a} and H_{2b} .

To analyze the moderating effects of strength of political affiliation on whether the on-screen data influences the participants, general linear regression models were run with each one of the post-stimulus questions relating to the candidates. In every instance, the interaction effects between the political identification and the grouping variable were not significant. As such there is no evidence to support either H_{3a} or H_{3b} , which stated that those with strong political ideologies would be less influenced by the on-screen data than those with more moderate political ideologies.

Discussion

The results of the experiment showed that some participants could be manipulated in their evaluations of candidates based on on-screen CRM data. Participants were

influenced in the direction with which the on-screen data was displayed with regard to their responses to the post-stimulus questionnaire but not with their own ratings using the dials. Therefore, both versions of H_1 , which stated that positive and negative on-screen data would be met with corresponding evaluations from participants that saw those data on their own dials, were not supported while both versions of H_2 , which stated the on-screen data would influence the participants' responses to the post-survey questionnaire, were supported. Even participants that had previously stated a strong ideological affiliation with liberal and conservative values were swayed by the CRM data. Those two occurrences do not support either element of H_3 , which stated that those with strong ideological stances would be less swayed in their evaluations of the candidates than those with more moderate ideological stances when exposed to on-screen CRM data.

The chosen New Mexico 2012 Senate race debate should have resulted in high-quality data, as it was quite recent, addressed health care policy, which would be of interest to respondents, did not involve locally based politicians, and thus nearly excluded the impact of past experiences with those candidates. With regard to H_{1a} and H_{1b} , the short duration of the stimulus may have limited the potential for supporting data. The researchers chose to seek out a debate that allowed both candidates to speak in almost equal durations, which becomes more difficult the longer the stimulus become. Additionally, with longer clips, data analyses could more easily control for the orientation that occurs when the individual that is currently speaking switches.

Although the on-screen continuous response measure data did not influence how the participants rated the candidates through the use of the participants' own continuous response devices, which is inconsistent with past studies that found CRM overlays sway viewers' responses (Fein et al., 2007; Davis et al., 2011). That discrepancy may be due to the amount being asked of the participants in real time. Various studies have highlighted the difficulty with which individuals have in media multi-tasking (Srivastava, 2013), particularly with limited capacity theories, such as the Elaboration Likelihood Model (Petty & Cacioppo, 1986) and the Limited Capacity Model of Mediated Message Processing (Lang, 2000). The amount of activity may have been overwhelming for the participants. With that, there may have been less opportunity for the participants to counter argue with what the speakers said, leading to increased persuasion. As such, that may explain how the on-screen data influenced how the participants stated they would vote in a forced choice scenario. It is unclear if adding the additional element of utilizing the dials could have pushed the participants over the edge of their mental capacities or if simply including the on-screen data can have that effect. It is possible that viewing a debate with the on-screen data could not only bias evaluations in real time, but also the viewer's opinion of the candidate's views in comparison with their own, and, ultimately, their voting choice.

The results for the third set of hypotheses did offer some additional evidence that the on-screen data has the potential to sway individuals regardless of political affiliation. No interaction between strength of political ideology and experimental

condition was found with regard to evaluations of the candidates shown in the stimuli. Without the moderation, or weakening, of the effects of seeing the on-screen data, it may have the possibility of affecting the entire political spectrum evenly. There are limitations to those findings discussed in a later section. Considering the importance of the debates in modern elections, the moment-to-moment data could hypothetically change the minds of many.

The results of this study, as well as the others mentioned in the literature review, should give pause to the television networks that may choose to air the debates with on-screen CRM data. For the networks, it depends on their goals in showing the data. So far, there has been no academic research on the viewers' opinions of the coverage when the on-screen data are included. If the viewers are more drawn to that coverage, ultimately it may serve the networks' purposes by increasing viewership rather than giving a less biased view of the event. Boyd (2008) points out that "CNN thinks dial-testing has boosted its debate ratings, helping it reach 9.2 million viewers, more than any other cable news channel, and giving it the highest percentage of 25- to 54-year-old viewers (the age group advertisers are most interested in)." Additionally, another important consideration is whether the on-screen data can draw viewers to watch the debate that would not watch the debate otherwise. If that were the case, it would be difficult to judge whether it would be better for the viewers to get a biased view of the debate or not see it at all. The potential for abuse is also high. Should a network want to influence how the viewers see the debate in real-time instead of through commentary and coverage afterwards, it would hypothetically be possible for it to alter the on-screen data as it stands as the middleperson between the polled and the viewers. More research is needed to understand all of the variables that would go into that judgment. The networks should consider the potential that the displays have on the voting populace and should conduct their own internal research to decrease the potential for distortions.

The networks could potentially modify the impact of the CRMs by increasing the sample size of those polled. Utilizing few individuals from a specific location can limit the range of responses sent out to the viewers. As technology increases, it may be possible to live poll individuals over the Internet so as to allow anyone that wants to participate the opportunity to do so. Additionally, the networks could change the way that the content is exhibited. They could collect the data and not display it live but use it as an explanatory tool during post-debate coverage, as they did in early iterations prior to the availability of technology to do it live. The networks could also maintain, or increase, their overall viewership by simultaneously broadcasting the debates on multiple channels owned by the same conglomerate, such as CNN and Headline News, or on the network's website.

Limitations and Future Research Directions

There were limitations to this dial testing study. First, the tracking data that appeared in all three of the videos prominently overlaid the debate video. Researchers could not

place the tracking data on the screen subtly, as the graph was designed for display on major news networks during debates, which does not overlay in front of the candidates and is placed below the main video section. Finding a way to decrease the size of the tracker data and placing this information on the screen in a manner that did not block the candidates in the video could make the graph appear more transparently during the showing of the stimulus. That would increase the similarity between the experimental stimulus and the CRM displays used by television networks.

Additionally, the videos ended rather abruptly after the Democratic candidate made his final point. The amount of time between his/her final utterance and the end of the video did not allow the participants the opportunity to fully comprehend the message and react appropriately using the dials. Including a black screen, or perhaps letting the debate video run for a short amount of time, would allow participants to finish measuring their response.

Finally, while this study provided important results through quantitative analysis, engaging in a brief focus group session immediately after our post-test would have provided a rich analysis as to how participants responded to the stimuli. Nearly 65% of participants reported that having tracker data on screen would affect how they viewed the debate. By asking participants an open-ended question about why they felt this way, researchers could come to a better understanding of the impact that tracker data has on debate audiences.

Further research on continuous response measurements can provide additional details about the effects of on-screen tracker data on different groups and demographics during political debates. This study showed on-screen tracker data but did not articulate the group characteristics of the line. Participants did not know what the graph represented outside of a non-specific explanation detailing previous groups' data. Future research should articulate the groups that are represented by the on-screen tracker data to understand if knowing who the lines represent has an impact on an audience's perceptions of a political debate. Similarly, some of the debate coverage seen on television utilizes two lines concurrently to represent the views of different groups. The impact of multiple lines may moderate the effects seen in this experiment if there were other sources of influence available. Finally, understanding the psychological mechanisms that draw the participants to following the line should be considered. A follow-up eye-tracking study could add insight into how media multitasking affects the way audiences consume mediated messages, while a recall study could help determine how much information viewers retain when CRM lines are used. Mental overload may be due to cognitive limitations of multitasking, social pressure imbued by others' evaluations, or another unknown process. Further research should look into these underlying processes.

Conclusion

The current study illustrated the potential for individuals to be influenced by on-screen live polling data for hypothetical elections when put in a forced vote scenario.

It is likely, given the ratings and technological increases in broadcasting debates, that the practice of displaying CRM could continue in the future. In fact, it could potentially expand to other avenues. Boyd (2008) notes "[the high ratings suggest] that dial-testing is likely to play an increased role in the coverage of future debates and, it's not much of a leap to imagine, even other political events like State of the Union address or press conferences." More research is needed to truly understand the full impact of the CRMs.

References

- Andolina, M., Keeter, S., Zukin, C., & Jenkins, K. (2003). *A guide to the index of civic and political engagement*. The Center for Information & Research on Civic Learning & Engagement. Retrieved from <http://civicyouth.org/PopUps/IndexGuide.pdf>.
- Ansolabehere, S., & Iyengar, S. (1994). Of horseshoes and horse races: Experimental studies of the impact of poll results on electoral behavior. *Political Communication*, 11, 413–430.
- Benoit, W., & Hansen, G. (2004). Presidential debate watching, issue knowledge, character evaluation, and vote choice. *Human Communication Research*, 30, 121–144.
- Benoit, W., Hansen, G., & Verser, R. (2010). A meta-analysis of the effects of viewing U.S. Presidential debates. *Communication Monographs*, 70, 335–350.
- Benoit, W., McKinney, M., & Holbert R. (2010). Beyond learning and persona: Extending the scope of Presidential debate effects. *Communication Monographs*, 68, 259–273.
- Berlin, L., & Prieto-Mendoza, A. (2014). Evidential embellishment in political debates during U.S. campaigns. *Intercultural Pragmatics*, 11, 389–409.
- Biocca, F., David, P., & West, M. (1994). Continuous response measurement (CRM): A computerized tool for research on the cognitive processing of communication messages. In A. Lang (Ed.), *Measuring psychological responses to media* (pp. 15–64). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Boyd, S. (2008, October 15). What are those squiggly lines on CNN telling you? The American Prospect. Retrieved from <http://prospect.org/article/what-are-those-squiggly-lines-cnn-telling-you>
- Carlin, D. (1992). Presidential debates as focal points for campaign arguments. *Political Communication*, 9, 251–265.
- Ceci, S. J., & Kain, E. L. (1982). Jumping on the bandwagon with the underdog: The impact of attitude polls on polling behavior. *Public Opinion Quarterly*, 46, 228–242.
- Chaffee, S. (1978). Presidential debates: Are they helpful to voters? *Communication Monographs*, 45, 330–346.
- Cho, J., Shah, D. V., Nah, S., & Brossard, D. (2009). "Split screens" and "spin rooms:" Debate modality, post-debate coverage, and the new videomalaise. *Journal of Broadcasting & Electronic Media*, 53, 242–261.
- Davis, C. J., Bowers, J. S., & Memon, A. (2011). Social influence in televised election debates: A potential distortion of democracy. *PloS one*, 6, e18154.
- Druckman, J. (2005). Media matter: How newspapers and television news cover campaigns and influence voters. *Political Communication*, 22, 463–481.
- Druckman, J. N. (2003). The Power of television images: The first Kennedy-Nixon debate revisited. *Journal of Politics*, 65, 559–571.
- Eveland Jr., W. P., McLeod, D. M., & Nathanson, A. I. (1994). Reporters vs. undecided voters: An analysis of the questions asked during the 1992 presidential debates. *Communication Quarterly*, 42, 390–406.
- Fein, S., Goethals, G. R., & Kugler, M. B. (2007). Social influence on political judgments: The case of presidential debates. *Political Psychology*, 28, 165–192.
- Fleitas, D. W. (1971). Bandwagon and underdog effects in minimal-information elections. *American Political Science Review*, 65, 434–438.

- Hellweg, S. A. (1993). Introduction. *Argumentation and Advocacy*, 30, 59–61.
- Hellweg, S. A., Pfau, M., & Brydon, S. R. (1992). *Televised presidential debates: Advocacy in contemporary America*. Santa Barbara, CA: Praeger Publishers.
- Jamieson, K. (1987). Television, presidential campaigns, and debates. In J. L. Swerdlow (Ed.), *Presidential debates 1988 and beyond* (pp. 27–33). Washington, DC: Congressional Quarterly.
- Kelley, S. (1983). *Interpreting elections*. Princeton, NJ: Princeton University Press.
- Lang, A. (2000). The limited capacity model of mediated message processing. *Journal of Communication*, 50, 46–70.
- Levy, M. R. (1982). The Lazarsfeld-Stanton program analyzer: An historical note. *Journal of Communication*, 32, 30–38.
- Marsh, C. (1985). Back on the bandwagon: The effect of opinion polls on public opinion. *British Journal of Political Science*, 15, 51–74.
- Mayer, G. (2008). *What exactly is a swing voter? Definition and measurement*. In W. G. Mayer (Ed.), *The swing voter in American politics* (p. 1–31). Washington, DC: Brookings Institution Press.
- McAllister, I., & Studlar, D. T. (1991). Bandwagon, underdog, or projection? Opinion polls and electoral choice in Britain, 1979–1987. *The Journal of Politics*, 53, 720–741.
- McKinney, S., & Carlin, B. (2004). Political campaign debates. In L. L. Kaid (Ed.), *Handbook of political communication research* (p. 203–234). Mahwah, NJ: Lawrence Erlbaum.
- Mehrabian, L. (1998). Effects of poll reports on voter preferences. *Journal of Applied Social Psychology*, 28, 2119–2130.
- Morwitz, V. G., & Pluzinski, C. (1996). Do polls reflect opinions or do opinions reflect polls? The impact of political polling on voters' expectations, preferences, and behavior. *Journal of Consumer Research*, 23, 53–67.
- Nagel, F., Maurer, M., & Reinemann, C. (2012). Is there a visual dominance in political communication? How verbal, visual, and vocal communication shape viewers' impressions of political candidates. *Journal of Communication*, 62, 833–850.
- Neuman, W. R., Just, M. R., & Cragler, A. N. (1992). *Common knowledge: News and the construction of political meaning*. University of Chicago Press.
- O'Grady, G. (2014). The use of key in projecting face-threatening acts in televised political debates. *Text & Talk*, 34, 685–711.
- Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. *Advances in Experimental Social Psychology*, 19, 123–205.
- Price, V., & Zaller, J. (1993). Who gets the news: Alternative measures of news reception and their implications for research. *Public Opinion Quarterly*, 57, 133–164.
- Roper, E. (1960, November). Polling post-mortem. *Saturday Review*, 10–13.
- Rothschild, D., & Malhotra, N. (2014). Are public opinion polls self-fulfilling prophecies? *Research & Politics*, 1, 1–10.
- Scheufele, D., Kim, E., & Brossard, D. (2007). My friend's enemy: How split-screen debate coverage influences evaluation of presidential debates. *Communication Research*, 34, 3–24.
- Schill, D., & Kirk, R. (2014). Courting the swing voter: "Real time" insights into the 2008 and 2012 U.S. Presidential debates. *American Behavioral Scientist*, 58, 536–555.
- Schudson, M. (1995). *The power of news*. Cambridge, MA: Harvard University Press.
- Sears, O., & Chaffee, H. (1979). Uses and effects of the 1976 debates: An overview of empirical studies. In S. Kraus (Ed.), *The great debates: Carter vs. Ford, 1976* (p. 223–261). Bloomington, IN: Indiana University Press.
- Srivastava, J. (2013). Media multitasking performance: Role of message relevance and formatting cues in online environments. *Computers in Human Behavior*, 29, 888–895.
- Stockemer, D. (2012). Students' political engagement, a comprehensive study of University of Ottawa undergraduate students. *Journal of Youth Studies*, 15, 1028–1047.
- Sundar, S. S. (1999). Questions (and responses) for the record. Submitted to the Subcommittee on Criminal Justice, Drug Policy and Human Resources of the Government Reform Committee United States House of Representatives for hearings on the National Youth Anti-Drug Media Campaign, Washington, DC.

- Swanson, L. L., & Swanson, D. L. (1978). The agenda-setting functions of the first Ford-Carter debate. *Communication Monographs*, 45, 347-353.
- Tauber, C., & Seeber, G. H. (2014). "Body language" and words in conflict. The impact of candidates' verbal and nonverbal performance in televised debates on viewers' short term perceptions. *Conference Papers—American Political Science Association*, 1-20.
- Thalhimer, M., & Federman, J. (n.d.). *The debate pulse: Rapid response, interactivepolling*. Retrieved from http://www.museum.tv/debateweb/html/equalizer/print/essay_thalhimer.htm
- Vancil, D. L., & Pendell, S. D. (1987). The myth of viewer-listener disagreement in the first Kennedy-Nixon debate. *Central States Speech Journal*, 38, 16-27.
- Weaver, D., & Drew, D. (2001). Voter learning and interest in the 2000 Presidential election: Did the media matter? *Journalism and Mass Communication Quarterly*, 78, 787-798.
- Weaver III, J. B., Huck, I., & Brosius, H. B. (2009). Biasing public opinion: Computerized continuous response measurement displays impact viewers' perceptions of media messages. *Computers in Human Behavior*, 25, 50-55.



Partisan Enclaves or Shared Media Experiences? A Network Approach to Understanding Citizens' Political News Environments

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Partisan Enclaves or Shared Media Experiences? A Network Approach to Understanding Citizens' Political News Environments

Brian E. Weeks, Thomas B. Ksiazek, and R. Lance Holbert

The abundance of political media outlets raises concerns that citizens isolate themselves to likeminded news, leaving the public with infrequent shared media experiences and little exposure to disagreeable information. Network analysis of 2008 National Annenberg Election Survey data (N = 57,967) indicates these worries are exaggerated, as general interest news outlets like local newspapers and non-partisan television news are central to the public's media environment. Although there is some variation between the media diets of Republicans and Democrats (FOX News and conservative talk radio are central to Republicans' information network), neither group appears to engage in active avoidance of disagreeable information. Individuals across the political spectrum are not creating partisan "echo chambers" but instead have political media repertoires that are remarkably similar.

The proliferation of media outlets in the post-broadcast age offers citizens an array of options for news and political information. With this expansion of sources comes the possibility of audience fragmentation and concerns over the citizenry no longer having a common point of reference on important political and social issues (Bennett & Iyengar, 2008; Jamieson & Cappella, 2008; Sunstein, 2007). The segmenting of

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political understanding and perspective taking along partisan or ideological fissures can create barriers to productive deliberation between discordant parties, the desire to seek compromise, and the formation of legitimate consensus building, all of which are foundational processes for a well-functioning democracy.¹

One particular threat is that audiences will abandon general interest news outlets (e.g., broadcast and non-partisan television news, local newspapers) that expose them to a diverse range of topics and viewpoints and create shared media experiences in favor of specialized news outlets (i.e., partisan news) that reinforce existing dispositions (Sunstein, 2007). There is some evidence that citizens prefer ideologically consistent political media outlets (Iyengar & Hahn, 2009; Stroud, 2011) but do not avoid counter-attitudinal news (Garrett, 2009; Garrett & Stroud, 2014; Holbert, Hmeilowski, & Weeks, 2012; Prior, 2013a). However, it remains unclear how the abundance of political information sources affects citizens' media diets *as a whole* or whether partisans still share political news experiences. That is, to what extent do individuals from opposing political parties rely on similar sources of news or isolate themselves to partisan enclaves? On one hand, it is possible that individuals' preference for news from likeminded media outlets may result in broader political media diets that look very different for members of opposing political parties. On the other hand, it is plausible that partisans show some preference for pro-attitudinal news but continue to have common media experiences by also consuming more mainstream, general interest news. The implications of the former versus the latter are profound for democracy (Garrett & Resnick, 2011; Sunstein, 2007).

Although questions of news audience fragmentation are not new, prior research typically takes a relatively narrow scope to understanding citizens' media use by examining connections between a limited set of outlets within particular media channels such as cable television news (Holbert et al., 2012; Prior, 2013a) or online news sites (Garrett, Carnahan, & Lynch, 2013). We therefore do not know the extent to which partisans share a common set of information sources or how they use multiple sources from various channels in conjunction with one another. The present study fills this void by looking at the political media environment in a holistic manner. Rather than examining bivariate patterns of political news use or using forced exposure experiments with limited choice (Arceneaux & Johnson, 2013; Iyengar & Hahn, 2009), we use a novel method to look at the broader media environments of partisans in the United States.

We utilize network analysis of the 2008 telephone National Annenberg Election Survey (NAES) ($N = 57,967$) to assess citizens' complementary use of numerous outlets for political news, including mainstream and partisan television programming, newspapers, talk radio, and Web sites. We conceptualize the political media environment as a network consisting of news outlets as interrelated nodes, with connections between outlets defined by their shared audience members (Ksiazek, 2011). We examine the network relative to a core-periphery model (Borgatti & Everett, 1999) that shows the interconnectedness of all outlets in the political media environment. The more connected the outlet—that is, the more audience overlap it shares with other outlets in the network—the more likely it will reside in the core of the

network. Less densely connected outlets will reside at the periphery (i.e., outer edges) of the network. This complementary approach allows us to move beyond bivariate associations and examine the larger pattern of ties between numerous political media outlets using a large, diverse data set collected over the course of a presidential election cycle. Importantly, it provides theoretical insights into the public's political information diet as a whole, demonstrating whether partisans share common political news experiences by using the same media outlets.

General Interest and Specialized (Partisan) Political Media Outlets

Information sources in the political media environment can be classified as either "general interest" or "specialized" outlets based on their audience and content. General interest outlets target a demographically diverse audience and provide general, less partisan content intended to meet the needs of a heterogeneous audience and the public at large (McQuail, 1997; Schooler, Chaffee, Flora, & Roser, 1998; Sunstein, 2007; Tewksbury, 2005). These include outlets like broadcast network television news (e.g., NBC), non-partisan cable news outlets (e.g., CNN), local daily newspapers, and Web portals that aggregate news (e.g., MSN).

Sunstein (2007) argues that exposure to these general interest news outlets is critically important in an era where citizens' media environments can easily reflect their existing preferences. By offering more diverse content, voices, and topics, general interest outlets create a more public forum that provides individuals opportunities to encounter, often unexpectedly, information and viewpoints they might otherwise have avoided. In doing so, they create the shared media and political experiences for ideologically disparate individuals that are so important to a well-functioning, deliberative democracy. While many individuals may not be persuaded by such diverse information and viewpoints at the very least they are encountered, which encourages knowledge and understanding of the other side (Sunstein, 2007).

Specialized outlets provide information for more homogenous, niche audiences who share a particular characteristic such as lifestyle interests or political ideology (Schooler et al., 1998). The content provided by specialized outlets has a more narrow focus than general interest outlets and is intended for a unique demographic (Dimmick, 2003; Tewksbury, 2005). In the political media context, specialized outlets include partisan cable news networks (e.g., FOX News), national newspapers with ideological editorial pages (e.g., *Wall Street Journal*) and partisan Web sites (Prior, 2013a). We refer to these sources as "partisan" outlets.

Some have warned that citizens' reliance on partisan news outlets will create enclaves in which people consistently hear opinions and receive information that reinforces their existing positions (Bennett & Iyengar, 2008; Jamieson, & Cappella, 2008). The concern is that heavy use of partisan outlets will lead to less use of the general interest outlets that provide a common point of reference for diverse citizens and, at times, expose people to attitude-challenging information (Sunstein, 2007). As a result, there is the possibility that the public becomes increasingly fragmented

regarding the type of information to which it is exposed and polarized in its political positions (Levendusky, 2013; Stroud, 2010).

Partisan Selective Exposure and Citizens' Media Environments

The possibility of audiences abandoning general interest outlets in favor of partisan outlets is based on the concept of selective exposure, which is defined as the extent to which individuals' overall news diet reflects their pre-existing attitudes and beliefs. Selective exposure is based on dissonance theory (Festinger, 1957) and suggests people select news based in part on a desire to avoid dissonant information that contradicts pre-existing attitudes, beliefs, and behaviors. Dissonance stemming from political news may be avoided by either selecting ideologically consistent sources (selective approach) or avoiding ideologically inconsistent sources (selective avoidance) (Garrett, 2009).

Although both strategies may be effective in preventing dissonance, citizens engage in selective approach more often than avoidance (Garrett & Stroud, 2014). When given the choice, people prefer news from ideologically consistent media outlets (Iyengar & Hahn, 2009; Stroud, 2011), but do not actively avoid news that challenges their political attitudes (Garrett & Stroud, 2014). As Garrett (2009) argues, there are several reasons people do not avoid counter-attitudinal information. First, it is difficult to avoid all attitude-discrepant information and a more efficient way to reduce dissonance may be to counter-argue challenging information following exposure. Second, exposure to counter-attitudinal information may be useful for partisans to know the other side's position on issues or to reinforce their own opinion (Valentino, Banks, Hutchings, & Davis, 2009). Finally, people who want balanced information and a diverse set of viewpoints are unlikely to engage in avoidance (Garrett, 2009). Because citizens—even strong partisans—do not consistently avoid attitude-challenging news, it is likely that they incorporate a mix of both partisan and general interest media outlets into their news repertoires. Empirical research has found support for this contention, as use of mainstream and partisan media are often related (Garrett et al., 2013), and some partisans explicitly use counter-attitudinal sources (Holbert et al., 2012; Prior, 2013a).

Yet, prior research has not fully addressed the breadth of citizens' media environments or the extent to which partisans use a common set of news outlets. Notably, many studies of political news audience fragmentation do not fully account for use of general interest outlets—the exact sources that provide consistent exposure to diverse and, at times, disagreeable information (Mutz & Martin, 2001; Sunstein, 2007). For example, Prior (2013a) and Holbert and colleagues (2012) examine only partisan cable television use, which precludes inferences about the political media environment as a whole. Similarly, Stroud (2011) controls for broadcast network news use, but does not use ideology or partisanship to predict its use. Experimental designs also tend to not provide participants many news options from general interest outlets (Iyengar & Hahn, 2009). By not fully incorporating general

interest outlets, extant work is unable to demonstrate how citizens use these sources alongside partisan outlets.

The tendency of prior research to focus on political news use within a particular media channel also limits what it can tell us about the broader media environment. For instance, Garrett and colleagues (2013) examine the relationship between use of partisan and mainstream political media outlets but limit their analyses only to online sources. Other work investigates how citizens use cable television programs but omits online news and newspapers (e.g. Holbert et al., 2012; Prior, 2013a). These studies therefore provide insights into audience composition for a single media channel rather than the media environment as a whole. As it stands, three important questions regarding citizens' media repertoires persist. First, how do individuals incorporate media from different channels into their overall political media diets? Second, to what degree do media diets consist of both general interest and partisan outlets? Finally, to what extent do partisans' media environments continue to share similarities? The network analyses used here allow us to examine these questions and provide new insights into citizens' broader political news diets.

Hypotheses

Existing literature leads us to predict that citizens mostly rely on a common set of political media outlets, regardless of their political party affiliation. We expect people use both general interest and partisan media outlets in a complementary manner and do not isolate themselves to political enclaves. Because they target a heterogeneous audience and provide broad, less-partisan content, general interest outlets should be more central to the general public's media environment (H_{1a}). Given their niche audiences and content, we also expect partisan outlets to be at the periphery for the general public (H_{1b}). Although partisans prefer sources that reinforce their existing beliefs, we do not expect use of ideological sources to replace their use of general interest outlets. Instead, we predict general interest outlets will remain central to partisans' media environments, as citizens make little attempt to avoid these sources (H_{2a}). However, given the tendency for individuals to engage in selective approach we also expect ideologically-consistent partisan outlets to be more central to partisans' media diets (H_{2b}). In sum, these hypotheses predict citizens engage in some level of selective approach but not avoidance. As a result, the media diets of Republicans and Democrats should look similar and include the same set of primary general interest outlets, with some partisan outlets becoming more or less prominent based on partisanship.

Method

This study uses data from the NAES 2008 Phone Edition. This rolling cross-sectional survey consisted of telephone interviews with 57,967 U.S. respondents

conducted daily between December 17, 2007 and November 3, 2008 (Annenberg Public Policy Center, 2008). Using AAPOR (2008) guidelines (RR5) the response rate for this survey was 23%. Over half (57.2%) of the respondents were women, 82.9% were Caucasian, the mean age was 53, and 58.9% had at least an Associate's or two-year college degree.

Measures

News Use. General interest outlets were conceptualized as those targeting heterogeneous audiences and providing general content to the public at large (Sunstein, 2007; Tewksbury, 2005). We identified ten general interest outlets including news programs and/or content from broadcast network television channels (ABC, CBS, NBC), local newspapers from around the country, non-partisan cable news (CNN), a national newspaper (*USA Today*), the public broadcasting channel (PBS), and internet news aggregators (AOL, MSN, Google). Political media outlets targeting niche audiences with a common political ideology were identified as partisan outlets (Dimmick, 2003; Tewksbury, 2005). A total of nine partisan news outlets were identified, including programs and content from partisan cable news channels (FOX News, MSNBC), national newspapers whose editorial pages are often characterized as either liberal (*New York Times*, *Washington Post*), or conservative (*Wall Street Journal*), conservative and liberal (NPR) political talk radio, and conservative and liberal Web sites.

The NAES survey asked respondents about their use of several specific news programs or outlets across four media platforms including television news, newspapers, online news, and radio news. To create the measures for the general interest and partisan outlets, respondents' use of various programs and outlets were recoded and combined as described below (see Appendix for specific survey news items that were used to create each general interest and partisan outlet variable).

If a respondent reported using television news at least one day in the past week, they were asked to name the television network or program from which they received most of their information. Individuals who reported using a specific source most frequently were given a second follow-up question asking them to name all other networks or programs used in the previous week. Data from these two questions were combined and any outlet respondents reported using was coded as 1 and all unused programs as 0.² We next combined all content from the same network to form a single television brand variable for each outlet. For example, we combined use of general *ABC News*, *ABC World News Tonight*, *Nightline*, and *abc.com* to create the brand variable, *ABC*.³ If a respondent reported use of any of the individual programs on a network or the network's Web site, the parent brand variable was coded as 1. This coding strategy reduces the error from respondents' recall. For example, perhaps a respondent reported that they watched an unspecified program on *ABC News* but in fact had watched *ABC World News Tonight*. In this instance treating the programs separately would misidentify the actual program viewed, but

combining these items captures use of the larger brand. This procedure was used to create the following network and partisan television brand variables: ABC, CBS, NBC, PBS, CNN, FOX News, and MSNBC.

We included both local (e.g., *Houston Chronicle*, *Detroit Free Press*) and four national newspapers in our analyses (*New York Times*, *Wall Street Journal*, *Washington Post*, and *USA Today*). If newspapers were used at least once in the previous week, respondents were asked to name the newspaper they received most of their information from (either online or in print), as well as other newspapers they used during that time frame. If any local newspaper was named as either the primary or "other" paper used, the local newspaper variable was coded as 1. If no local paper was named or if the respondent did not use a newspaper in the previous week, the local newspaper variable was coded 0. We assessed the four national newspapers individually using the same coding scheme.

Respondents who used the Web at least once for campaign information in the previous week were asked to name their most-used online site, as well as other sites used. Any reported use of a site was coded as 1 and non-use as 0. Because use of the individual partisan Web sites was very low, we identified the partisan leanings of several sites and combined them to create a single variable for both conservative and liberal Web sites.

Respondents who heard information about the campaign on political talk radio shows in the previous week were asked to name the program they listened to most, as well as other political talk radio programs listed to during that time frame.⁴ Conservative and liberal radio were coded separately, and reported use of these radio programs were coded as 1 and non-use as 0.

Political Party. Political party affiliation was assessed by asking, "Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or something else?" Of those polled, 2,494 respondents did not answer this question and were excluded from our partisan analyses. The final sample ($N = 55,473$) included 16,526 Republicans (29.8%), 20,258 Democrats (36.5%), and 18,689 Independents (or other) (33.7%).

Analysis

This study takes a networked, audience-centric approach to citizens' media diets and provides a macro-level view of political media use that highlights the position of each media outlet relative to all other outlets (Hindman, 2009). This holistic view of the political media environment is beneficial in that it integrates multiple levels of analysis by demonstrating both the audience for each political media outlet as well as the news repertoires for different audiences (Webster & Ksiazek, 2012). This approach takes individual-level exposure patterns, scales them to the aggregate, and analyzes them in the context of the entire political information diet of a particular audience. This analytical technique departs from the dominant empirical approach to fragmentation that often treats each outlet in isolation—and thus in

competition with one another for a user's attention. Network analysis allows for interpretations relying on the interconnections among outlets, offering a more comprehensive and broader picture of citizens' political news environments.

The political media network here is defined as a set of media outlets (the nodes), with the shared users between each pair of outlets constituting a link. Any two nodes were connected if a respondent reported using both outlets. The measure of link strength was the number of times two outlets were connected across all respondents. Two complementary network analyses in UCINET were used (Borgatti, Everett, & Freeman, 2009). First, the network was depicted visually through iterative metric multi-dimensional scaling, where outlets are located spatially based on the strength of their connections to other outlets. Outlets are positioned so those with the strongest ties are closest together. This puts the most connected outlets in the center of the network, with those less connected in the periphery. Second, a continuous core-periphery analysis was conducted to provide empirical validation of the visual network (Borgatti & Everett, 1999). This procedure estimates a "coreness" score for each outlet and suggests a core-periphery solution that confirms whether each outlet is located in the core or periphery. The core-periphery assignments are based on the computation of concentration scores (which are calculated using formulas comparing differences between outlets with high and low coreness scores) for networks of size 1 to $n-1$, and the highest concentration score signals the recommended core size. Then, the media outlets with the highest coreness scores are selected for placement in the core until the recommended core size is met. For example, if the recommended core size is 3 because that solution had the highest concentration score, the outlets with the three highest coreness scores for that network are in the core. The procedure computes a model fit statistic to indicate how well the data fit a core-periphery structure.⁵

While the outlets are categorized as core and periphery, a coreness score is also reported to offer more detailed information about the relative location of outlets. A coreness score is a descriptive indicator of spatial location that accounts for the entire pattern of network connections. It ranges from 0 to 1 with higher coreness scores suggesting an outlet is closer to the network's core, and lower scores suggesting an outlet belongs in the periphery (Borgatti & Everett, 1999). Although coreness is not measured with error and a traditional significance test is not available, coreness scores do allow for interpretations that go beyond a simple core-periphery dichotomy by providing a more granular measure of where a node is positioned with respect to the core and periphery of a given network. They also provide descriptive information to aid in the interpretation of the visualizations.

We also conducted post-hoc assessments of whether outlets reside in the semi-periphery, which is the space midway between the core and the periphery (Moore, Teixeira, & Shiell, 2006). Drawing on the network visualizations and coreness scores, this analysis identified outlets clearly located between the core and periphery. Identifying semi-peripheral outlets provides additional theoretical insights by highlighting the outlets that remain well connected in the network and bridge the gap between core and peripheral sources.

Results

The first two hypotheses (H_{1a} and H_{1b}) predicted general interest outlets exist at the core of the general public's political media environment and specialized partisan outlets exist at the periphery. Figure 1 shows two general interest outlets in the core (local newspapers and CNN). However, FOX News also appears in the core and several other general interest (e.g., network television news) and partisan outlets (e.g. MSNBC, conservative talk radio) are in the semi-periphery. The core-periphery analysis supports these observations and the data are a good fit for the model (Table 1). These results indicate that local newspaper use, CNN, and FOX News share the most connections and overlap with other outlets, meaning that users of all other outlets also turn to these three outlets with greater frequency. The close proximity these core outlets have to one another indicates that people who use local newspapers are also likely to use CNN and FOX News and are more likely to also use the various outlets that lie in the semi-periphery.

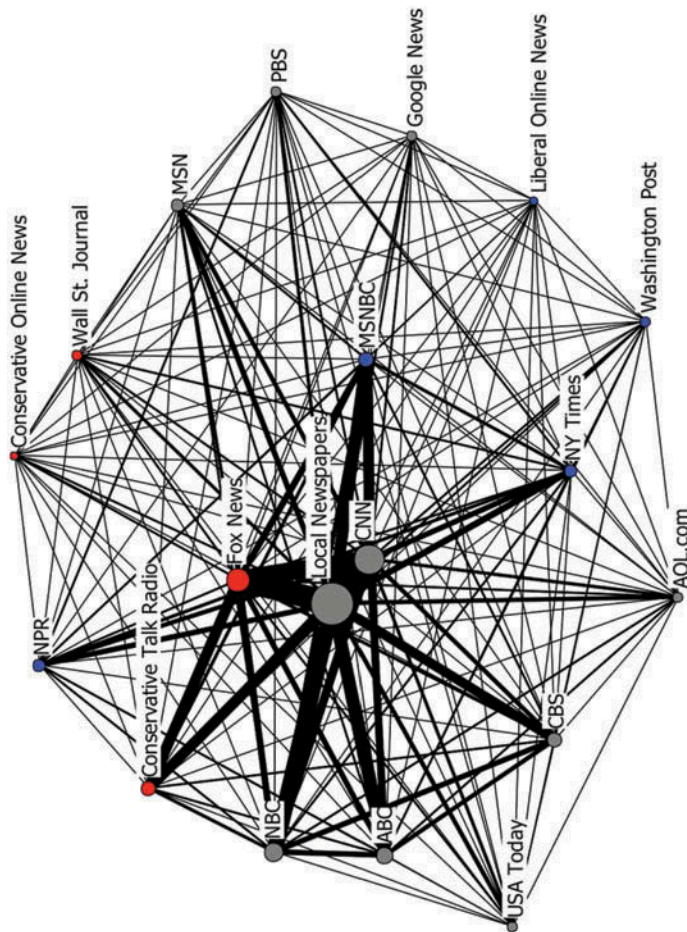
The other hypotheses introduce party identification as a moderator. The analyses were replicated for the Republican and Democratic networks by restricting the data only to individuals who identify as a member of each party. The results support the prediction that general interest outlets remain central to partisans' media environments (H_{2a}). There is also partial support for the hypothesis that attitude-consistent outlets are more central in partisans' media diets (H_{2b}).

Both predictions find support in the Republican network, which consists of a core of general interest outlets (local newspapers and CNN) and partisan outlets (FOX News, conservative talk radio) (Figure 2). The semi-periphery includes several general interest outlets and the liberal partisan outlet, MSNBC (Table 1). Although FOX News is more centrally located for Republicans than it is the general population, use of this partisan source does not result in abandonment of general interest outlets. Like the general population, the close ties between FOX News, CNN, and local newspapers indicate Republicans use a mix of general interest and conservative partisan outlets as their primary sources of political information. It is important to note the liberal-leaning cable network, MSNBC, lies in the semi-periphery rather than the periphery, which indicates Republicans do not avoid counter-attitudinal programming altogether and occasionally seek to hear the other side. If selective avoidance were occurring, all liberal-leaning partisan outlets would be in the periphery. That is not the case here.

Contrary to expectations, liberal-leaning partisan outlets do not exist in the core for Democrats (Figure 3), as only two general interest outlets (local newspaper, CNN) constitute their core. The coreness scores highlight a semi-periphery consisting of general interest and partisan outlets, including both liberal (MSNBC, *NY Times*, NPR) and conservative (FOX News) partisan outlets. In fact, the coreness scores for Democrats show that FOX News shares nearly as many users with other media outlets as does MSNBC. Although Democrats appear less likely than Republicans to engage in selective approach, they display no signs of partisan enclaves or selective avoidance.⁶

Figure 1

Visualization of the General Public's Political Media Network (n = 55,473)



Note. Node size is an indicator of the raw number of users of a given outlet, where larger nodes have larger audiences. The thickness of the link between two outlets represents the number of shared users, where thicker lines indicate more shared audience members.

Table 1
Core, Semi-Periphery, and Periphery Assignments

General Public (N = 55,473) Model Fit = .98			Republican (N = 16,526) Model Fit = .99			Democrat (N = 20,258) Model Fit = .99		
Core	Semi-Periphery	Periphery	Core	Semi-Periphery	Periphery	Core	Semi-Periphery	Periphery
Local Newspaper (0.69)	NBC (0.22)	NPR (0.08)	Local Newspaper (0.62)	NBC (0.18)	MSN (0.07)	Local Newspaper (0.71)	NBC (0.22)	MSN (0.07)
CNN (0.47)	MSNBC (0.19)	MSN (0.08)	FOX News (0.54)	ABC News (0.16)	Wall St. Journal (0.06)	CNN (0.52)	MSNBC (0.22)	AOL.com (0.06)
FOX News (0.35)	ABC (0.17)	AOL.com (0.06)	CNN (0.37)	MSNBC (0.13)	USA Today (0.06)		FOX News (0.19)	PBS (0.06)
	Conservative Talk Radio (0.16)	USA Today (0.05)	Conservative Talk Radio (0.30)	CBS (0.10)	AOL.com (0.06)		ABC (0.18)	USA Today (0.05)
	CBS (0.12)	Wall St. Journal (0.05)					NY Times (0.14)	Conservative Talk Radio (0.05)
	NY Times (0.10)						CBS (0.13)	
							NPR (0.11)	

Note. Core/ness score in parentheses. Any outlet that was not assigned to the core but had a core/ness score greater than or equal to .10 was categorized as semi-peripheral. Outlets in the periphery with a core/ness score less than 0.05 are not shown.

Figure 2
Visualization of Republicans' Political Media Network (n = 16,526)

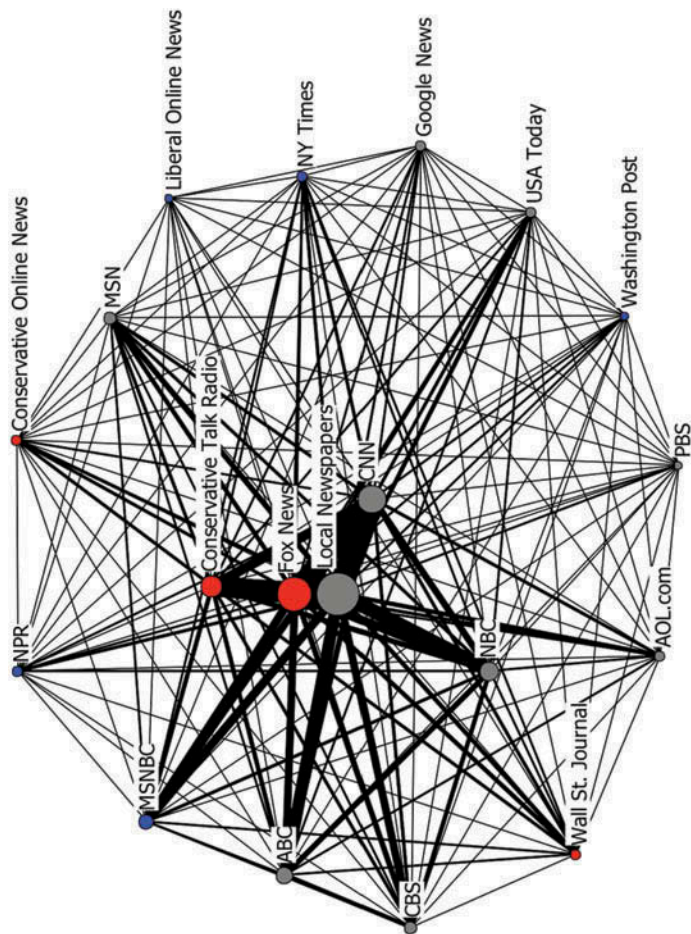
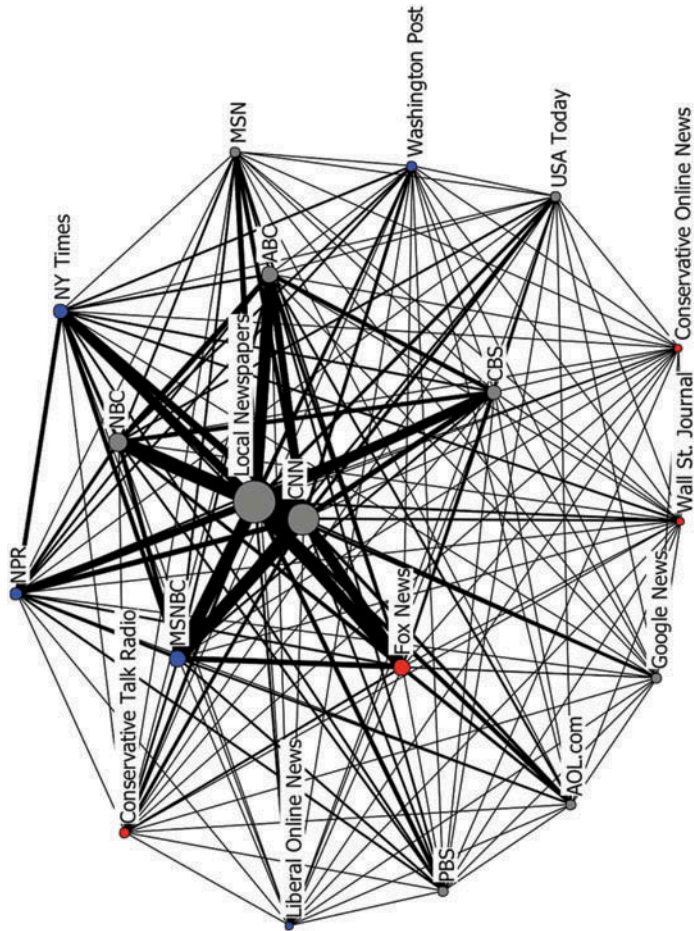


Figure 3
Visualization of Democrats' Political Media Network (n = 20,258)



Robustness Tests of Results

One potential limitation of our analyses is that they do not account for frequency of use. It is possible that citizens rely primarily on a set of attitude-consistent partisan outlets and use mainstream or counter-attitudinal outlets more sparingly. Although the NAES survey did not assess frequency of use in terms of days per week or hours per day, respondents were asked to indicate which television program, newspaper, and Web site they used *most* frequently for campaign information. To provide a check on our findings and incorporate a measure of frequency into our analyses, we retested our hypotheses using this more conservative measure of media use. When restricting our measure of media use only to those outlets respondents reported using most frequently we continue to find little evidence of selective avoidance and still see some reliance on similar sources of news for partisans. Consistent with H_{1a} and H_{1b}, local newspapers are the only outlet in the core for the general public. For Republicans, we see some minor differences: CNN moves from the core to the semi-periphery, and the semi-peripheral outlets from the original analysis move to the periphery. While newspapers are still central, and CNN is in the semi-periphery, we see FOX News and conservative talk radio playing a more important role for Republicans when restricting our analysis to only the most-used outlets. For Democrats, we see newspapers in the core, CNN in the semi-periphery, and everything else in the periphery. While the Republican network does suggest some degree of both selective approach *and* selective avoidance in this alternative analysis, we fail to see patterns of avoidance for Democrats or the general public. Moreover, across the board, general-interest outlets continue to be central to citizens' media diets, including Republicans.

We also examined the possibility that the most partisan individuals self-segregate by replicating our analysis on Republicans (N = 9,651) and Democrats (N = 13,222) who considered themselves to have a "strong" affiliation with their party. Once again, our hypotheses continue to be supported under these more rigorous analyses. We find no meaningful differences in our results from the original analyses when examining only strong partisans, as both general interest (local newspapers, CNN) and conservative partisan news outlets (FOX News, conservative talk radio) exist in the core for strong Republicans and only general interest outlets (local newspapers, CNN) are core for strong Democrats. These additional analyses suggest that even strong partisans do not create echo chambers but instead incorporate a variety of outlets into their media diets.

Our decision to include individual opinionated talk programs in the partisan cable channel variables raises the possibility that combining television programs under a parent brand restricts the opportunity for partisan preferences to emerge. These opinionated programs differ in format from traditional news broadcasts in that the latter present news in a more neutral, objective manner while the former are more opinionated and partisan and may be considered biased by the audience (Feldman, 2011). To address this possibility we examined the networks with the individual programs separated out from the "brand" variables. For example, an opinionated talk program like *The O'Reilly Factor* was treated as a distinct outlet and not combined with the FOX brand variable. The replicated analysis shows no meaningful

Table 2
Descriptive Statistics and Ratios

	General Public	Republicans	Democrats	Independents
Variable	(N = 57,967)	(N = 16,526)	(N = 20,258)	(N = 18,689)
All outlets (<i>M, SD</i>)	1.96 (1.45)	2.01 (1.41)	2.01 (1.44)	1.98 (1.48)
General Interest (<i>M, SD</i>)	1.44 (1.12)	1.38 (1.09)	1.56 (1.12)	1.47 (1.13)
General Interest/All Outlets	.77 (.30)	.70 (.32)	.81 (.27)	.78 (.30)
Partisan (<i>M, SD</i>)	.52 (.77)	.63 (.78)	.45 (.75)	.52 (.79)
Partisan/All Outlets	.23 (.30)	.30 (.32)	.19 (.27)	.22 (.30)
Partisan/general interest	.37 (.58)	.46 (.61)	.31 (.54)	.36 (.59)
Conservative (<i>M, SD</i>)	.30 (.53)	.49 (.63)	.16 (.39)	.29 (.52)
Conservative/All Outlets	.14 (.25)	.24 (.30)	.07 (.18)	.13 (.24)
Liberal (<i>M, SD</i>)	.22 (.52)	.14 (.39)	.29 (.60)	.23 (.52)
Liberal/All Outlets	.09 (.20)	.06 (.15)	.12 (.22)	.09 (.20)

Note. After combining the individual news sources into outlet variables, the dataset included a total of 19 outlets, with 10 general interest outlets and 9 partisan outlets (4 conservative and 5 liberal). Ratios are only for those with a positive number in the denominator. If denominator is 0, the ratio was not calculated. This means, for example, that the .46 ratio of partisan to general interest for Republicans is only for those who used a general interest site.

differences from our original approach. The core/periphery assignments and the network visualizations were nearly identical, with the newly added individual cable news programs primarily appearing in the periphery.

Finally, to validate the network analysis interpretations, Table 2 offers more traditional descriptive statistics to highlight the usage patterns that underpin the visualizations and coreness scores. Looking at means for exposure to general interest and partisan outlets, we see general interest sources outweigh partisan outlets for all groups. The ratios of general interest/all outlets and partisan/all outlets tell a similar story: general-interest outlets constitute a larger share of citizens' media diets than partisan outlets, across all groups. This is consistent with the network analysis results presented above and supports the location of general-interest outlets in the core, with partisan outlets in the semi-periphery and periphery.

Discussion

The expanse of media outlets has led to predictions of citizens separating into partisan enclaves that are walled off from any disagreeable information and the shared political media experiences that are essential to a healthy democracy will cease to exist. However, the results of this study strongly contest these predictions. Our network analysis of the public's broader media repertoires show citizens' media environments—even partisans'—are strikingly more similar than different. Although partisans exhibit some preference for likeminded sources, we find no evidence that they avoid disagreeable information but rather continue to rely mostly on a common set of mainstream, general interest news outlets. These more mainstream sources provide information that at times challenges both Republicans' and Democrats' positions, yet neither make an attempt to avoid them. Partisans may occasionally use niche sources that appeal to their ideology, but more often than not, people across the political spectrum still turn to major outlets for political information, suggesting they remain interested in getting a general, non-partisan take on the news.

Our assessment also shows people are at times interested in hearing a range of political opinions, including information from the other side of the spectrum, as counter-attitudinal sources were semi-peripheral for partisans (e.g., Republicans and MSNBC). This suggests there is a "middle ground" of political media outlets—those that are not quite central to people's diets yet are by no means avoided. Were partisan enclaves to exist, all counter-attitudinal sources would be isolated on the periphery for partisans. Instead, we see people at times seek non-likeminded information, which is far from selective avoidance. This does not mean partisans do not prefer political media outlets that reinforce their beliefs. They do. But there is simply no evidence for selective avoidance or partisan "echo chambers." Although there is a shift between Democrats and Republicans in the general centrality of outlets with a partisan bias, these movements are minor when compared to the greater consistency in the networks across the sub-populations.

The network approach used here advances our theoretical understanding of citizens' political media environments in several important ways. First, prior research has provided key insights into citizens' media habits at a more micro level (Garrett et al., 2013; Prior 2013a; Stroud, 2011), but these studies are only a narrow piece of the puzzle. Citizens' use of a particular political media outlet does not exist in a vacuum and is instead influenced by the other news they use (Holbert & Benoit, 2009). In order to fully understand media selectivity it is necessary to take a step back and look at the bigger picture. By examining how a large range of media outlets from different channels are used in conjunction with each other, this study highlights that partisan selectivity is minimal even on a macro level.

This study also demonstrates that partisans continue to share common media experiences, as political affiliation has little effect on the public's overall media diet. Republicans' and Democrats' media environments are similar, suggesting that individuals from both parties are often exposed to the same news and political information. Although some experimental work hints that partisans—in particular

Republicans—avoid information that disproportionately challenges their beliefs (Garrett & Stroud, 2014; Iyengar & Hahn, 2009), we find little evidence that one party avoids disagreeable information more than the other. This discrepancy may be due to the fact that experimental designs tend to look at news selectivity using only a single issue or a limited set of choices, while our work examines the larger media diet. That is, at a micro level some differences in avoidance between Republicans and Democrats might be evident but looking at a broader political media repertoire reveals that partisans still rely on similar news sources.

Finally, our network analyses of citizens' broad media repertoires confirms prior work suggesting citizens' preference for attitude-consistent sources does not come at the expense of disagreeable information (Garrett, 2009; Garrett & Stoud, 2014). Although citizens' media repertoires do not include explicitly cross-cutting outlets in their core, they do include general interest outlets that provide information *both* Republicans and Democrats at times find disagreeable. If we consider that these mainstream outlets sometimes offer attitude-challenging news, conclusions regarding selective avoidance become more optimistic. If disagreeable sources are instead limited only to those that provide information from one end of the political spectrum (e.g., FOX News), it is unsurprising that evidence of selective avoidance is sometimes found. However, this latter approach offers a narrow view of exposure to counter-attitudinal information. Local newspapers and broadcast television continue to be important sources of news for many citizens and these outlets offer information that challenges members of both parties. When people use these mainstream sources it becomes difficult for them to avoid dissimilar political information (Mutz & Martin, 2001; Sunstein, 2007). By incorporating these sources and treating them as potential outlets for exposure to counter-attitudinal information, we believe our data provide a more realistic view regarding selective avoidance.

The study is not without limitations. It relies on self-reported media use, which requires respondents to accurately recall which news outlets they used and is prone to biased estimations of exposure (Prior, 2013b). However, bias in self-reported media use only threatens hypothesis testing if it varies among certain demographics of interest, which in the present study is political party affiliation. There is little reason to believe party identification influences self-reports of media use, nor is there any evidence that use of one type of media outlet is over-reported more than others.

The data also do not fully account for frequency of media use. A possible concern is that limited exposure to disagreeable information is not equivalent to a steady stream of news from ideologically-consistent sources (Prior, 2013b). To account for this, we conducted additional analyses that examined only the television program, newspaper, radio program, and Web site used most frequently for political information. Admittedly, this measure is not a perfect proxy for frequency of use but we find that more often than not people turn to mainstream sources such as their local newspaper and non-partisan television programming as their primary source of news. It does not appear partisans turn en masse to like-minded outlets as their most frequent sources of news. This is encouraging, as any exposure to either mainstream or disagreeable information, however brief, may

be beneficial. Even limited amounts of cross-cutting information can impact public opinion and play a key role in the democratic process and most individuals who choose to use cross-cutting outlets see their attitudes become more moderate as a result (Mutz & Martin, 2001).

Finally, network analysis offers unique insights into citizens' media use but the approach carries its own limitations. Hypothesis testing in network analysis could be categorized as a mix of science and art, and visualizations of networks play a key role in interpretation (de Nooy, Mrvar, & Batagelj, 2011). Like determining an articulated factor in exploratory factor analysis or respecifying a model in structural equation modeling, the interpretation of network patterns is both objective and subjective. Network models clearly identify media outlets that constitute the network core, but making sense of the connections and location of other outlets requires informed judgments. In this sense network analysis is no different than other more exploratory statistical techniques, although the statistics in Table 2 help validate the network analysis interpretations. The benefits of a network approach—particularly the ability to see connections and patterns that other analytical techniques miss—outweigh its potential limitations.

Conclusion

Technological changes afford citizens the opportunity to craft political information environments to fit their specific needs, creating the possibility of partisan enclaves and infrequent shared news experiences. The evidence provided here indicates these threats may be exaggerated. Citizens hold some preference for likeminded content but do not actively avoid disagreeable information. More often than not, partisans and non-partisans alike use many of the same, general interest news sources. Across the political spectrum, citizens are not isolating themselves to likeminded partisan content but instead have media environments that are exceedingly more similar than different.

Notes

1. Althaus (2012) argues for the need to explicitly state the democratic theory from which any normative claims are offered (i.e., fourth-level normative assessment) in empirical political communication research. Heeding this call, our argument for the importance of shared understanding, compromise, and consensus building is in accordance with a republicanist approach to democratic theory. Pluralistic and elitist democratic theories would express different preferences (Baker, 2002; Teorell, 2006).
2. Some television outlets were used by as few as 10 people. With a large sample size, and users aggregated to the outlet level, inferences made about outlets with very few users would be questionable (Webster & Ksiazek, 2012). To limit this possibility and for the sake of parsimony, we only included outlets that reached a 200-person threshold. This cut point was selected because there was a clear division in the data; several outlets had audiences between 200–250, while the next largest block of outlets had audiences well under 100 users.

3. Web sites of the television networks were coded as part of the network brand variable because these sites offer much of the same content and videos seen on television.
4. As prior research suggests conservatives at times avoid news from NPR while liberals prefer it, NPR was treated as a liberal-oriented outlet (Iyengar & Hahn, 2009).
5. The model fit score is a correlation indicating whether the data are a good fit for a core-periphery model. The procedure computes 10,000 random iterations of a network of the specified size to find an ideal core-periphery structure. It then compares the ideal structure to the observed data. A high correlation suggests the observed data are a good fit for the core-periphery network structure. Borgatti & Everett (1999) note, "maximizing the correlation is equivalent to running a t-test for the difference in means between the core-to-core ties and the periphery-to-periphery ties. A valued network has a core-periphery structure to the extent that the difference in means across blocks is large relative to the variation within blocks" (p. 384). A good fit means the core would have strong ties, the periphery would have weak ties, and the variation within either block is much less than the variation between the core and periphery.
6. We also examined Independents' media environment, which looks very similar to Republicans' and the general public's environments. Local newspapers and CNN are in the core, along with FOX News. Independents' network also displayed a possible semi-periphery with a mix of general and partisan outlets (including MSNBC and conservative talk radio).

References

- AAPOR. (2008). *Standard definitions: Final dispositions of case codes and outcome rates for surveys* (5th ed.). Lenexa, KS: AAPOR.
- Althaus, S. L. (2012). What's good and bad in political communication research? Normative standards for evaluating media and citizen performance. In H. Semetko & M. Scammell (Eds.), *The SAGE handbook of political communication* (pp. 97–112). London, UK: Sage.
- Annenberg Public Policy Center of the University of Pennsylvania. (2008). *National Annenberg Election Survey 2008 phone edition (NAES09-phone) codebook*.
- Arceneaux, K., & Johnson, M. (2013). *Changing minds or changing channels? Media effects in an era of expanded choice*. Chicago, IL: University of Chicago Press.
- Baker, E. C. (2002). *Media, markets, and democracy*. New York, NY: Cambridge University Press.
- Bennett, W. L., & Iyengar, S. (2008). A new era of minimal effects? The changing foundations of political communication. *Journal of Communication*, 58, 707–731. doi:10.1111/j.1460-2466.2008.00410.x
- Borgatti, S. P., & Everett, M. G. (1999). Models of core/periphery structures. *Social Networks*, 21, 375–395. doi:10.1016/S0378-8733(99)00019-2
- Borgatti, S. P., Everett, M. G., & Freeman, L. C. (2009). *UCINET 6.0*. Natick: Analytic technologies. Retrieved from www.analytictech.com
- de Nooy, W., Mrvar, A., & Batagelj, V. (2011). *Exploratory social network analysis with Pajek*. (2nd ed.). New York, NY: Cambridge University Press.
- Dimmick, J. (2003). *Media competition and coexistence: The theory of the niche*. Mahwah, NJ: Lawrence Erlbaum.
- Feldman, L. (2011). Partisan differences in opinionated news perceptions: A test of the hostile media effect. *Political Behavior*, 33, 407–432. doi:10.1007/s11109-010-9139-4
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Garrett, R. K. (2009). Politically motivated reinforcement seeking: Reframing the selective exposure debate. *Journal of Communication*, 59, 676–699. doi:10.1111/j.1460-2466.2009.01452.x

- Garrett, R. K., Carnahan, D., & Lynch, E. (2013). A turn toward avoidance? Selective exposure to online political information, 2004–2008. *Political Behavior*, 35, 113–134. doi:[10.1007/s11109-011-9185-6](https://doi.org/10.1007/s11109-011-9185-6)
- Garrett, R. K., & Resnick, P. (2011). Resisting political fragmentation on the internet. *Daedalus*, doi:[10.1162/DAED_a_00118](https://doi.org/10.1162/DAED_a_00118)
- Garrett, R. K., & Stroud, N. J. (2014). Partisan paths to exposure diversity: Differences in pro- and counter-attitudinal news consumption. *Journal of Communication*, 64, 680–701. doi:[10.1111/jcom.12105](https://doi.org/10.1111/jcom.12105)
- Hindman, M. (2009). *The myth of digital democracy*. Princeton, NJ: Princeton University Press.
- Holbert, R. L., & Benoit, W. L. (2009). A theory of political campaign media connectedness. *Communication Monographs*, 76, 303–332. doi:[10.1080/03637750903074693](https://doi.org/10.1080/03637750903074693)
- Holbert, R. L., Hmielowski, J. D., & Weeks, B. E. (2012). Clarifying relations between ideology and ideologically-oriented cable tv news consumption: A case of suppression. *Communication Research*, 39, 194–216. doi:[10.1177/0093650211405650](https://doi.org/10.1177/0093650211405650)
- Iyengar, S., & Hahn, K. S. (2009). Red media, blue media: Evidence of ideological selectivity in media use. *Journal of Communication*, 59, 19–39. doi:[10.1111/j.1460-2466.2008.01402.x](https://doi.org/10.1111/j.1460-2466.2008.01402.x)
- Jamieson, K. H., & Cappella, J. N. (2008). *Echo chamber: Rush Limbaugh and the conservative media establishment*. New York, NY: Oxford University Press.
- Ksiazek, T. B. (2011). A network analytic approach to understanding cross-platform audience behavior. *Journal of Media Economics*, 24, 237–251. doi:[10.1080/08997764.2011.626985](https://doi.org/10.1080/08997764.2011.626985)
- Levendusky, M. S. (2013). Why do partisan media polarize viewers? *American Journal of Political Science*, 57, 611–613. doi:[10.1111/ajps.12008](https://doi.org/10.1111/ajps.12008)
- McQuail, D. (1997). *Audience analysis*. Thousand Oaks, CA: Sage.
- Moore, S., Teixeira, A. C., & Shiell, A. (2006). The health of nations in a global context: trade, global stratification, and infant mortality rates. *Social Science & Medicine*, 63, 165–178. doi:[10.1016/j.socscimed.2005.12.009](https://doi.org/10.1016/j.socscimed.2005.12.009)
- Mutz, D. C., & Martin, P. S. (2001). Facilitating communication across lines of political difference: The role of mass media. *American Political Science Review*, 95, 97–114.
- Prior, M. (2013a). Media and political polarization. *Annual Review of Political Science*, 16, 101–127. doi:[10.1146/annurev-polisci-100711-135242](https://doi.org/10.1146/annurev-polisci-100711-135242)
- Prior, M. (2013b). The challenge of measuring media exposure: Reply to Dilliplane, Goldman, and Mutz. *Political Communication*, 30, 620–634. doi:[10.1080/10584609.2013.819539](https://doi.org/10.1080/10584609.2013.819539)
- Schooler, C., Chaffee, S. H., Flora, J. A., & Roser, C. (1998). Health campaign channels: Tradeoffs among reach, specificity, and impact. *Human Communication Research*, 24, 410–432. doi:[10.1111/j.1468-2958.1998.tb00423.x](https://doi.org/10.1111/j.1468-2958.1998.tb00423.x)
- Stroud, N. J. (2010). Polarization and partisan selective exposure. *Journal of Communication*, 60, 556–576. doi:[10.1111/j.1460-2466.2010.01497.x](https://doi.org/10.1111/j.1460-2466.2010.01497.x)
- Stroud, N. J. (2011). *Niche news: The politics of news choice*. New York, NY: Oxford University Press.
- Sunstein, C. R. (2007). *Republic.com 2.0*. Princeton, NJ: Princeton University Press.
- Teorell, J. (2006). Political participation and three theories of democracy: A research inventory and agenda. *European Journal of Political Research*, 45, 787–810. doi:[10.1111/j.1475-6765.2006.00636.x](https://doi.org/10.1111/j.1475-6765.2006.00636.x)
- Tewksbury, D. (2005). The seeds of audience fragmentation: Specialization in the use of online news sites. *Journal of Broadcasting & Electronic Media*, 49, 332–338. doi:[10.1207/s15506878jobem4903_5](https://doi.org/10.1207/s15506878jobem4903_5)
- Valentino, N. A., Banks, A. J., Hutchings, V. L., & Davis, A. K. (2009). Selective exposure in the internet age: The interaction between anxiety and information utility. *Political Psychology*, 30, 591–613. doi:<http://dx.doi.org/10.1111/j.1467-9221.2009.00716.x>
- Webster, J. G., & Ksiazek, T. B. (2012). The dynamics of audience fragmentation: Public attention in an age of digital media. *Journal of Communication*, 62, 39–56. doi:[10.1111/j.1460-2466.2011.01616.x](https://doi.org/10.1111/j.1460-2466.2011.01616.x)

Appendix: Individual News Sources Used to Create General Interest and Partisan Outlet Variables

General Interest Outlets

- Local Newspapers: Paper or Online Copy (*Arizona Republic, Atlanta Journal Constitution, Baltimore Sun, Boston Globe, Chicago Sun-Times, Chicago Tribune, Cleveland Plain Dealer, Concord Monitor, Dallas Morning News, Denver Post, Des Moines Register, Detroit Free Press, Houston Chronicle, Los Angeles Times, Miami Herald, New Hampshire Union Leader, New York Daily News, New York Post, Newsday, Orange County Register, Oregonian, Philadelphia Inquirer, Rocky Mountain News, San Diego Union-Tribune, San Francisco Chronicle, San Jose Mercury News, St. Louis Post-Dispatch, St. Petersburg Times, Star Tribune, Star-Ledger, Other Local Paper-Verbatim Answer*)
- CNN: (*CNN-unspecified, Headline News, Anderson Cooper 360, Lou Dobbs Tonight, Situation Room with Wolf Blitzer, cnn.com*)
- ABC: (*ABC news-unspecified, ABC World News with Charles Gibson, Nightline, abcnews.com*)
- CBS: (*CBS news-unspecified, CBS Evening News with Katie Couric, cbsnews.com*)
- NBC: (*NBC news-unspecified, NBC Nightly News with Brian Williams, Meet the Press, Today Show, nbcnews.com*)
- PBS: (*PBS news-unspecified, News Hour with Jim Lehrer*)
- USA Today: Paper or online copy
- MSN: Online news portal
- Google News: Online news portal
- AOL.com: Online news portal

Partisan Outlets: Conservative

- FOX News: (*FOX News Channel-unspecified, Fox Report with Shepard Smith, Glenn Beck, Hannity and Colmes, O'Reilly Factor, foxnews.com*)
- Wall St. Journal: (Paper or *wsj.com*)
- Conservative Online News: (*Drudge Report, Instapundit, Michelle Malkin.com, Townhall*)
- Conservative Talk Radio: (*Glenn Beck, Bill Bennett, Jim Bohannon, Neal Boortz, Jerry Doyle, Focus on the Family, Mike Gallagher, Sean Hannity, Laura Ingraham, Mark Levin, Rush Limbaugh, Bill O'Reilly, Michael Savage, Laura Schlessinger*)

Partisan Outlets: Liberal

- MSNBC: (*MSNBC-unspecified, Countdown with Keith Olberman, Hardball with Chris Matthews, msnbc.com*)
- New York Times: (Paper or *nytimes.com*)
- Washington Post: (Paper or *washingtonpost.com*)
- Liberal Online News: (*Daily Kos, Huffington Post, NewRepublic.com, Talking Points Memo, Think Progress*)
- NPR: (*NPR-unspecified, All Things Considered, Morning Edition*)



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Facebook Friend Request: Applying the Theory of Reasoned Action to Student-Teacher Relationships on Facebook

Pavica Sheldon

The purpose of this study was to investigate factors that influence professors' and students' intentions to add each other as friends on Facebook. Participants were 160 professors and 249 students from different universities in the United States. Consistent with theory of reasoned action, intention was the strongest predictor of them adding each other as Facebook friends. However, among faculty members, a personal attitude was the most significant predictor of the intention to add students as friends. For students, subjective norm was the most significant predictor of the intention to friend professors.

In the traditional classroom environment the role of the instructor is to communicate the course content, which is mostly a one-way process. Social media have changed the student-teacher relationship by allowing both instructors and students to communicate between and among each other in and out of class. One form of social media are social network sites, often abbreviated as SNSs. boyd and Ellison (2007) define SNSs as Web-based applications allowing three functions: "1) users construct a public or semi-public profile; 2) present a list of other users to whom an individual is connected; and 3) view and follow that list and the lists of others within the system" (p. 211). A number of studies have suggested that social network sites such as Facebook and Twitter could be used to promote learning outside the classroom (e.g., Maloney, 2007; Puzio, 2013; Sturgeon & Walker, 2009). For example, Sturgeon and Walker (2009) found that those students who add professors as friends appear to be more willing to communicate with them if they already know them through the use of Facebook. Students who accessed the Facebook page of a teacher high in self-disclosure anticipated higher levels of motivation and affective learning and a more positive classroom climate (Mazer, Murphy, & Simonds, 2007). As a higher education instructor, Schwartz (2009) argued that some of her Facebook friendships with students meet the criteria of a mentoring relationship. In her own experience, being available to students via Facebook requires setting boundaries, but

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students tend to appreciate her availability, and, as a result, feel more connected to her. In addition, students might reach teachers on Facebook to discuss other school-related issues, such as bullying or depression, as it might be easier for a student to discuss those issues in the privacy of his or her home without facing the teacher face-to-face (Puzio, 2013).

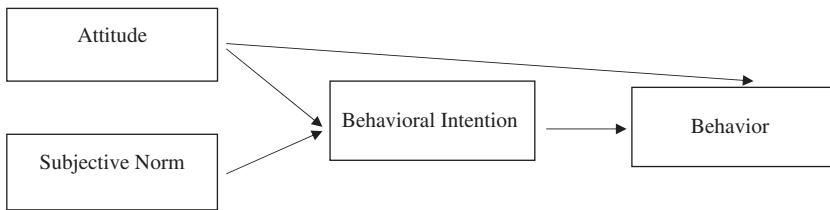
Although a number of studies have found that informal or out-of-classroom communication between students and teachers results in positive outcomes, including greater academic achievements (Pascarella, 1985) and a greater sense of well-being for both teachers and students (Roorda, Koomen, Spilt, & Oort, 2011), the over-exposure to each other's private lives may have negative results for either the student or the faculty member (Cain & Fink, 2010). In a Hewitt and Forte (2006) study, one-third of the students did not believe that faculty should be present on Facebook at all, raising concerns about identity management and privacy issues. Similarly, a third of students in Cain, Scott, and Akers's (2009) study indicated that they have posted information that they would not want their professors to see. Interestingly, students approve faculty's use of SNS, when students benefit directly (e.g., being notified about extra credit) (Malesky & Peters, 2012). Some researchers (e.g., McEwan, 2012) have suggested that faculty members wait for students to add them as friends on social network sites, rather than attempting to initiate the connection themselves.

While a few studies have revealed that the majority of faculty would decline/ignore a friend request from a student, or would wait to accept it after the student had graduated (Metzger, Finley, Ulbrich, & McAuley, 2010), we do not know what influences the intention among students and faculty to add each other as Facebook friends. Particularly, we do not know if students themselves (attitude component) have a negative opinion about befriending their professors on Facebook, or if they do not add them because it is not a popular thing to do among their other friends (subjective norm). The goal of the present study was to uncover those factors as well as to understand their reasons are for being a friend with each other. Understanding the students' motives might help faculty grasp why students like to be their "friends" in a setting outside of class. Theory of reasoned action predicts that attitude and subjective norm have the most influence on intentions to perform the behavior. Theory of reasoned action (TRA, Ajzen & Fishbein, 1980) has been used to predict an array of behaviors, including students' use of social network sites (Baker & White, 2010; Cameron, 2010; Pelling & White, 2009).

Theory of Reasoned Action

TRA suggests that a person's behavior is determined by his or her intention to perform the behavior, and that this intention is, in turn, a function of his or her attitude toward the behavior and his or her subjective norm (Figure 1). Intentions are "indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior" (Ajzen, 1991, p. 181). The stronger the intention to engage in a behavior, the more likely its performance.

Figure 1
Theory of Reasoned Action Model



Attitude refers to “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Ajzen, 1991, p. 188). According to TRA, people’s evaluations of, or attitudes toward, behavior are determined by their accessible beliefs about the behavior. A belief is defined as the subjective probability that the behavior will produce a certain outcome (Fishbein & Ajzen, 1975). This outcome expectancy originates from the expectancy-value model. Individuals evaluate their own performance based on perceived benefits. Subjective norm is defined as “the perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991, p. 188). This social pressure might come from peers, family, school, or the workplace. Webster and Trevino (1995) argued that subjective norms are more influential in explaining the adoption and use of new media. Following the past research this study predicts that attitude and subjective norm will be positively related to the *intention* to add each other as Facebook friends (H_1), as well as the *behavior* of adding each other as Facebook friends (H_2).

Another interesting but unexplored area is understanding if there are differences in attitude and subjective norm between those students and instructors who add and those who do not add each other as Facebook friends (RQ_1).

In addition, we do not know much about why faculty and students add each other as friends. One of the purposes of this study was to examine what motivates professors and students to friend each other on Facebook (RQ_2).

Two separate studies have been conducted with students and faculty. Study 1 explores students’ perspectives for adding faculty as Facebook friends, and Study 2 explores faculty members’ perspectives for adding students as Facebook friends.

Study 1: Adding Professors as Facebook Friends

Method

Participants in Study 1 were undergraduate students ($N = 249$), including 158 female and 91 male students. They ranged in age from 19 to 53 years old ($M = 22.23$, $SD = 4.71$). Approximately 67% of the participants were self-identified as Caucasian, 17% African

American, 1% Native American, 5% Hispanic, and 3% Asian-American—while the remaining participants (7%) did not fit into provided categories.

Following Institutional Review Board approval, participants were recruited through classes offered in the College of Liberal Arts at a southern research university in the Fall Semester 2013. Some participants received extra credit for their participation. The first question following the consent form asked participants whether they use Facebook. In order to participate in the study, they had to be Facebook users. Students were then asked a series of questions to measure their attitudes toward friending a professor on Facebook, their subjective norms, as well as their intentions to add a professor as a Facebook friend. These items were modeled after Peslak, Ceccucci, and Sendall's (2011) study, Cameron's (2010) thesis, Pedersen and Nysveen's (2002) study, and Pelling and White's (2009) study. To find out the reasons for adding faculty as Facebook friends, 15 items from Waldeck, Kearney, and Plax's (2001) study were modified for this study. All answers were recorded on a five-point Likert scale (1 = *strongly disagree* and 5 = *strongly agree*), and attitude was measured using the semantic differential scale.

Measures. The *attitude* toward friending a professor was measured with five questions asking participants whether they felt that friending a professor on Facebook is good, wise, beneficial, acceptable, or appropriate. This scale demonstrated an excellent internal consistency: $\alpha = .92$ ($M = 3.08$, $SD = .95$; ranging from 1 to 5). The mean score indicated a neutral-to-positive attitude toward adding professors as Facebook friends.

The *subjective norm* or perception of important others' beliefs that he or she should be a Facebook friend with a professor was measured by three items (e.g., "People important to me would approve of me being a Facebook friend with my teachers," "These days it is acceptable that students be friends with teachers on Facebook," and "I think that being a Facebook friend with a teacher is typical for my age group."). Internal consistency of the scale was excellent: $\alpha = .90$ ($M = 3.33$, $SD = .83$; 5 = *strongly agree* and 1 = *strongly disagree*). The mean scores indicated a neutral-to-positive perception of their important others' approval of being a Facebook friend with a professor.

Three items were used to measure the future *intention* to friend a professor on Facebook (e.g., "I believe I will befriend some of my current teachers on Facebook," "In the future I intend to be Facebook friends with my teachers," and "I plan to befriend some of my teachers on Facebook."). Internal consistency was excellent, $\alpha = .94$ ($M = 2.85$, $SD = 1.085$; 5 = *strongly agree* and 1 = *strongly disagree*). The mean score indicated a slightly negative trend toward a future intention to add a professor as a Facebook friend.

To find out the *reasons* for adding faculty as Facebook friends, 15 items from a Waldeck and colleagues' (2001) study were modified. Waldeck and colleagues' (2001) study focused on the reasons students use e-mail to communicate with their teachers. Of an overall 15 items, eight items asked about personal/social reasons for

adding faculty as Facebook friends ("To discuss personal issues with the teacher" and "To thank the teacher for his/her good classroom performance"), two mentioned efficiency reasons ("To avoid wasting my time" and "I can send a message when it is convenient"), and five measured procedural/clarification reasons ("To ask for guidance on assignments" and "To ask the teacher for feedback about my own performance"). Responses ranged from 1 = *not at all* to 5 = *very often*. Factor analyses extracted factors relating to motivations for adding faculty as Facebook friends. The factor analysis used a principal component solution, varimax rotation, and specified the retention of factors with eigenvalues greater than 1.0. This resulted in three factors. Of 15 items, results showed that participants could not relate to four of them (double loading and communalities lower than .50), and those were excluded from the analysis ("To let the teacher know that I am interested in the course," "To escape or divert my attention from other tasks," "To express my feelings about issues discussed in class," and "To impress the teacher"). In addition, all reason statements resulted in a positively skewed distribution, indicating that a majority of responses were in the "rare" category (median = 2). The overall structure resulted in three factors that accounted for 73.64% of variance (Table 1 and 2). An open-ended question also asked students to explain why they add faculty as Facebook friends.

Table 1
Motives for Adding Professors as Facebook Friend: Primary Factor Analysis

	Loading	Eigenvalue	Variance	A
Factor 1: Procedural/Clarification				
To ask the instructor questions about course content.	.88			
To clarify material from lecture.	.90			
To ask about examination content.	.92	5.21	47.33	.94
To ask for guidance on assignment.	.87			
To ask the teacher for feedback about my own performance.	.73			
Factor 2: Personal/Social				
To get to know the teacher better.	.78			
To tell the teacher something about myself.	.86	1.75	15.87	.79
To discuss personal issues with the teacher.	.67			
To thank the teacher for his/her good classroom performance.	.75			
Factor 3: Efficiency Reasons				
To avoid speaking to the teacher by phone or in person.	.88			
To avoid wasting my time. I can send a message when it is convenient.	.78	1.15	10.44	.67

Table 2
Motives for Adding Professors as Facebook Friend: Measures of Central Tendencies

	M	SD
Factor 1: Procedural/Clarification		
To ask the instructor questions about course content.	2.18	1.23
To clarify material from lecture.	2.08	1.16
To ask about examination content.	1.80	1.08
To ask for guidance on assignment.	2.00	1.14
To ask the teacher for feedback about my own performance.	1.97	1.14
Factor 2: Personal/Social		
To get to know the teacher better.	2.53	1.29
To tell the teacher something about myself.	2.27	1.23
To discuss personal issues with the teacher.	1.73	.98
To thank the teacher for his/her good classroom performance.	2.45	1.25
Factor 3: Efficiency Reasons		
To avoid speaking to the teacher by phone or in person.	1.81	1.07
To avoid wasting my time. I can send a message when it is convenient.	2.32	1.26

Note. *means for a 5-point scale (not at all= 1; rarely = 2; sometimes = 3; often = 4; very often = 5)

Those students who were currently friends with their professor(s) on Facebook were asked additional questions about the number of male and female faculty members that they have friended on Facebook, and also who initiated the friendship (response categories were “You only” “My teacher,” and “Both”). Of 249 participants, 40% (n = 99) said they are currently a Facebook friend with one or more professors. When asked who initiated the Facebook friendship, 60 participants said “both my teacher and I,” 27 said “I,” and 12 said “my teacher.” Students had on average 2.87 female faculty friends and 2.95 male faculty friends. The numbers of faculty friends ranged from 1 to 15. They were also asked to report their sex, age, race, and the number of hours spent on Facebook on a typical day. On average, they reported spending between one and two hours on Facebook per day.

Results

In order to test H₁, a hierarchical multiple regression analysis was conducted (see Table 3). In the first step, age and gender were entered; in the second step attitude, and in the third step subjective norm. Age and gender did not emerge as significant predictors of the intention to add faculty as Facebook friends. However, attitude was a positive and significant predictor of the intention to friend faculty members, explaining 15% of

Table 3
Hierarchical Multiple Regression Analysis Predicting Intentions to Add Professors as Facebook Friends

<i>Predictor</i>	<i>B</i>	β	R^2	ΔR^2
Step 1				
Age	.01	.03	.00	.00
Gender	-.08	-.04		
Step 2				
Attitude	.43***	.38	.15	.13
Step 2				
Subjective norm	.76***	.58	.43	.30

*Note. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

variance, $F(3, 243) = 13.67$, $p < .001$. The addition of the Step 3 subjective norm variable increased the proportion of variance to 43%, $F(4, 243) = 45.10$, $p < .001$, also making the subjective norm the most important predictor of the intention to friend professors on Facebook.

It was also expected that attitude and intentions would predict the behavior of adding professors as Facebook friends (H_2). In order to test this hypothesis, logistic regression analysis was performed. Intention was the only significant, although negative, predictor of a behavior (Table 4). Respondents who intended to add professors as Facebook friends were .25 times less likely to have added some faculty as Facebook friends already. Attitude was not a significant factor influencing the behavior.

In order to answer RQ₁, an independent sample t-test was conducted. Results showed that those who add faculty as Facebook friends have more positive attitudes toward adding professors ($M = 3.24$; $SD = .84$) than those who do not ($M = 2.97$; $SD = 1.02$). They also score higher on the subjective norm ($M = 3.74$; $SD = .63$) than those who do not add them ($M = 3.09$; $SD = .83$). Finally, they have higher intentions to add teachers as friends in the future ($M = 3.60$; $SD = .84$) when compared to those who are currently not a Facebook friend with any teacher ($M = 2.40$; $SD = .95$).

Table 4
Logistic Regression Analysis Predicting Adding Professors as Facebook Friends

<i>Predictor</i>	<i>B</i>	<i>S.E.</i>	<i>Wald</i>	<i>df</i>	<i>p</i>	<i>Exp(B)</i>
Step 1						
Attitude	.26	.22	1.39	1	.239	1.30
Step 2						
Intention	-1.38	.24	34.73	1	.000	.25

The RQ₂ asked about the reasons for adding professors as Facebook friends. Although mean scores were very low, results showed that the main reasons were personal/social ($M = 2.13$; $SD = .86$; 5-point scale). This includes “wanting to know the teacher better” or “to let the teacher know that a student is interested in the course.” The second most important reason was efficiency ($M = 2.07$; $SD = 1.00$) or using Facebook to “avoid wasting time by sending a message when it is convenient.” Procedural or clarifications reasons ($M = 1.99$; $SD = 1.02$) were on the third place, including “asking the instructor questions about course and examination content.” This reason had the highest variance extracted (Table 1).

To further understand the relationship between reasons for adding faculty and intentions to be a Facebook friend, Pearson-product moment correlations were conducted. Results indicated that the strongest relationship was between *personal* reasons and an intention, $r(97) = .42$, $p = .000$. However, findings also suggested a significant but weak relationship between the *efficiency* reason and an intention to be a friend in the future, $r(97) = .18$, $p = .041$. In a linear regression, of all three reasons predicting the intention to add faculty as friends, only *personal* reasons were significant predictors of the intention to be a friend—explaining 18% of variance in the intention ($B = .43$; $SE = .09$; $\beta = .47$; $F(3,94) = 8.17$, $p = .000$). Efficiency and procedural reasons were not significant predictors of the intention to be a Facebook friend with a faculty member. When answering an open-ended question, students indicated that the reasons to be a Facebook friend with a professor are “interest in their lives/updates,” “having somebody of good influence there,” and “it is helpful for homework questions.” Most students had similar answers indicating their interests in the professors’ personal lives. Responses to open-ended questions seem to correspond with statistical data.

Brief Discussion

The results suggest that students have a neutral-to-positive attitude toward adding professors as Facebook friends. Those who had added some as friends before had a more positive attitude towards it. Previous studies show that attitudes originate from the expectancy value model (Fishbein & Ajzen, 1975). In this study, students’ reasons are personal—to get to know the teacher better. However, subjective norm is the most important predictor of the intention to friend faculty on Facebook. It appears that college students are more influenced by what their friends believe is appropriate to do. This is an important finding that does not correspond to the meta-analysis of previous theory of planned behavior studies (Armitage & Conner, 2001)—suggesting a stronger link between attitudes and intention. A possible reason in this study might be the age of student participants. Young people are more influenced by what their peers say (subjective norm). Overall, the most significant predictor of actually being a friend with a professor is the intention, as suggested by theory of reasoned action. This relationship was negative, meaning that those who plan to add professors as Facebook friends are less likely to already be Facebook friends with faculty. In other words, students are still interested in adding their professors on their Facebook friendship list, even if they have not done it before.

Study 2: Adding Students as Facebook Friends

Method

One hundred and sixty faculty members attempted to fill out a survey posted on surveymonkey.com. Faculty members were recruited through the principal investigator's college by means of emails sent to all instructors teaching at the College of Liberal Arts. The link to the survey was also posted on the CRTNET and AEJMC (Association for Education in Journalism and Mass Communication) Facebook page. Of 160 faculty members who attempted to fill out the survey, nine did not have a Facebook account, and 34 were deleted from the database due to failing to answer more than one question. Results were analyzed using complete data from 117 participants. Participants ranged in age from 25 to 70 years old ($M = 42.11$, $SD = 10.98$, 4 missing, and included both females ($n = 81$) and males ($n = 36$). Most identified themselves as Caucasian (88%), followed by African-American (4.3%), Asian-American (2.6%), Hispanic (.9%), and other (3.4%).

Measures. The *attitude* toward friending a student was measured with five questions asking faculty if they felt that friending a student on Facebook is good, wise, beneficial, acceptable, and appropriate. This scale demonstrated an excellent internal consistency: $\alpha = .95$ ($M = 2.55$, $SD = 1.00$; ranging from 1 to 5). The mean score indicates a neutral-to-negative attitude about adding students as Facebook friends.

The *subjective norm* or perception of important others' belief that he or she should be a Facebook friend with students was measured by three items (items reported in study 1). Internal consistency of the scale was good: $\alpha = .80$ ($M = 2.83$, $SD = .97$, 5 = *strongly agree* and 1 = *strongly disagree*). Mean score indicated a neutral-to-negative perception of important others' beliefs that he or she should be a Facebook friend with students.

Three items were used to measure the future *intention* to friend a student on Facebook (items reported in study 1). Internal consistency of the scale was excellent: $\alpha = .90$ ($M = 2.47$, $SD = 1.10$; 5 = *strongly agree* and 1 = *strongly disagree*).

Due to the lack of existing scales measuring the reasons faculty would initiate relationships with students online, one open-ended question was asked: "What is the main reason you are a Facebook friend with your student(s)?" The answers were then content-analyzed. Faculty members were also asked if they are currently friends with any of their students on Facebook. If they answered "no," the survey was finished. If they answered "yes," they were asked additional questions about the number of male and female students that they have befriended on Facebook and also who initiated the friendship (categories included "You only," "My student," and "Both"). Of 117 participants, almost half ($n = 55$) said they are currently a Facebook friend with one or more students. When asked who initiated the Facebook friendship, 41 participants said "my students," and 13 said "both." No faculty chose the category "I." Most

participants could not recall how many of those students were male versus female, but some commented that most of them were female because that is “consistent with the gender breakdown of my students in general.”

They were also asked to report their sex, age, race, and the number of hours that they spend on Facebook on a typical day. On average, they report spending between one and two hours on Facebook per day.

Results

In order to test H₁ that attitude and subjective norm would predict the *intention* to add students as Facebook friends, a hierarchical multiple regression analysis was conducted (see Table 5). In the first step, age and gender were entered; in the second step attitude, and in the third step subjective norm was entered. Attitude emerged as a significant predictor of the intention to friend students, explaining 57% of the variance, $F(3,112) = 48.26, p < .001$. The addition of the subjective norm variable increased the proportion of variance to 60%, $F(4, 112) = 40.56, p < .001$.

It was also expected that attitude and intentions would predict the *behavior* of adding students as Facebook friends (H₂). In order to test this hypothesis, logistic regression analysis was performed. According to Table 6, attitude and intention were significant predictors of adding students as Facebook friends. Respondents who have a positive attitude towards adding students as Facebook friends are about 3.6 times more likely to add them compared to those who have a negative attitude towards adding students as Facebook friends. Similarly, those who intend to add students as Facebook friends are 6.8 times more likely to have added students as Facebook friends already. As seen from Table 6, intention to friend a student was the most significant predictor of currently having them as a Facebook friend.

In order to answer RQ₁, an independent sample t-test was conducted. Results showed that those who add students as Facebook friends have more positive attitudes toward

Table 5
Hierarchical Multiple Regression Analysis Predicting Intentions to Add Students as Facebook Friends

Predictor	B	β	R ²	ΔR ²
Step 1				
Age	-.01	-.11	.01	.01
Gender	.03	.01		
Step 1				
Attitude	.83***	.76***	.57***	.56***
Step 2				
Subjective norm	.20*	.18*	.60*	.03*

*Note. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 6
Logistic Regression Analysis Predicting Adding Students as Facebook Friends

<i>Predictor</i>	<i>B</i>	<i>S.E.</i>	<i>Wald</i>	<i>df</i>	<i>p</i>	<i>Exp(B)</i>
Step 1						
Attitude	1.27	.51	6.27	1	.012	3.57
Step 2						
Intention	1.92	.52	13.5	1	.000	6.80

adding students ($M = 3.28$; $SD = .79$) than those who do not ($M = 1.90$; $SD = .68$). They also score higher on the subjective norm ($M = 3.38$; $SD = .83$) than those who do not add students ($M = 2.34$; $SD = .82$). Finally, they have higher intentions to add students as friends ($M = 3.32$; $SD = .89$) than those who do not add them ($M = 1.72$; $SD = .60$).

In order to answer RQ₂, responses to an open-ended question: "What is the main reason you are a Facebook friend with your student(s)?" were analyzed using thematic content analysis. Three major themes emerged: a) it is social obligation (49%), b) alumna tracking (39%), and c) the class content discussions (12%). Results showed that most participants added students because they felt an *obligation* to do so, but they also felt the students were mature and responsible. One respondent said: "They asked for permission and seemed responsible/mature enough." Other responses included: "Reciprocal adult acknowledgment and engagement," "They requested and were students I am close to," "To learn what is important to them." The second most often reported category was *alumna tracking*. Answers included: "To keep up with them after they graduate," "I would like to stay in touch with my best students and follow their academic progress," "Remain connected; professional and personal; may be difficult to remain in contact otherwise." Several faculty members emphasized that students befriended them after their class which they found acceptable. Finally, the least reported category was the *class content discussion*. Few professors used Facebook and other social network sites to facilitate discussion about course concepts. Those who did reported: "They send me a request to communicate outside of class about class questions," "Connecting with my debaters," and "I post articles and pose questions through my Facebook page."

Additionally, this study explored whether there are age differences between faculty who add students as friends and faculty that do not. Results showed no age difference. The average age for both groups of faculty was 42. However, faculty who are Facebook friends with their students spend more time on Facebook ($M = 1.71$; $SD = 1.22$) than do those who are not Facebook friends with their students ($M = 1.11$; $SD = .87$).

Brief Discussion

The results indicate the change in attitude toward adding students as Facebook friends. Almost 50% of surveyed faculty members said that they are currently a Facebook friend with one or more students. This number is much higher than the

number reported in a 2010 study of faculty members' friendships with students at Ohio colleges of pharmacy (Metzger et al., 2010). More faculty members are recognizing the benefits of having students as friends, but it is likely that more faculty are using Facebook actively compared to studies done over three years ago. As this study showed, faculty members like to stay in touch with their alumna, and Facebook and other online social networks are the easiest way to track former students.

Most faculty, however, still admit that students are the ones who initiate the relationships and that most of these students are females. This result is not surprising considering that women are more likely to be on these sites. However, it appears that faculty members do not use Facebook in the same way that they use e-mail and Blackboard—for learning purposes. In this study only several faculty members said that the reason they add students is to discuss class material. This reflects the purpose of the Facebook network, created to maintain existing relationships (e.g., Sheldon, 2008) of which student-teacher relationships are a part.

Lastly, despite previous research (Metzger et al., 2010) suggesting that younger faculty members would be more willing to be Facebook friends with their students, there are no age differences between faculty members who add students as Facebook friends and those who do not. These results might reflect the current trends of closing the generation gap when it comes to the activity of online social networks. Another explanation might be in the fact that faculty try to reach students where they are. Many students check their Facebook accounts more often than their university e-mail or Blackboard. Another interesting finding is that faculty members who accept students' friend requests spend more time on Facebook as well. It is likely that they already have a higher affinity toward the site.

General Discussion

The present study utilized theory of reasoned action to investigate factors that influence professors' and students' intentions to add each other as friends on Facebook. In addition, it explores the reasons students and teachers befriend each other. Despite anecdotal evidence of teachers adding students as friends on online social networks, there has been almost no research studying what motivates teachers and students to add each other as Facebook friends. In line with the tenets of theory of reasoned action, in both the faculty and students' sample, intention was the strongest predictor of adding each other as Facebook friends. Other researchers have supported this relationship when testing predictors of SNS use (Peslak et al., 2011). Because intention is the cognitive representation of a person's readiness to perform a specific behavior, it is an immediate antecedent of behavior (Ajzen & Fishbein, 1980).

While for faculty a personal attitude was the most significant predictor of the intention to add students as Facebook friends, for students the subjective norm was the most significant predictor, and a personal attitude was less significant. This shows that attitudes and norms are not weighted equally in predicting behavior, and, in this

case, their importance differs depending on the role of a person (student vs. teacher) in a Facebook relationship. It is possible that these differences stem from the differences in ages between professors and students. Faculty members were significantly older than their students. Older individuals use social network sites less than the Millennial generation. In addition, unlike older individuals, young adults still compare themselves to their peers and learn about norms and values through interactions with them (Lee, 2002). Students might feel much more peer pressure to maintain a certain social image on Facebook (Chaudhuri, 2012)—which would also include being a friend with a professor—than faculty do. Some students might also feel that it is expected to add faculty as Facebook friends as other students add them. Developmental theories also stress the importance of peers during adolescence (e.g., Heaven, 1994; Muuss, 1988). As Centola (2010) argued, they might be victims of the “everyone is doing it” effect. Personal attitude was also a significant predictor of students’ intentions to add faculty as Facebook friends. Students might think that they can benefit from a Facebook relationship with their professor. In fact, in DiVerniero and Hosek’s (2011) study, most students said that they would discontinue communication with the instructor on Facebook once the semester was over. This could be understood in terms of social exchange theory which argued that “every individual voluntarily enters and stays in any relationship only as long as it is adequately satisfactory in terms of his or her rewards and costs” (Thibaut & Kelley, 1959, p. 37). Costs are those elements in the relationship that have a negative value to a person (e.g., stress, time, energy, attention). Rewards are those elements in the relationship that have a positive value to a person (e.g., fun, loyalty, attention) (as cited in West & Turner, 2010). In this case, rewards include a personal relationship with the professor.

Generational differences are evident from testing the second hypothesis. While students had positive beliefs about important others’ approval and appropriateness, faculty had slightly negative beliefs about what important others would think of them being a Facebook friend with a student. In fact, many faculty members mentioned that they would add a student as a friend after he or she graduates but only if a student initiated the relationship. The fact that not a single professor admitted that they initiated a Facebook friendship with a student, is perhaps evidence of the privacy concerns that many still fear. Although the role of the subjective role was less important for faculty than for students, faculty might still rely on other colleagues’ opinions when it comes to adding students as Facebook friends. In some academic departments it is acceptable for faculty to be friends with students. In other departments, such relationship is discouraged. Sturgeon and Walker’s (2009) interviews with faculty members at a small private university revealed their concerns about the balance between being a teacher and being a friend to their students. In their study, faculty agreed that they do not want to be viewed by students as equals. In a 2010 study (Metzger et al.), 79% of faculty members who used Facebook were not friends with their students. In the current study, 50% of those with a Facebook account were not friends with their students. These numbers might be the result of faculty who were already Facebook friends with their students being more interested

in completing the study. Another possibility is that neither faculty nor students provided an honest answer about their actual friendships with each other on Facebook. For example, while the majority of faculty members said that their students solely initiated a relationship with them on Facebook, most college students said that it is both they and their professors who initiated the relationships. Hence, it is possible that faculty feel that important others, including their colleagues, would disapprove of them being a Facebook friend with students. This again reflects the subjective norm significance. Unlike students, faculty might also face credibility and ethical concerns when it comes to adding students as Facebook friends (Malesky & Peters, 2012). According to the American Association of University Professors ethical principles and standards, college personnel should "avoid dual relationships with students where one individual serves in multiple roles that create conflicting responsibilities, role confusion, and unclear expectations that may involve incompatible roles and conflicting responsibilities" (ACPA Ethics Code, 2006). However, both the U. S. Supreme Court and lower courts have supported the contention that teachers should be protected by academic freedom in their use of social network sites to communicate with their students (Puzio, 2013). In the present study, faculty members are more willing to befriend their former students, than their current students. This might reflect their ethical concerns.

While faculty members add students as Facebook friends because they feel a social obligation and want to stay in touch with alumna, for students personal reasons were the main motivating forces to be a friend of a professor. These results are in line with DiVerniero and Hosek (2011), who also found that having access to instructors' online profiles allows students to see them as "human beings" and "friends." In this study, they said that they are interested in their teachers' lives, and it is good to have positive mentors on Facebook. This finding may be related to the convenience of relationship maintenance, identified as the most important motive for Facebook use in general (e.g., Krasnova, Spiekermann, Koroleva, & Hildebrand, 2010; Sheldon, 2008). Again, from the social exchange theory perspective, students would gain more from their friendships with faculty than faculty would from their friendships with students.

Limitations and Future Research

It has to be noted though, that this study has limitations, including only a sample consisting of faculty teaching mostly in liberal arts colleges. It is likely that those teaching in other disciplines have different experiences with friending students on Facebook. Similarly, most students were enrolled in liberal arts classes and were female, while few were majoring in other disciplines. Future research should include a more diverse sample. Furthermore, faculty members who were *not* Facebook friends with their students did not have an opportunity to explain their reasons for this. Future studies should also examine how students and professors feel about befriendng each other. Are they anxious, or would they be disgusted if they befriended a student and then saw

pictures of inappropriate behavior? Hale, Householder, and Greene (2002) argued that moral obligation, self-identity, affect, and prior behavior can all contribute to explaining a person's behavioral intention. Moral obligation, or what the individual believes is right or wrong with regard to a behavior, might be quite different from the perception of how others believe one should behave and quite different from one's attitude toward the behavior (Hale et al., 2002).

Conclusion

Despite these limitations, there are several theoretical and practical contributions of this study. From a theoretical perspective, this study provides support for the application of theory of reasoned action in the context of the student-teacher relationship. It extends the theory by showing that personal attitude and subjective norm have a distinct influence on the intention and behavior of faculty and students. Thus, faculty members add students as Facebook friends if they believe it is beneficial to do so and because of a social obligation and alumna tracking. However, personal attitudes were less important for students' decisions about adding faculty as friends. Students monitor what their important others do and add faculty for personal reasons.

From a practical perspective, the current results suggest that university professors are still divided when it comes to using Facebook to communicate with their students, even as studies suggest the benefits of doing so (e.g., Mazer et al., 2007; Sturgeon & Walker, 2009). Perhaps unsurprisingly, they appear to be more concerned about their relationship with students on Facebook than are their students. This trend, however, might be changing, when compared to studies conducted several years ago (Metzger et al., 2010) where fewer faculty members were likely to be Facebook friends with their students. It is likely that this student-teacher relationship will be encouraged in the future as more schools incorporate social media into instruction.

References

- ACPA Ethics Code. (2006). *Statement of ethical principles and standards*. Retrieved from <http://www.myacpa.org/au/documents/EthicsStatement.pdf>
- Ajzen, I. (1991). The theory of planned behavior. *Organization Behavior and Human Decision Processes*, 50, 179–211. doi:10.1016/0749-5978(91)90020-T.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behavior: A meta-analytic review. *British Journal of Social Psychology*, 40, 471–499. doi:10.1348/014466601164939
- Baker, R., & White, K. (2010). Predicting adolescents' use of social networking sites: From an extended theory of planned behavior perspective. *Computers in Human Behavior*, 26, 1591–1597. doi:10.1016/j.chb.2010.06.006
- boyd, d. m., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13. Article 11. Retrieved from <http://jcmc.indiana.edu/vol13/issue1/Boyd.ellison.html>

- Cain, J., & Fink, J. L. (2010). Legal and ethical issues regarding social media and pharmacy education. *American Journal of Pharmaceutical Education*, 74, 1–7.
- Cain, J., Scott, D. R., & Akers, P. (2009). Pharmacy students' Facebook activity and opinions regarding accountability and e-professionalism. *American Journal of Pharmaceutical Education*, 73, 1–6.
- Cameron, R. (2010). *Ajzen's theory of planned behavior applied to the use of social networking by college students*. Honors Thesis. Texas State University–San Marcos.
- Centola, D. (2010). The spread of behavior in an online social network experiment. *Science*, 329, 1194–1197. doi:10.1126/science.1185231
- Chaudhuri, N. (2012). Social networking is the new peer pressure. *The Times of India*. Retrieved from http://articles.timesofindia.indiatimes.com/2012-11-19/man-woman/33738135_1_face-book-comments-peer-pressure-flb
- DiVerniero, R. A., & Hosek, A. M. (2011). Students' perceptions and communicative management of instructors' online self-disclosure. *Communication Quarterly*, 59, 428–449. doi:10.1080/01463373.2011.597275
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Hale, J. L., Householder, B. J., & Greene, K. L. (2002). The theory of reasoned action. In J. P. Dillard & M. Pfau (Eds.), *The persuasion handbook: Developments in theory and practice* (pp. 259–286). Thousand Oaks, CA: Sage.
- Heaven, P. C. L. (1994). *Contemporary adolescence: A social psychological approach*. Melbourne, Australia: MacMillan.
- Hewitt, A., & Forte, A. (2006). *Crossing boundaries: Identity management and student/faculty relationships on Facebook*. Poster presented at the Computer Supported Cooperative Work (CSCW).
- Krasnova, H., Spiekermann, S., Koroleva, K., & Hildebrand, T. (2010). Online social networks: Why we disclose. *Journal of Information Technology*, 25, 109–125. doi:10.1057/jit.2010.6
- Lee, S. (2002). The effects of peers on the academic and creative talent development of a gifted adolescent male. *The Journal of Secondary Gifted Education*, 14, 19–29.
- Malesky, L. A., & Peters, C. (2012). Defining appropriate professional behavior for faculty and university students on online social networking websites. *Higher Education*, 63, 135–151.
- Maloney, E. J. (2007). What Web 2.0 can teach us about learning. *The Chronicle of Higher Education*, 53, B26–B27.
- Mazer, J. P., & Murphy, R. E., & Simonds, C. J. (2007). I'll see you on "Facebook." The effects of computer-mediated teacher self-disclosure on student motivation, affective learning, and classroom climate. *Communication Education*, 56, 1–17. doi:10.1080/03634520601009710
- McEwan, B. (2012). Managing boundaries in the Web 2.0 classroom. *New Directions for Teaching and Learning*, 2012, 15–28. doi:10.1002/tl.20024
- Metzger, A. H., Finley, K. N., Ulbrich, T. R., & McAuley, J. W. (2010). Pharmacy faculty members' perspectives on the student/faculty relationship in online social networks. *American Journal of Pharmaceutical Education*, 74, 1–5.
- Muuss, R. E. (1988). *Theories of adolescence*. New York, NY: Random House.
- Pascarella, E. T. (1985). Students' affective development within the college environment. *Journal of Higher Education*, 56, 640–663.
- Pedersen, P. E., & Nysveen, H. (2002). *Using the theory of planned behavior to explain teenagers' adoption of text messaging services*. Working Paper. Agder University College.
- Pelling, E. L., & White, K. M. (2009). The theory of planned behavior applied to young people's use of social networking Web sites. *CyberPsychology & Behavior*, 12, 755–759. doi:10.1089/cpb.2009.0109
- Peslak, A., Ceccucci, W., & Sendall, P. (2011). *An empirical study of social networking behavior using theory of reasoned action*. Conference for Information Systems Applied Research (CONISAR) Proceedings.

- Puzio, E. (2013). Why can't we be friends? How far can the state go in restricting social networking communications between secondary school teachers and their students? *Cardozo Law Review*, 34, 1099–1127.
- Roorda, D. L., Koomen, H. M. Y., Spilt, J. L., & Oort, F. J. (2011). The influence of affective teacher-student relationships on students' school engagement and achievement: A meta-analytical approach. *Review of Educational Research*, 81, 493–529. doi:[10.3102/0034654311421793](https://doi.org/10.3102/0034654311421793)
- Schwartz, H. L. (2009). Facebook: The new classroom commons? *Chronicle of Higher Education*, 56, B12–13.
- Sheldon, P. (2008). The relationship between unwillingness to communicate and students' Facebook use. *Journal of Media Psychology: Theories, Methods, and Applications*, 20, 67–75. doi:[10.1027/1864-1105.20.2.6](https://doi.org/10.1027/1864-1105.20.2.6)
- Sturgeon, C. M., & Walker, C. (2009). *Faculty on Facebook: Confirm or deny*. Paper presented at the Annual Instructional Technology Conference, Murfreesboro, TN.
- Thibaut, J., & Kelley, H. (1959). *The social psychology of groups*. New York, NY: Wiley.
- Waldeck, J. H., Kearney, P., & Plax, T. G. (2001). Teacher e-mail message strategies and students' willingness to communicate online. *Journal of Applied Communication Research*, 29, 54–70. doi:[10.1080/00909880128099](https://doi.org/10.1080/00909880128099)
- Webster, J., & Trevino, L. K. (1995). Rational and social theories as complementary explanations of communication media choices: Two policy-capturing studies. *Academy of Management Journal*, 38, 1544–1572.
- West, R., & Turner, L. H. (2010). *Introducing communication theory: Analysis and application* (4th ed). Boston, MA: McGraw-Hill Higher Education.



"I Play So I Am?" A Gender Study into Stereotype Perception and Genre Choice of Digital Game Players

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"I Play So I Am?" A Gender Study into Stereotype Perception and Genre Choice of Digital Game Players

Lotte Vermeulen and Jan Van Looy

Stereotypes in game culture are still inhibiting the freedom of female players. This survey study aims to gain insight into these practices by looking at gaming stereotypes on two different, yet interrelated, levels. First, we inquire into perceptions of gamers regarding gender-related and general gamer stereotypes and how these relate to playing frequency. Second, genre choice is investigated in light of player's gender and how this is associated with play motivations. Results suggest that high frequency female players disagree the most with gender-related stereotypical beliefs and that these women are more strongly drawn towards specific gaming genres than men.

As digital games become more widespread in the lives of many people, game culture persists to hold and distribute several stereotypical beliefs about who counts as a gamer and who does not (Shaw, 2011). Many of these stereotypical practices, in which differences are articulated and thus re-produced, are based on the player's gender (Hayes, 2005). This is rather odd given that gaming as a pastime is now more or less equally distributed across gender. The annual report of the Entertainment Software Association (ESA, 2013), for example, demonstrates that the American gamer population consists of 47% female and 53% male players. The Interactive Software Federation Europe (2012) further notes that 43% of all women aged 16 to 64 are playing digital games. What these growing numbers do not explicate, however, is how cultural and social contours of game culture are defining the game experience of female players. Throughout this paper, we discuss how stereotypes limit women in playing digital games, and look at so-called gender differences in playing styles and preferences from a social constructionist stance. Moreover, we look at the interplay between gender and motivations for playing games. The aim of this study is thus twofold: first, we explore player's gender and playing frequency in

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relation to perception of gender stereotypes in game culture. Concretely, we argue that stereotypical beliefs about gaming not only depend on player's gender but also interact with playing frequency. Second, stereotypical gender preferences are investigated in light of playing motivations and game genre frequencies. We specifically aim to grasp how men and women's playing motivations are related to genre frequencies. This further allows us to investigate whether women who often play "masculine" game genres have higher motivational scores because of their atypical gender play. Studying stereotypical gender beliefs based on investment and motivation is interesting from an academic point of view for at least four reasons. First, it adds to insights regarding gender and game research by means of an exclusive focus on gender effects for studying stereotypical beliefs and genre play. Second, it contributes to the body of research on gamer stereotypes through focusing on the gaming community in general instead of limiting ourselves to a particular player group such as MMO-players (e.g., Griffiths, Davies, & Chappell, 2003). Third, the present study includes the endorsement of gamer stereotypes instead of just evaluating the accuracy of these stereotypes as is often based on demographic inquiries (e.g., Williams, Yee, & Caplan, 2008). And fourth, it contributes to our understanding of the intersection between stereotypical gamer beliefs, playing frequency, and playing motivations with a clear focus on players' gender.

Gender Stereotyping in Digital Games

Stereotyping is a signifying practice that reduces people to some essential characteristics and abilities (Hall, 2003). Although stereotypes commonly generate negative connotations, they are also part of an ordering process in which people make sense of the world (Dyer, 1977; Jacobson, 2005). This process of meaning making is better understood in terms of *typing*, which is necessary in order to assign people to wider categories such as group membership based on gender or class (Dyer, 1977; Van Damme, 2013). According to Hall (2003), stereotyping is different from typing in that it naturalizes differences and deploys a strategy of "splitting." Put differently, it serves the maintenance of symbolic boundaries between those who belong and those who are excluded. This point makes clear that stereotyping is related to symbolic power "since only those with such power can exercise and enforce the practice of stereotyping" (Van Damme, 2013, p. 12). When looking at gender, most societies generate inequality whereby men exert power over women (Siann, 2013). Gender stereotyping, then, functions as a mechanism to exercise symbolic power by making assumptions based on someone's gender (Jacobson, 2005). These assumptions, albeit socially constructed, can have detrimental consequences for women being "threatened" by negative stereotypical beliefs. Literature on stereotype threat, for example, showed that the risk of confirming a negative stereotype about one's group is enough to impair task performance (Inzlicht & Kang, 2010), lower performance expectations (Cadinu, Maass, Frigerio, Impagliazzo, & Latinotti, 2003), and entail negative

emotional responses (Shapiro & Williams, 2012). It is argued that such practices could eventually lead to disidentification with a particular domain or field (Inzlicht & Kang, 2010).

Gender stereotyping is a common practice in and around digital game culture. Carr (2005) talks about “the alignment of gaming technology with one gender” (p. 468) as a result of historical practices and economic decisions contributing to the association between masculinity and digital games. Although recent studies report higher numbers of female players (e.g., ESA, 2013), the discourse of game culture is still stereotypically male, young, heterosexual, and white (Nakamura, 2012; Schut, 2006). This creates a symbolic division between people who legitimately claim gamer identity and those who have no right to do so. This is not to say that the disciplinary power of discourse cannot be resisted or subverted however (van Zoonen, 2000). Countermoves such as Grrl Gamers, Riot Grrls, and Frag Dolls have proven successful all-female game communities, resisting a male hegemony of play (Jenson, de Castell, & Fisher, 2007). Nonetheless, woman gamers are frequently reminded of their unconventional position within a digital game culture. One argument is that much game content draws on masculine (heterosexual) fantasy by portraying stereotypical and sexualized images of women (Schut, 2006). In addition, the vast majority of female game characters are unplayable or supplemental, often depicted in helpless and innocent roles (Miller & Summers, 2007). Another argument is that women engaging in game play frequently suffer from comments on their identified presence; whether they are in a virtual environment, a domestic space, or a public setting (Bryce & Rutter, 2003). These issues give rise to the stereotypical belief by both men *and* women of digital gaming being a particularly masculine pastime (Selwyn, 2007). Related stereotypical gender ideas are concerned with perceptions of men being better at playing games and women having to spend their time on other, more productive activities such as household chores (Selwyn, 2007; Williams, Consalvo, Caplan, & Yee, 2009). Moreover, it is argued that women experience a “double stereotyping” while engaging in game culture. They not only encounter discrimination based on their gender, but also suffer from the low pop culture status of digital gaming (Gyongran, 2008). Being an active gamer is socially disvalued because there are a lot of negative connotations about gamers such as “geeky” or “socially inept” (Kowert, Festl, & Quandt, 2013; Shaw, 2013). These stereotypes position game culture as peripheral to mainstream media culture and frame it as a relatively unimportant leisure activity (Kowert, Griffiths, & Oldmeadow, 2012; Shaw, 2011). However, in the study of Royse, Lee, Undrahbuyan, Hopson, and Consalvo (2007), it was asserted that high frequency female players do not epitomize the stereotypical beliefs attributed to gamer identity. For these players, digital games were not a problematic technology as previously mentioned. On the other hand, the female non-gamers in Royse and colleagues’ study held the most critical and negative perceptions of gaming, giving priority to other, “real-world” activities. While the female players looked at game culture as fairly androgynous, the non-gamers refuted it as a completely masculine domain. These findings suggest that

attitudes towards digital gaming are being negotiated among women with different playing experiences.

The first goal of our investigation is therefore to examine the role of playing frequency and player's gender in relation to reporting stereotypical perceptions of digital gaming. Although various studies have investigated game players' stereotypical attributes (e.g., Griffiths et al., 2003; Kowert et al., 2013), few studies have looked at the attitudes of players themselves towards gaming stereotypes. Moreover, given that these studies mostly deploy a qualitative approach (e.g., Hayes, 2005; Royse et al., 2007), we are interested to provide a quantitative empirical account of internalized general and gender-specific gaming stereotypes by players. Our first research question is:

RQ₁: How do player's gender and playing frequency relate to perception of gamer stereotypes?

A Social Constructionist Perspective on Gaming and Gender

To gain insight into gender differences and associated stereotypes, we need a solid understanding of what "gender" is. The pioneering work of social constructionists West and Zimmerman (1987) is particularly interesting in this respect. From their perspective, gender is "the activity of managing situated conduct in light of normative conceptions of attitudes and activities appropriate for one's sex category" (p. 127). In other words, they suggest that gender is rather something people *do* than the property of individuals; we *are* not male or female but we are doing maleness or femaleness. It is also a social doing; gender is recurrently performed in interactions and assessed by others based on normative conceptions of femininity or masculinity (West & Fenstermaker, 1995; West & Zimmerman, 1987). Accordingly, Butler (1990) talks about the concept of "gender performativity" stating that there is no natural substance to being a man or a woman. Gender only seems natural because of the "stylized repetition of acts through time" (p. 141), which "enables, produces, and regulates the discursive notion of woman" (Duits, 2008, p. 39). This constructs a compulsory binary gender system in which there are ostensibly essential differences between men and women. This binary then produces and sustains stereotypical opposites of what is perceived as typically feminine and masculine while doing gender (Brickell, 2006; Van Damme, 2013).

Gendered Game Preferences

In this socially constructed reality, there are several gender stereotypes with regard to playing styles of male and female gamers. Many studies indicate a pattern in which women are discouraged by violent and competitive gaming environments while men seem to embrace such game-play mechanics (e.g., Kafai, Heeter, Denner,

& Sun, 2008). Attractive games for women seem to be focused on social interaction, non-purposeful exploration, and collaborative instead of competitive gaming elements (Hartmann & Klimmt, 2006). These stereotypical ideas about female game preferences have led to the development of typical "girl games," following female themes such as appearance, fashion, and relationships (Kafai et al., 2008). Although these games likely presented an introduction to the medium for many female players, some authors have criticized them for creating a disparity between games for girls and games for "real," male players (De Castell & Jenson, 2003). According to Shaw (2011), targeted marketing of groups based on stereotypical notions of gender further promotes the marginalization of women as gamers. She argues that "marking 'girl gamers' as a market, whether women feel adequately appealed to by those attempts or not (often not), makes gender a salient category when talking about games" (Shaw, 2011, p. 39). In other words, although the game industry aims to be more inclusive, its efforts seem to reproduce stereotypical ideas about womanhood enhancing boundaries between those who have the right to claim gamer identity and those who do not.

Several authors have argued that the constructed gender binary in game culture has taken on a new form with the rise of the "casual game genre" (Vanderhoef, 2013). This genre, characterized by its positive fiction, short play time, and low complexity, seems to be especially popular with a non-traditional gamer audience such as female and older players (De Schutter, 2011). Casual game players have often been described against a group of "hardcore players," referring to players who prefer stereotypical masculine themes, enjoy difficult games, play large numbers of games, and invest much time and resources in their hobby (Juul, 2012). As this definition already shows, there is something distinct about membership of either group. Whereas the discourse of casual play is mostly associated with femininity and trivial, easy fun, hardcore play stands for masculinity and is "celebrated as the authentic and superior game design and experience" (Vanderhoef, 2013, para. 1). Consequently, a redefined binary in which one side is privileged (i.e., "masculine hardcore gamers") over the other (i.e., "feminine casual gamers") gets installed and reproduces seemingly obsolete gender inequalities in game culture (Vanderhoef, 2013). Casual games are then "deemed outside gamer subcultural capital," and its players, mainly women, are denied or even self-refuse gamer identity (Shaw, 2013, Performing subcultural capital, para. 6).

In other words, many shared ideas (i.e., stereotypes) about what women or men like in digital games are based on social constructions, situated in interaction with others and (re)producing gendered differences in game genre preferences. Previous studies into these genre preferences have confirmed playing behavior conform with gender norms, showing that women prefer casual, "soft" game genres and men "core," action-based genres (e.g., Pew Internet & American Life Project, 2008). In line with these findings, we expect that gender will be an important predictor of genre preferences. In this study, however, we do not limit ourselves to single game genres. Instead, we look at genre choice

conceptualized as genre components, accounting for the variety of content that is played and the time spent with this content. Our first hypothesis is:

H₁: Player's gender will predict game genre playing frequencies of digital gamers.

Motivations as Moderators for Gendered Preferences

Simplistic and stereotypical ideas about gamers as addicts or aggressors ignore the fact that people play digital games for a wide range of reasons and motives (Yee, 2006). Game playing motivations have been proven to be important determinants for digital play (e.g., Olson, 2010; Ryan, Rigby, & Przybylski, 2006). Moreover, research has indicated that content is important when considering game playing motivations (Schneider, Lang, Shin, & Bradley, 2004). As people choose to play games with various types of content, gaming motives seem to differ depending on genre preferences (Scharrow, Festl, Vogelgesang, & Quandt, 2012). Tanis and Jansz (2008), for example, found that players of role-playing games (RPGs) and massively multiplayer online role-playing games (MMORPGs) scored lowest on the competition motive, but highest on the challenge motive, while the opposite applied to people playing first-person shooters. These findings show that, besides gender, people are likely to choose a variety of game genres based on their motivational layout. In line with this argument, we argue that play motives are crucial when considering game genre frequencies. Our second hypothesis is:

H₂: Game motivations will predict game genre playing frequencies of digital gamers.

Based on the literature, it can be argued that digital games as a technology is gendered and that its production is based on stereotypical beliefs about distinct male and female gaming preferences. We have also argued that game culture, consciously or not, keeps women out by constructing specific ("superior") game genres for men. And yet, women are playing digital games and continue to do so. Taylor (2008) even talks about "one of the most dedicated player demographics around" (p. 54), indirectly stating that women's motivations for playing transcend the experienced cultural and social thresholds. But is this actually true? Some studies found, for example, that women are less motivated than men to play digital games (e.g., Hartmann & Klimmt, 2006). Lucas & Sherry (2004) showed that women scored lowest on all investigated gaming motivations, including challenge, arousal, diversion, fantasy, competition, and social interaction. However, although they controlled for amount of game play, little attention has been paid to how genre frequencies are determined by the interplay between playing motivations and player's gender. This study attempts to fill this gap and investigates how playing motivations of both men and women (differently) define the amount of genre play. It could be, for instance, that traditional differences between male and female preferences are modulated by

motivations for playing. Moreover, given the gender bias in genre play, we are interested to know whether women who play more stereotypical “masculine” genres (e.g., action-based games) are more motivated to do so than their male peers. Concretely, the second research question is:

RQ₂: What is the relationship between player’s gender and playing motivations in predicting game genre frequency?

Method

Sampling and Procedure

We drew upon a sample of 962 Flemish game players, recruited on a broad range of online game forums/Web sites and through our department’s gamer panel. Moreover, the survey link was placed on forums of women’s Web sites (e.g., fashion Web sites) to address enough females. Flyers with the questionnaire URL were also distributed on a university campus. Given that this study focused on people who have some experience with digital games, we had to omit those respondents who indicated they never played games (2%). Nine percent of the subjects indicated that they rarely played games, 12% played regularly, 31% played often, and 46% played games on a daily basis. Overall, the sample comprised more male (64.20%) than female respondents (35.80%). The mean age of our respondents was 24 years ($SD = 6.49$), ranging from 11 to 65.

Measures

Stereotypical beliefs about gamers and attitudes towards gaming were measured by five Likert-scale items ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Examples of items were “All gamers are nerds” or “Boys are better at gaming than girls” (for a full overview see [Table 1](#)). As there are no validated scales for measuring gamer stereotypes, the content of the items was based on the literature review and input from two explorative focus groups. The survey questionnaire was pretested by laymen and gaming experts.

Gaming frequencies of 16 different kinds of game genres were measured using a 5-point ordinal scale ranging from 1 (*never*) to 5 (*every day*). This list of game genres was adapted from a classification as formulated by a Flemish government Web site (Van Looy & De Vocht, 2009). In order to reduce these game genres to a more reasonable number of categories, we made use of principal component analysis (PCA, varimax rotation), using the raw-data matrix of polychoric correlations for categorical variables as input (Kolenikov & Angeles, 2009). Five components were found for 14 game genres: (1) casual genres (e.g., puzzle games, card games); (2) heavy action genres (e.g., survival horror games, shooting games); (3) growth genres (e.g., MMORPGs, strategy games); (4) linear

Table 1
2 (Gender: Male vs. Female) x 2 (Playing Frequency: Low vs. High) Factorial ANOVA

5-point Likert items	Player's gender		Playing frequency		Two-way interaction	
	<i>F</i> (1, 958)	<i>r</i>	<i>F</i> (1, 958)	<i>r</i>	<i>F</i> (1, 958)	<i>r</i>
Gaming is equal to any other form of pastime	37.44**	.19	57.81**	.24	n.s.	n.s.
All gamers are nerds	n.s.		49.88**	.22		
Gaming is a pastime for boys	n.s.		27.53**	.17	10.82**	.11
Boys are better at gaming than girls	n.s.		14.03**	.12	11.06**	.11
Games cause violent behavior	51.30**	.23	55.93**	.23	5.18*	.07

Note. *r* = Pearson's correlation effect size; n.s. = not statistically significant **p* < .05. ***p* < .001.

progression genres (e.g., adventure games, platform games); and (5) sports genres (e.g., sports games, racing games). The total variance explained was 61.26% and all factor loadings were greater than 0.6. Statistical differences in playing frequencies were found between men and women concerning these genres. Concretely, men played more heavy action genres ($U = 60193$, $p < .001$), growth genres ($U = 75684$, $p < .001$), and sports genres ($U = 85421$, $p < .001$). Women, on the other hand, played more casual game genres ($U = 80479$, $p < .001$). No significant differences were found for playing linear progression genres ($U = 104521$, $p = .618$).

We also looked into motivations for playing games by using the *Video Game Intrinsic Motivation Questionnaire* (Van Looy, 2010). This 5-point Likert motivation scale is based on the previous work of Van Looy, Schuurman, De Moor, De Marez, and Courtois (2010), who in turn revised the original gameflow heuristics of Sweetser and Wyeth (2005). By means of PCA (varimax rotation) on 31 items, we distinguished between five intrinsic game motivation components: (1) Immersion ($\alpha = .86$); (2) Challenge ($\alpha = .78$); (3) Competition ($\alpha = .73$); (4) Social contact ($\alpha = .84$); and (5) Freedom/Control ($\alpha = .71$). All components had eigenvalues greater than 1.0 and the total variance explained was 57.74%. Three items were removed because of factor loadings smaller than 0.5, whereas the remaining 28 items had factor loadings greater than 0.5. Two items constituted an unexpected factor with regard to playing games against the computer, but this factor was not taken up due to low internal consistency ($\alpha = .51$).

Data Analysis

A 2 (gender: male versus female) x 2 (playing frequency: low versus high frequency players) factorial ANOVA was used to examine the effects of gender and playing frequency on stereotypical beliefs about digital gaming. For this analysis, low frequency gamers were considered as players who play less than once a week and

high frequency gamers as players who play at least once a week. This was similar to the studies by Durkin and Barber (2002) and Schmierbach, Boyle, Xu, and McLeod (2011). Adding the variable "age" as a covariate did not yield different effects of players' gender and playing frequency on the dependent variables; therefore we omitted this factor in subsequent analyses. Post-hoc tests were calculated using the Bonferroni correction, which guards against Type I error rate. Statistical significance for these tests was set at $p < .05$.

Additionally, binary logistic regression was conducted to predict genre frequency components (i.e., dependent variables) using gender, game motivations, and interactions between gender and game motivations as predictors. Dependent variables were recoded into dichotomous variables to facilitate interpretation as well as to better meet assumptions for subsequent analyses (e.g., to avoid too many empty cells when using ordinal regression). Concretely, based on a median split, cases were divided into low frequency players (n_1) versus high frequency players (n_2) of specific game genre components (e.g., a value of 0 refers to a low frequency player of casual genres while a value of 1 points to a high frequency player of casual genres). The medians were 2 for casual genres ($n_1 = 550$ vs. $n_2 = 412$), 3 for heavy action genres ($n_1 = 501$ vs. $n_2 = 461$), 3 for growth genres ($n_1 = 482$ vs. $n_2 = 480$), 2 for linear progression genres ($n_1 = 535$ vs. $n_2 = 427$), and 2 for sports genres ($n_1 = 547$ vs. $n_2 = 415$). Statistical significance for these tests were also set at $p < .05$.

Results

Stereotypical Beliefs

Factorial ANOVA was deployed for measuring players' attitudes towards general gamer stereotypes and gender-related gaming stereotypes. As shown in Table 1, there were only two significant main effects of gender for the items "Gaming is equal to any other form of pastime" ($M_{\text{men}} = 4.11$ vs. $M_{\text{women}} = 3.61$) and "Games cause violent behavior" ($M_{\text{men}} = 1.83$ vs. $M_{\text{women}} = 2.45$). Both items also displayed main effects of playing frequency, showing that high frequency players agree more ($M = 4.17$) with gaming being equal to other hobbies than low frequency players ($M = 3.55$), but less ($M = 1.82$) with gaming causing violent behavior compared to low frequency players ($M = 2.47$).

As further displayed in Table 1, playing frequency had a significant main effect on all other items, showing that low frequency players agreed more than high frequency players on gamers being nerds ($M_{\text{low}} = 1.85$ vs. $M_{\text{high}} = 1.39$), gaming being a pastime for boys ($M_{\text{low}} = 2.31$ vs. $M_{\text{high}} = 1.85$), and boys being better at gaming than girls ($M_{\text{low}} = 2.64$ vs. $M_{\text{high}} = 2.25$).

Three significant interaction effects were found between player's gender and playing frequency (see Figures 1–3). First, for the item "Games cause violent behavior," post-hoc tests demonstrated that low frequency female players ($M = 2.88$) agreed significantly more compared to all other groups, while high frequency male players (M

= 1.61) had significantly lower ratings than other types of players. No significant differences were found between high frequency female players ($M = 2.03$) and low frequency male players ($M = 2.06$). Second, an interaction was found for the item "Gaming is a pastime for boys." Significant post-hoc tests exposed that high frequency women ($M = 1.72$) disagreed the strongest with the statement compared to all other player groups. While Figure 2 illustrates a reversed pattern for low frequency female players ($M = 2.47$), they only significantly differed from high frequency male ($M = 1.98$) and female players and not from low frequency male players ($M = 2.16$). A third statistically significant interaction was found for the gender stereotype that boys are better at gaming than girls. Again, Figure 3 displays an opposed pattern, showing that high frequency female players ($M = 2.03$) have the lowest ratings while low frequency female players ($M = 2.78$) have the highest scores compared with every other group. Pairwise comparisons revealed that high frequency female players significantly differed from other players, yet only marginally significant from low frequency male players ($M = 2.51, p = .05$). Whereas the scores of low frequency female players were significantly higher compared to high frequency male ($M = 2.47$) and female players, they did not differ from low frequency male players.

Figure 1
Interaction Between Gender and Playing Frequency on "Games Cause Violent Behavior."

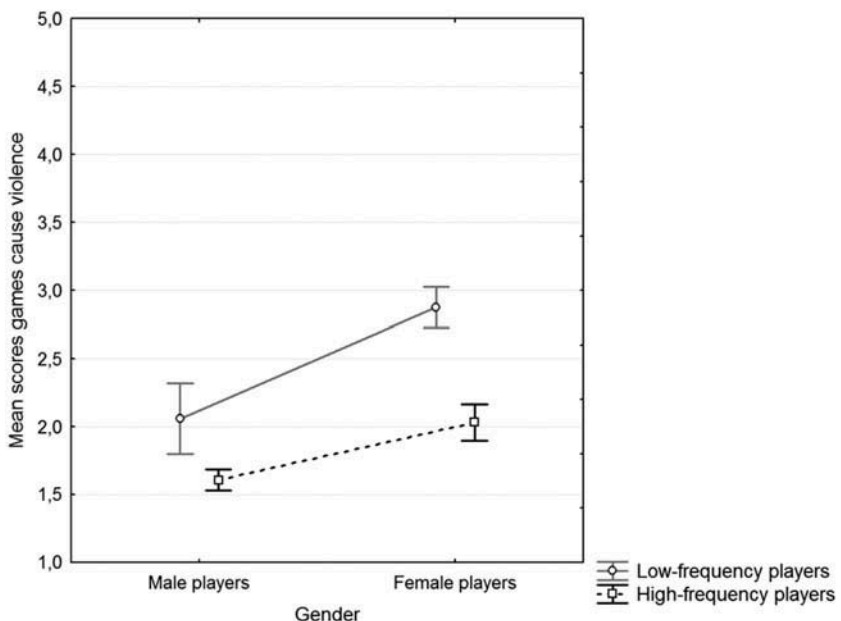


Figure 2
Interaction Between Gender and Playing Frequency on “Gaming is a Pastime for Boys.”

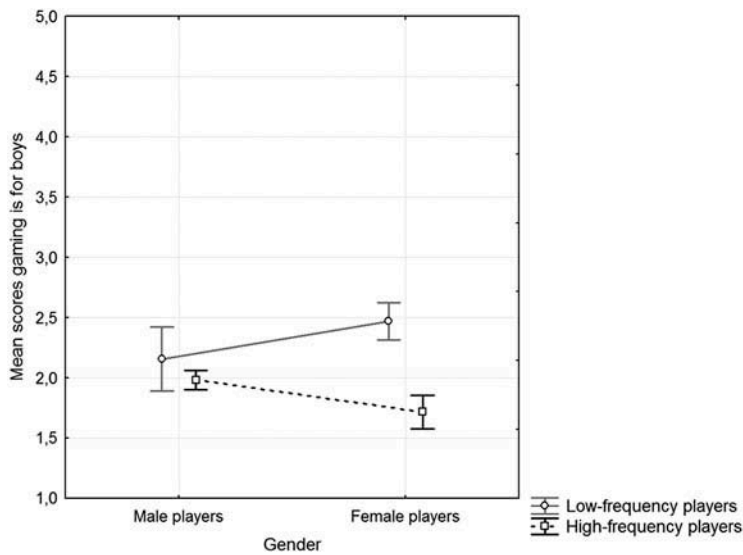
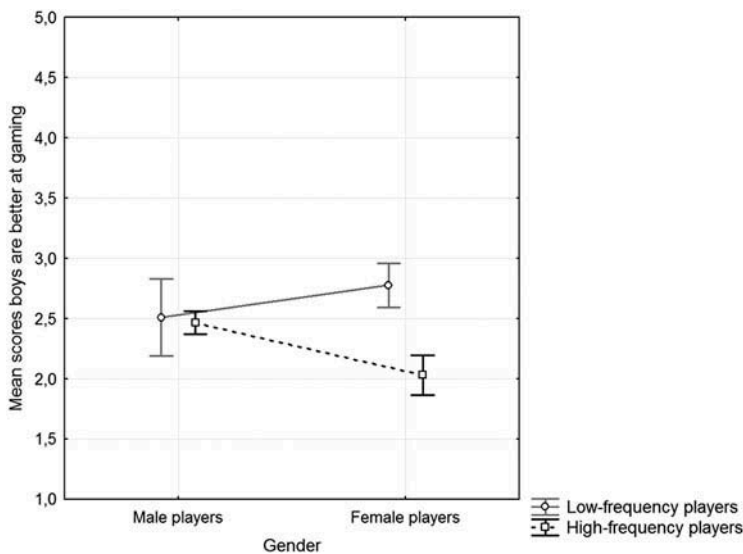


Figure 3
Interaction Between Gender and Playing Frequency on “Boys Are Better at Gaming Than Girls”.



Gender, Game Motivations, and Game Genre Choice

Table 2 summarizes the results of a logistic regression on gender, game motivations, and their interactions for predicting game genre frequency (low vs. high). In what follows, we describe the main effects of gender and game motivations separately from the interaction effects even though both were included in the executed regression models.

Main Effects. Regarding main effects of gender, only the regression models of growth genres and linear progression genres revealed significant gender effects, showing that men were more likely to be high frequency players of these genres than women. Concretely, the odds ratios tell us that as gender changes from male (0) to female (1), the change in the odds of being a high frequency player compared to being a low frequency player is 0.04 for growth genres and 0.07 for linear progression genres. Or put differently, the odds of a man being a high frequency player compared to not being a high frequency player are for growth genres ($1/0.04 = 25$ times) and for linear progression genres ($1/0.07 = 14$ times) more likely than for a woman. No other main effects of gender were found.

Furthermore, the analyses revealed significant main effects of several game motivations for each game genre component. For casual game genres, the positive regression coefficient indicated that an increase of one unit in the control motive produces a change in the odds of being a high frequency casual game player is 1.44. Frequencies of heavy action genres were significantly predicted by higher values on competition, challenge, and social contact motives. Also, the odds of being a high frequency growth genre player rise when scores are increasing on the motivations control, challenge, social contact, and immersion. Interestingly, people who scored higher on the competition motivation were less likely to be high frequency growth genre players. A similar result was found for linear progression genres, further showing that an increase in challenge and immersion produced a higher probability of being a high frequency player of this genre. Higher scores on the competition motive significantly predicted higher odds for being a high frequency sports genre player, while people who had higher ratings on the immersion motive were less likely to play this genre frequently.

Interaction Effects. Some of the aforementioned effects should be interpreted with caution, however, given that some findings were superseded by the interaction between gender and game motivations. Besides heavy action genres, interactions were found for the remaining four game genre components. Of all eight statistically significant interactions, six showed that, as a specific motivation score increased, women were more likely to be high frequency players than men. Concretely, for casual game genres, the interaction between gender and immersion indicated that as gender changes from male (0) to female (1) in combination with immersion increasing, the change in the odds of being a high frequency casual player compared to being a low frequency casual player is

Table 2
Results Logistic Regression for Expected Game Frequency (Low vs. High) of Genres on Gender and Game Motivations

Variable	Casual Genres			Heavy Action Genres			Growth Genres			Linear Progression Genres			Sports Genres		
	B	SE	OR	B	SE	OR	B	SE	OR	B	SE	OR	B	SE	OR
Gender (base = male)	.77	1.18	2.17	-3.02	1.55	.05	-3.36	*	1.51	.04	-2.65	*	1.25	.07	-1.66
Competition	-.11	.14	.90	.48	***	.15	1.62	***	.15	.59	-.38	**	.14	.68	.59
Control	.37	**	1.44	-.05	.15	.96	.43	**	.15	1.54	.14		.15	1.15	.23
Challenge	.06	.16	1.06	.37	*	.17	1.45	.51	.16	1.67	.41	**	.16	1.51	.21
Social Contact	-.04	.12	.96	.48	***	.12	1.61	.35	.12	1.41	-.19		.11	.83	.07
Immersion	-.14	.13	.87	.17	.13	1.19	.47	***	.13	1.60	.28	*	.12	1.32	-.36
Gender*Competition	-.22	.24	.81	-.30	.28	.74	-.51		.29	.60	-.11		.25	.90	-.32
Gender*Control	-.63	**	.53	-.24	.31	.79	-.39		.30	.67	-.34		.26	.71	-.67
Gender*Challenge	.16	.26	1.17	.44	.34	1.55	.41		.33	1.50	.02		.28	1.02	.51
Gender*Social Contact	.19	.18	1.21	.20	.22	1.22	.70	**	.22	2.02	.48	**	.19	1.62	.27
Gender*Immersion	.63	**	1.88	.35	.26	1.42	.64	**	.26	1.89	.84	***	.24	2.30	.48
Nagelkerke pseudo R ²	11%			36%			32%			14%			11%		
Chi-square	$\chi^2 = 80.60$, df= 11, $p < .001$			$\chi^2 = 297.82$, df= 11, $p < .001$			$\chi^2 = 264.90$, df= 11, $p < .001$			$\chi^2 = 105.01$, df= 11, $p < .001$			$\chi^2 = 82.85$, df= 11, $p < .001$		

Note. B = regression coefficient; SE = standard error; OR = odds ratio (Exp[B]) * $p < .05$. ** $p < .01$. *** $p < .001$

1.88. Similar significant interactions were found for the probability of being a high frequency growth genre player, linear progression genre player, and sports genre player. Furthermore, there were significant interactions between gender and the social contact motivation for determining growth genre and linear progression genre play. In both cases, higher ratings on social contact had a larger effect on women compared to men for being high frequency players. The only significant interactions indicating a stronger effect for men were those associated with the control motivation. Specifically, as scores on the control motive increase, men were more likely to be high frequency casual and sports genre players than women.

Discussion

This article contributes to the field of gender and games studies by investigating stereotypical practices in digital game culture based on a quantitative survey study. In a first stage, we looked at how player's gender and general playing frequency determine stereotypical (gender) beliefs about gaming. In a second phase of this study, genre preferences were examined in light of player's gender and intrinsic playing motivations. This allowed us to better understand gendered patterns of playing styles and how these are modulated by playing motivations of particular game genres. Overall, this study provides novel evidence that frequent female players resist gender stereotypes in games and that some of their motivations for playing certain genres surpass those of male players.

The first research question concerned the relationship between player's gender and playing frequency for the perception of general and gender-related gamer stereotypes. Generally, we found that most investigated stereotypical beliefs depend on the intersection between gender and playing frequency. While high frequency male players disagreed the most with general gamer stereotypes, high frequency female players held the least gender-related stereotypical beliefs. This is in accordance with the study of Royse and colleagues (2007) who observed that frequent female players construct a gendered self that does not reflect a traditional masculine/feminine binary. On the contrary, as demonstrated in our study, these players seem to resist the dominant gender discourse in and around digital game culture. This is not unsurprising given the fact that high frequency female players invest heavily in their hobby and therefore may try to refute the allegations directed at their group. Findings further suggested that female low frequency players, though not always significantly different from male low frequency players, held the most stereotypical beliefs with regard to gaming. A possible explanation for this could be that these players suffer from "double stereotyping" as explained in our literature review (Gyongran, 2008). While high frequency female players employ a kind of "fight response" towards stereotypical ideas, low frequency female players may choose to distance themselves from a gamer identity and thus from its negative associated beliefs. This response act is similar to a phenomenon described in stereotype threat literature as "opting out," referring to a coping strategy whereby "threatened"

individuals eschew the negative qualities of one's group identity (Cohen & Garcia, 2005). Moreover, given the gender bias in gaming, it could be that these women are more concerned with "performing gender" in accordance with normative conceptions of leisure activities instead of putting themselves in a vulnerable position (Butler, 1990).

Furthermore, we expected that gender (H_1) and playing motivations (H_2) would predict game genre frequencies. These hypotheses were only partly supported. Although not all identified game motivations accounted for genre play, each genre component could be predicted by one or more playing motivations. Whereas this study did find stereotypical gender genre preferences, only two main effects of gender were significant when controlling for motivations and interactions between player's gender and motivations, showing that men were more likely than women to be high frequency players of growth genre games and linear progression genre games. No gender differences were found for casual genres, sports genres, and heavy action genres. These findings suggest that assumed gender differences in playing styles are often based on socially constructed ideas of male/female preferences and do not necessarily reflect what, where, and how individuals are really playing. For example, previous research has indicated that "gendered preferences" are often based on assumptions that disregard previous playing experience and acquired access to certain game types (Carr, 2005; Hayes, 2005). It must be noted, however, that people enjoying typical genres allied to their gender should not be dismissed as this would re-install a hierarchical distinction between games that belong to gamer subcultural capital and those that do not (Shaw, 2013; van Zoonen, 2000).

Finally, RQ_2 focused on the relationship between player's gender and playing motivations to predict game genre playing frequencies. Interestingly, we found rather non-stereotypical play habits of both men and women. Our results revealed significant interactions showing that the effect of motivations on genre playing frequency was larger for female players than for male players. This is dissimilar to previous research that asserted that women are a less motivated player group (Greenberg, Sherry, Lachlan, Lucas, & Holmstrom, 2010). Whereas the control motivation did affect men in a stronger sense to play casual and sports genres, women were more strongly drawn towards casual genres, growth genres, linear progression genres, and sports genres on the basis of social contact and/or immersion motives. Or put differently: Women who are motivated by immersion or social contact in games are more likely to be high-frequency players of these genres. This could signify that high frequency female players' motivations exceed stereotypical beliefs of gaming being a male pastime. Given the gender bias in game culture, it is possible that frequent female players have to be strongly motivated to pursue their hobby. Our previous findings already indicated that high frequency female players are reluctant towards gender-related stereotypes and this is further reflected in their motivations for playing digital games. As previously stated by Taylor (2008), these results seem to confirm that women are a highly motivated player group despite social and cultural thresholds in game culture.

Some limitations of this study should be mentioned. First, we should note that player's gender is just one dimension to take into account when discussing gaming stereotypes. Other demographic variables such as ethnicity, social class, and age could provide us with a more thorough understanding of stereotypical practices in game culture. Second, this study may not represent the whole gamer population because individuals were recruited based on respondents' self-selection. Third, it should be noted that findings might be limited to game players in the Belgian context. Other (non-Western) contexts such as fervent Asian game cultures could yield very different results. Fourth, single items were used to measure gamer and gender-related stereotypical attitudes. Future research on gamer stereotypes should further elaborate on underlying constructs and try creating a measurement index. Fifth, using a cross-sectional research design prevented us from making causal inferences. To make up for this flaw, exploring gaming stereotypes by means of qualitative in-depth research is suggested. This will not only allow further elaboration on contextual factors but also provide a clear account of which gamer stereotypes are prevalent nowadays. We are aware that this study only provides a glimpse of stereotypical gamer perceptions and that many other common ideas, including positive ones, may be circulating in contemporary society.

Despite these limitations, the present study is one of the first that elucidated the interplay between stereotypical gamer beliefs, playing frequency, and playing motivations with focus on player's gender. It provides a nuanced account of gender differences in stereotypical gamer behavior and beliefs from a social constructionist stance. In our opinion, this perspective advances an interesting theoretical basis to understand how player's gender and play habits can be linked to stereotyping. We believe that the research findings provide more insight into female game play and how women gamers themselves negotiate and deal with stereotypical beliefs in game culture. Practically, results could be interesting for game designers aiming to reach a more inclusive audience; for example by implementing more immersive content elements or offering extensive possibilities for social contact in digital games. Focus should not solely be on satisfying the needs of an already motivated female player group, however. It remains important to tackle stereotyping practices in gaming in order to shift from games as a threatening medium to gaming as an uninhibited pastime for women.

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References

- Brickell, C. (2006). The sociological construction of gender and sexuality. *The Sociological Review*, 54, 87–113. doi:10.1111/j.1467-954X.2006.00603.x
- Bryce, J., & Rutter, J. (2003). The gendering of computer gaming: Experience and space. *Leisure Studies*, 22, 1–15. doi:10.1080/02614360306571

- Butler, J. (1990). *Gender trouble. Feminism and the subversion of identity*. New York, NY: Routledge.
- Cadinu, M., Maass, A., Frigerio, S., Impagliazzo, L., & Latinotti, S. (2003). Stereotype threat: The effect of expectancy on performance. *European Journal of Social Psychology*, 33, 267–285. doi:10.1002/ejsp.145
- Carr, D. (2005). Contexts, gaming pleasures, and gendered preferences. *Simulation & Gaming*, 36, 464–482. doi:10.1177/1046878105282160
- Cohen, G. L., & Garcia, J. (2005). "I am us:" Negative stereotypes as collective threats. *Journal of Personality and Social Psychology*, 89, 566–582. doi:10.1037/0022-3514.89.4.566
- De Castell, S., & Jenson, J. (2003). OP-ED Serious play. *Journal of Curriculum Studies*, 35, 649–665. doi:10.1080/0022027032000145552
- De Schutter, B. (2011). Never too old to play: The appeal of digital games to an older audience. *Games and Culture*, 6, 155–170. doi:10.1177/1555412010364978
- Duits, L. (2008). *Multi-girl-culture. An ethnography of doing identity*. Amsterdam, NL: Amsterdam University Press.
- Durkin, K., & Barber, B. (2002). Not so doomed: Computer game play and positive adolescent development. *Journal of Applied Developmental Psychology*, 23, 373–392. doi:10.1016/S0193-3973(02)00124-7
- Dyer, R. (Ed.). (1977). *Gays and film*. London, UK: British Film Institute.
- Entertainment Software Association. (2013). *Essential facts about the computer and video game industry*. Retrieved from http://www.theesa.com/facts/pdfs/ESA_EF_2013.pdf
- Greenberg, B. S., Sherry, J., Lachlan, K., Lucas, K., & Holmstrom, A. (2010). Orientations to video games among gender and age groups. *Simulation & Gaming*, 41, 238–259. doi:10.1177/1046878108319930
- Griffiths, M. D., Davies, M. N., & Chappell, D. (2003). Breaking the stereotype: The case of online gaming. *CyberPsychology & Behavior*, 6, 81–91. doi:10.1089/109493103321167992
- Gyongran, J. (2008). Women in digital games and their meaning in gaming culture: In-depth interviews with high-level female gamers. *Korea Journalism Review*, 2, 107–127. Retrieved from http://www.kpf.or.kr/books/KJR/KJR_2008_02_Summer.pdf#page=108
- Hall, S. (2003). The spectacle of the "other." In S. Hall (Ed.), *Representation. Cultural representations and signifying practices*. London, UK: Sage.
- Hartmann, T., & Klimmt, C. (2006). Gender and computer games: Exploring females' dislikes. *Journal of Computer-Mediated Communication*, 11, 910–931. doi:10.1111/j.1083-6101.2006.00301.x
- Hayes, E. (2005). Women, video gaming and learning: Beyond stereotypes. *TechTrends*, 49, 23–28. doi:10.1007/BF02763686
- Interactive Software Federation Europe (2012). *Videogames in Europe: Consumer study*. Retrieved from <http://www.isfe.eu/videogames-europe-2012-consumer-study>
- Inzlicht, M., & Kang, S. K. (2010). Stereotype threat spillover: How coping with threats to social identity affects aggression, eating, decision making, and attention. *Journal of Personality and Social Psychology*, 99, 467. doi:10.1037/a0018951
- Jacobson, J. (2005). *Young people and gendered media messages*. Goteborg, SE: Nordicom.
- Jenson, J., de Castell, S., & Fisher, S. (2007). *Girls playing games: Rethinking stereotypes*. Paper presented at the Future Play Conference, Toronto, Canada.
- Juul, J. (2012). *A casual revolution: Reinventing video games and their players*. Cambridge, MA: The MIT Press.
- Kafai, Y., Heeter, C., Denner, J., & Sun, J. (2008). *Beyond Barbie and Mortal Kombat: New perspectives on gender and computer games*. Cambridge, MA: The MIT Press.
- Kolenikov, S., & Angeles, G. (2009). Socioeconomic status measurement with discrete proxy variables: Is principal component analysis a reliable answer? *Review of Income and Wealth*, 55, 128–165. doi:10.1111/j.1475-4991.2008.00309.x
- Kowert, R., Festl, R., & Quandt, T. (2013). Unpopular, overweight, and socially inept: Reconsidering the stereotype of online gamers. *Cyberpsychology, Behavior, and Social Networking*. doi:10.1089/cyber.2013.0118

- Kowert, R., Griffiths, M. D., & Oldmeadow, J. A. (2012). Geek or chic? Emerging stereotypes of online gamers. *Bulletin of Science, Technology & Society*, 32, 471–479. doi:10.1177/0270467612469078
- Lucas, K., & Sherry, J. L. (2004). Sex differences in video game play: A communication-based explanation. *Communication Research*, 31, 499–523. doi:10.1177/0093650204267930
- Miller, M. K., & Summers, A. (2007). Gender differences in video game characters' roles, appearances, and attire as portrayed in video game magazines. *Sex Roles*, 57, 733–742. doi:10.1007/s11199-007-9307-0
- Nakamura, L. (2012). Queer female of color: The highest difficulty setting there is? Gaming rhetoric as gender capital. *Ada: A Journal of Gender, New Media, and Technology*, 1. doi:10.7264/N37P8W9V
- Olson, C. K. (2010). Children's motivations for video game play in the context of normal development. *Review of General Psychology*, 14, 180. doi:10.1037/a0018984
- Pew Internet & American Life Project. (2008). *Teens' gaming experiences are diverse and include significant social interaction and civic engagements*. Retrieved from <http://pewinternet.org/Reports/2008/Teens-Video-Games-and-Civics.aspx>
- Royse, P., Lee, J., Undrahbuyan, B., Hopson, M., & Consalvo, M. (2007). Women and games: Technologies of the gendered self. *New Media & Society*, 9, 555–576. doi:10.1177/1461444807080322
- Ryan, R. M., Rigby, C. S., & Przybylski, A. (2006). The motivational pull of video games: A self-determination theory approach. *Motivation and Emotion*, 30, 344–360. doi:10.1007/s11031-006-9051-8
- Scharkow, M., Festl, R., Vogelgesang, J., & Quandt, T. (2012). *Choosing digital games: The relationship between gaming motives and genre preferences*. Paper presented at the ICA 2012 Conference, Phoenix, AZ.
- Schmierbach, M., Boyle, M. P., Xu, Q., & McLeod, D. M. (2011). Exploring third-person differences between gamers and nongamers. *Journal of Communication*, 61, 307–327. doi:10.1111/j.1460-2466.2011.01541.x
- Schneider, E. F., Lang, A., Shin, M., & Bradley, S. (2004). Death with a story. *Human Communication Research*, 30, 361–375. doi:10.1111/j.1468-2958.2004.tb00736.x
- Schut, K. (2006). Desktop conquistadors. Negotiating American manhood in the digital fantasy role-playing game. In J. P. Williams, S. Q. Hendricks, & W. K. Winkler (Eds.), *Gaming as culture: Essays on reality, identity, and experience in fantasy games*, (pp. 100–119). Jefferson, NC: McFarland & Company.
- Selwyn, N. (2007). Hi-tech = guy-tech? An exploration of undergraduate students' gendered perceptions of information and communication technologies. *Sex Roles*, 56, 525–536. doi:10.1007/s11199-007-9191-7
- Shapiro, J. R., & Williams, A. M. (2012). The role of stereotype threats in undermining girls' and women's performance and interest in STEM fields. *Sex Roles*, 66, 175–183. doi:10.1007/s11199-011-0051-0
- Shaw, A. (2011). Do you identify as a gamer? Gender, race, sexuality, and gamer identity. *New Media & Society*, 14, 28–44. doi:10.1177/1461444811410394
- Shaw, A. (2013). On not becoming gamers: Moving beyond the constructed audience. *Ada: A Journal of Gender, New Media and Technology*, 2. doi:10.7264/N33N21B3
- Siann, G. (2013). *Gender, sex, and sexuality. Contemporary psychological perspectives*. Oxon, UK: Taylor & Francis.
- Sweetser, P., & Wyeth, P. (2005). GameFlow: A model for evaluating player enjoyment in games. *Computers in Entertainment (CIE)*, 3, 3. doi:10.1145/1077246.1077253
- Tanis, M., & Jansz, J. (2008). *Gaming for different reasons: What motivates people to play a specific video game?* Paper presented at the the Annual Conference of the International Communication Association, Montreal, Canada.
- Taylor, T. L. (2008). Becoming a player: Networks, structure, and imagined futures. In Y. B. Kafai, C. Heeter & J. Y. Sun (Eds.), *Beyond Barbie & Mortal Kombat. New perspectives on gender and gaming*. Cambridge, MA: The MIT Press.

- Van Damme, E. (2013). *Youth fl/rjction. A multi-method research on the use, representation and consumption of youth's contemporary screen culture*. Ghent, Belgium: Ghent University Press.
- Vanderhoef, J. (2013). Casual threats: The feminization of casual video games. *Ada: A Journal of Gender, New Media and Technology*, 2. doi:10.7264/N3V40S4D
- Van Looy, J. (2010). Video game intrinsic motivation questionnaire (Internal report). Ghent: Faculty of Communication Studies, University of Ghent, Belgium.
- Van Looy, J., & De Vocht, M. (2009). *Informative Web site over gaming*. Retrieved from <http://www.cjism.vlaanderen.be/gaming/index.shtml>
- Van Looy, J., Schuurman, D., De Moor, K., De Marez, L., & Courtois, C. (2010). *Freewheelers, solo- en social competers. Een driewegsclassificatie van heavy gamers op basis van een vijfdimensionele gameflow-schaal*. Proceedings of the Etnaal van de Communicatiewetenschap, Ghent, Belgium
- van Zoonen, L. (2000). *Feminist media studies*. London: UK, Thousand Oaks: CA, Greater Kailash, New Delhi: SAGA Publications.
- West, C., & Fenstermaker, S. (1995). Doing difference. *Gender & Society*, 9, 8–37. doi:10.1177/089124395009001002
- West, C., & Zimmerman, D. H. (1987). Doing gender. *Gender & Society*, 1, 125–151. doi:10.1177/0891243287001002002
- Williams, D., Consalvo, M., Caplan, S., & Yee, N. (2009). Looking for gender: Gender roles and behaviors among online gamers. *Journal of Communication*, 59, 700–725. doi:10.1111/j.1460-2466.2009.01453.x
- Williams, D., Yee, N., & Caplan, S. E. (2008). Who plays, how much, and why? Debunking the stereotypical gamer profile. *Journal of Computer-Mediated Communication*, 13, 993–1018.
- Yee, N. (2006). Motivations for play in online games. *CyberPsychology & Behavior*, 9, 772–775. doi:10.1089/cpb.2006.9.772



Far from Fifty-Fifty: Legal Measures and the Relative Lack of Women in Powerful Decision-Making Positions in Germany's Broadcasting Sector

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Far from Fifty-Fifty: Legal Measures and the Relative Lack of Women in Powerful Decision-Making Positions in Germany's Broadcasting Sector

Romy Fröhlich¹ and Sabine Baudisch

A gender-equal organization of institutions requires adequately qualified women to be equally present on every hierarchical/functional level. In light of this, the authors evaluate how women participate in leading managerial and supervisory positions of administrative relevance, i.e., beyond editorial departments, in public and private broadcasting corporations and organizations in Germany. The study comprises an examination and comparison of existing legal requirements/regulations for gender equality on the supervisory councils of Germany's broadcasting corporations/organizations and contributes to the analysis on the contemporary politics of gender in Germany's broadcasting sector. It is the first study of its kind.

Achieving equality of equally qualified women and men is a major concern of modern societies. It is not only an essential prerequisite for social progress and cohesion as well as for economic growth, but also a question of justice. The European Commission (EC) (2000) refers to gender discrimination as a "violation of human rights" (p. 2). Article 23 of *The Charter of Fundamental Rights of the European Union* (2007), which commits the EU and its member states to gender mainstreaming, states: "Equality between women and men must be ensured in all areas, including employment, work, and pay." The *Global Gender Gap Report*¹, published by the World Economic Forum (Hausmann, Tyson, Bekhouche, & Zahidi, 2013) however shows that some leading Western nations have not been very effective over the past few years to minimize gender imbalances. The United Kingdom, for example, ranked 9th in the 2006 Global Gender Gap ranking but fell steadily to 18th by 2013, and the United States ranked 17th in 2011

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but 23rd in 2013. Since 2006, Germany, too, has consistently lost ground. In 2006 and 2007, Germany was ranked in the top ten, but only attained 11th place in 2008 and currently sits in 14th (Hausmann et al., 2013, pp. 8–9). The reasons are manifold. For example, as proven in several studies “it is not different productivity, nor different personality, but *discrimination* that leads to differential treatment and sex segregation at the workplace” (Weichselbaumer, 2004, p. 181; see also Eagly & Karau, 2002).

The most important prerequisite for the advancement of women and the achievement of substantive gender equality is the equal participation of men and women in *decision-making* processes and positions (European Commission, 2012, p. 10). According to Schein’s (1973) study, decision-making and leading managers, however, are convinced that to be successful in high-ranking positions it takes more of those characteristics typically ascribed to men than to women. This result has been replicated for China, Germany, Japan, the UK, and the U.S. (e.g., Arkkelin & Simmons, 1985; Heilman, Block, Martell, & Simon, 1989; Powell & Butterfield, 1994; Schein, 2001). Is this why women currently hold only 13.7% of the seats on the EU member states’ largest publicly listed companies’ boards (in Germany, 15.6%) (European Commission, 2012, p. 41)? Viviane Reding, the EC’s Vice President in early 2010, is convinced that regulatory pressure towards more equal opportunities for women is an effective remedy:

The proof is in the pudding: regulatory pressure works...The example set by countries such as Belgium, France, and Italy, who have recently adopted legislation and are starting to show progress, clearly demonstrates that time-limited regulatory intervention can make all the difference (European Commission, 2013).

This unfortunate situation also applies to the broadcasting sector: “Women’s... groups have expressed alarm at being excluded from decision-making positions within this powerful social institution (media; the authors), arguing that the gatekeepers of media have become an increasingly homogenous group” (Cishecki, 2002, p. 1). With these words, Melanie Cishecki introduced a new regulatory model to the UN’s Division for the Advancement of Women (DAW) Expert Group. Citing a poll in Canada, she remains convinced that the public strongly supports “the idea of promoting women to decision-making levels and appointing them to boards so that they have more influence on media policy” (Cishecki, 2002, pp. 5, 8). However, anti-discrimination/affirmative action legislation/regulations and equal pay laws for women are disputed. Neumark and Stock (2006), for instance, have examined the effects of sex discrimination laws on employment and found “robust evidence that state equal pay laws for women reduced relative employment of...women” (p. 385).

Aim and Focus of Study

Against this background, we focus on the implementation and effect(s) of gender sensitive equal opportunity legislation/regulations in Germany.² In Europe, Germany

serves as a good case for analysis, since the first federal equal treatment law was introduced as early as 1980. For the first time, it legally facilitated proactive measures to foster the advancement of women and to promote women into (senior) management positions. However, the existence of various laws alone does not solve the equal opportunities problem (e.g., Gottfried & O'Reilly, 2002). This becomes most evident when comparing the situation in Germany with the progress in the Scandinavian countries, for instance. While in the Nordic nations the first comparative equal treatment laws were also passed during the early 1980s, there is little disagreement over the fact that the situation there today is very different (i.e., much more advanced) from that of Germany and all other European nations (e.g., Hausmann et al., 2013, p. 8).

Public institutions in particular should show a capacity for innovation and set an example, especially bearing in mind their social responsibility and significance. In this regard, the German broadcasting sector seems particularly relevant—whether considering the legislative definitions, attributions, and allocations of the functions, roles, and responsibilities of *public* broadcasting in particular (broader public good), whether considering the still impressive range and market shares of public and private broadcasters.³ Besides this, the German broadcasting sector is highly relevant because: In Germany, TV (41% women) and radio (40% women) have by far the highest proportion of female journalists (Weischenberg et al., 2006). Although, as we now explain, while we do not explicitly investigate journalistic/editorial staff, this particular circumstance gives the broadcasting sector additional relevance for our analysis.

While there is much data available on proportions of female among journalistic/editorial staff in the German media, there are no current studies on women in decision-making positions *beyond* journalistic and/or editorial areas. Owing to the given legal basis, quota regulations as a particular form of strict affirmative action legislation in Germany only apply to the *regulatory and supervisory bodies/boards* of broadcasters, but not to the hiring and promotion of journalistic/editorial staff. This makes these bodies and boards highly relevant for our research. The gender balance in decision-making media positions beyond the journalistic/editorial areas is of great importance for the gender balance of media organizations (Zoonen, 1994, pp. 63–65). A qualitative study on women in leading editorial positions in public broadcasting by Susanne Keil (2000, pp. 196–200) showed that women need to be represented on every hierarchical and functional level in order to achieve and to ensure a generally and sustainable gender-balanced organization. For gender-balanced organizations to become a reality and to facilitate women's careers, it is not sufficient to have only some women on (even public) display in leading positions. Gender equality requires a balanced representation of women in *diverse* leading positions with decision-making powers (including administrative boards and supervisory bodies). Research has “found a quantitative link between women working behind the scenes and the representation and portrayal of women on screen” (Lauzen & Dozier, 1999, p. 355).

To date, the only relevant data collection on female representation in *administrative* decision-making boards of German broadcasters and their *regulatory and supervisory bodies* stems from the beginning of the 1990s (between 6% and 13% women) (Fröhlich & Holtz-Bacha, 1995; Holtz-Bacha, 1990). In light of this, we conducted an analysis of female representation in leading *administrative* positions as well as in decision-making *regulatory and supervisory* positions (beyond the editorial staff/departments) in Germany's broadcasting sector and combined this data-set with a detailed analysis of the various regulatory laws (where applicable). As in most European countries, in Germany, the broadcasting sector is also highly regulated. Although this especially applies to the public broadcasting organizations in Germany, it also applies to the regulatory *supervisory bodies* responsible for the supervision of private broadcasters.

Our study seeks to challenge the actual effect(s) of equal opportunity legislation/regulations in Germany that aims to retain and improve equal representation of (adequately) qualified women and men in high-ranking *administrative* management positions and *supervisory* bodies (not journalistic/editorial staff) in Germany's broadcasting sector. Our study not only provides new descriptive data for Germany, but also contributes to the general analysis of contemporary politics of gender. For the latter purpose, our study also analyzes the specific wording of the various state media and broadcasting laws concerning gender sensitive affirmative action regulations. It is the first study of its kind of the broadcasting sector; to our best knowledge, there are no comparable approaches from other countries or regions in the world.⁴ Thus, our country-specific case study provides a starting point for further international comparative studies.

To gain a better understanding of the structures of power and the decision-making processes in broadcasting in Germany, we will now briefly describe the relevant (regulatory and supervisory) bodies and their powerful positions inside and outside the broadcasting corporations/organizations.

Germany's Broadcasting System

In response to experiences of media abuse during the Third Reich, regulatory principles and power structures in Germany's broadcasting sector today must ensure pluralistic structures as well as independence (Libertus, 2004, p. 5). Thus, in the aftermath of WWII, public broadcasting in West Germany was established according to the British Broadcasting Corporation (BBC) (i.e., regulated by public law; representation/participation of the whole society rather than just financially strong groups; committed to the common good; a plurality of views and political opinions; economically independent through a general public broadcasting fee; internal and external supervision of power/decision-making; etc.). Independent of each other, public broadcasters were set up in the different states (*Länder*), but in 1950 formed the Consortium of Public Law Broadcasting Institutions of the Federal Republic of Germany (ARD).⁵ In 1963,

a nationwide public TV broadcaster—ZDF⁶—was established by a treaty between Germany's states.⁷

To monitor and evaluate the tasks and functions of public broadcasters (e.g., compliance to the legal commitment for the so-called *basic supply*), supervisory bodies (councils) were installed. Similar to the Board of Governors of the BBC (the BBC's governing body until 2007) or now the BBC Trust, socially relevant groups (trade unions, employer associations, religious communities, etc.) are represented in the 10 sovereign broadcasting councils of the ARD and the ZDF's television board to ensure plurality of opinions in programming. The number of members of each council varies between 26 members (Radio Bremen) and 74 members (SWR). The number and range of organizations and groups that are entitled to delegate members is strictly specified in each state broadcasting law and varies from state to state. The Catholic, Protestant, and Jewish communities, employee and employer representative organizations, as well as representatives from state parliaments, political parties, and the state government are generally entitled to delegate members (ARD, 2014). The broadcasting council/television board primarily advises and checks on the program content and usually also elects and appoints the *intendant* (special term for the chairman of a broadcasting company) as well as the members of a second supervisory body, the administrative council, which mainly oversees the intendant's and the several directors' professional management and economic operations. (Schulz, Held, & Dreyer, 2008, p. 12)

Private broadcasting corporations did not exist in Germany until the mid-1980s. Their broadcasting services are regulated by the State Media Authorities (SMA) (*Landesmedienanstalten*), which are responsible for licensing broadcasters, supervising regulation (the protection of minors; advertising and program guidelines etc.), and participating in frequency management. These SMAs have considerable regulatory powers, even though they are not part of the state administration or government. They are regulated by public law and act as independent agencies with internal supervisory bodies/councils consisting either of representatives from socially relevant groups (comparable to the respective councils of public broadcasters) and/or of media experts. (Schulz et al., 2008, pp. 12, 18) The concrete denotations of these SMA councils vary from state to state (*Medienrat, Versammlung, Medienkommission, Medienausschuss* or *Landesrundfunkausschuss*). We opt for the general term "Länder media councils."

Method

Concerning the *public* broadcasting sector, we collected data from: (1) the nine independent and separate state broadcasting organizations of ARD (each provides TV and radio programs), (2) Germany's international broadcaster Deutsche Welle (DW) (member of ARD), and (3) ZDF, the (second) national

Table 1
Leading Decision-Making Positions Within the Administration (Non-Journalistic/
Non-Editorial Staff) of Public Broadcasting Organizations

Position	Explanation
Intendant	Chairman of a public broadcasting corporation; represents the corporation externally; responsible for administering the organization according to the general policy directives, including the management and direction of the station's editorial and creative strategy, output and personnel.
Commercial Director, Legal Directorate, Director of Operations	Responsible for the operational delivery of a station's services.
Director of Content	Decides on radio and/or TV programs.
Director Land Broadcasting Station	Some ARD broadcasting organizations are based on an interstate agreement between two or three states/ Länder and, respectively, two or three regional stations located in the capitals of the respective states/ Länder.
Other Directors	Diverse responsibilities other than the above mentioned (heavily dependent on the respective public station/ corporation).

TV broadcaster. We categorized the following decision-making positions in the administration of the afore-mentioned broadcasters (Table 1) as follows:

In addition to top decision-making positions in the public broadcasting organizations, we also collected data on the proportion of females in the public broadcasters' two supervisory bodies: (1) the *broadcasting councils* and (2) the *administrative councils*.

Equivalent data collection for *private* commercial broadcasting in Germany proved more difficult (394 TV programs, 268 radio programs) (die medienanstalten, 2014, pp. 45, 132). The sheer number of private broadcasting corporations forced us to concentrate on the two corporations that reach the highest market shares via their stations: (1) ProSiebenSat.1 Media AG/ProSiebenSat.1 TV Deutschland GmbH (partly an incorporation; TV stations: SAT.1, ProSieben, kabel eins, sixx, SAT.1 Gold, and ProSieben MAXX) and (2) Mediengruppe RTL Deutschland (TV stations: RTL, VOX, n-tv, RTLNITRO, Super RTL, and RTL II) (AGF/GFK Fernsehforschung, 2014). At ProSiebenSat.1, we identified top decision-making positions at the following levels: management of the TV Germany group, management of the diverse TV stations, and the managerial and supervisory board of the incorporation (ProSiebenSat.1 TV Deutschland GmbH, 2014). At the Mediengruppe RTL Deutschland (not an incorporation), we

identified the top decision-making positions at the highest managerial level positions of the group and at its various TV stations (Mediengruppe RTL Deutschland, 2014).

For the fourteen State Media Authorities (SMAs) supervising the private broadcasting corporations as well as for their specific supervisory bodies—the Länder media councils—we identified six different relevant top decision-making positions (comparable to the positions at the public broadcasting organizations): Director, Administrative Director, Legal Directorate, Director of Operations, Director of Content, and Director of Community Broadcasting.⁸ Finally, we compared our figures with the wording of state media laws regarding equal opportunities and gender balance regulations for councils and supervisory boards/councils in the broadcasting sector (Table 2):

We now present our results. Although the absolute numbers are low, we have decided to present the female proportion as a percentage. In some cases, one woman more or less in a council makes a huge difference to the percentage. It also shows

Table 2
Samples and Analytical Structure

Public Broadcasting		Private Broadcasting	
A	Quantitative data selection: Decision-making positions within the non-editorial management of <i>ZDF</i> , <i>DW</i> and the nine state broadcasting corporations of <i>ARD</i> (no state broadcasting laws regarding gender balance regulation for decision-making positions in management).	A	Quantitative data selection: Decision-making positions within the non-editorial management of <i>ProSiebenSat. 1 Media Group</i> and <i>RTL Media Group</i> (no state broadcasting laws regarding gender balance regulation for decision-making positions in management).
B		B	Quantitative data selection: Decision-making positions within the State Media Authorities (no state broadcasting laws regarding gender balance regulation for decision-making positions in management).
C	Quantitative data selection: Members of broadcasting councils/television board and of administrative councils/supervisory board.	C	Quantitative data selection: Members of Länder media councils of the State Media Authorities.
C.1	Qualitative analysis: Comparison with text wording of state broadcasting laws regarding equal opportunities and gender balance regulation for councils and supervisory boards.	C.1	Qualitative analysis: Comparison with text wording of state media laws regarding equal opportunities and gender balance regulation for councils and supervisory boards.

how easy it would be to fulfill specified gender quotas by the appointment of just one or two more women.⁹

Results

The Public Broadcasting Organizations: ARD, DW, and ZDF

Proportion of Females in Decision-Making Positions at Public Broadcasting Organizations/Stations (Without Councils).

ARD, ZDF, and DW reach a 23% proportion of females in all decision-making positions. A more detailed look at the respective positions (Figure 1) provides a differentiated picture: While only 18% of the highest positions (intendant) are filled by women, 56% of the directors at Länder broadcasting stations are women. The lowest female proportions are found among directors of operations ($n = 1$; 13%) and legal directorates ($n = 1$; 10%).

A look at the separate results for each of the public broadcasting organizations (Figure 2) shows that two out of 11 stations filled none of their leading positions with a woman: HR (Hesse) and SR (Saarland). None of the stations has a 50% proportion of females. RBB, the station of Berlin/Brandenburg, comes closest, with 40%. WDR (North Rhine-Westphalia) and MDR (state treaty between Saxony, Saxony-Anhalt and Thuringia) can at least claim a one-third proportion of females.

Proportion of Females on Supervisory Councils (Broadcasting and Administrative Councils, and Supervisory Boards) of Public Broadcasting Corporations.

Broadcasting Councils. We found a 32% proportion of females in the broadcasting councils of ARD, DW, and ZDF together, which is an improvement over the last 25 years, compared to earlier results from Holtz-Bacha (1990). However, we discovered significant differences between the councils of the various public broadcasters, with Radio Bremen's (RB) broadcasting council having the highest proportion of females (60%), and the council of the Mitteldeutscher Rundfunk (MDR) the lowest (9%) (Figure 3).

Since 1989, a fairly precise regulation concerning the representation of women in the supervisory bodies has been added. Thus, we examined these state broadcasting laws. The Radio Bremen law is one of the few broadcasting laws with a precise quantitative legal requirement of at least 50% women on the councils: When selecting the council's members, women and men should be chosen on a fifty-fifty basis; if an organization appoints a man, the deputy member must be a woman, and vice versa (Radio Bremen Gesetz, 2014, § 10(4)). In light of this, it is unsurprising that Radio Bremen has the highest proportion of women on any broadcasting council (60%).

Another example that shows that a precise statutory provision can lead to a gender-balanced composition of broadcasting councils is that of the NDR state treaty, which also regulates the composition exactly: half of the broadcasting council members must be female (NDR-Staatsvertrag, 2005, § 17(2)). With a female

Figure 1
Share of Women in Top Decision-Making (Management) Positions at Public Broadcasting Organizations by Position (No Regulation)

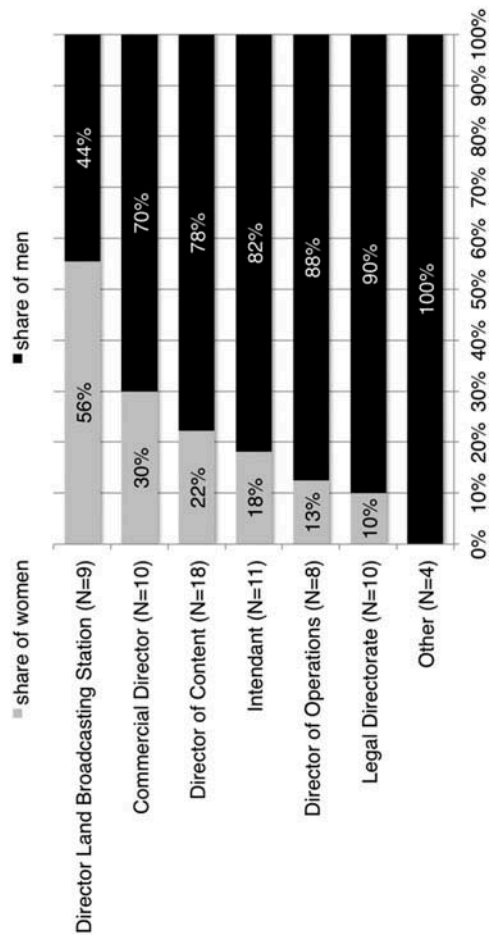


Figure 2
Share of Women in Top Decision-Making Positions at *Public Broadcasting Organizations by Organization (No Regulation)*

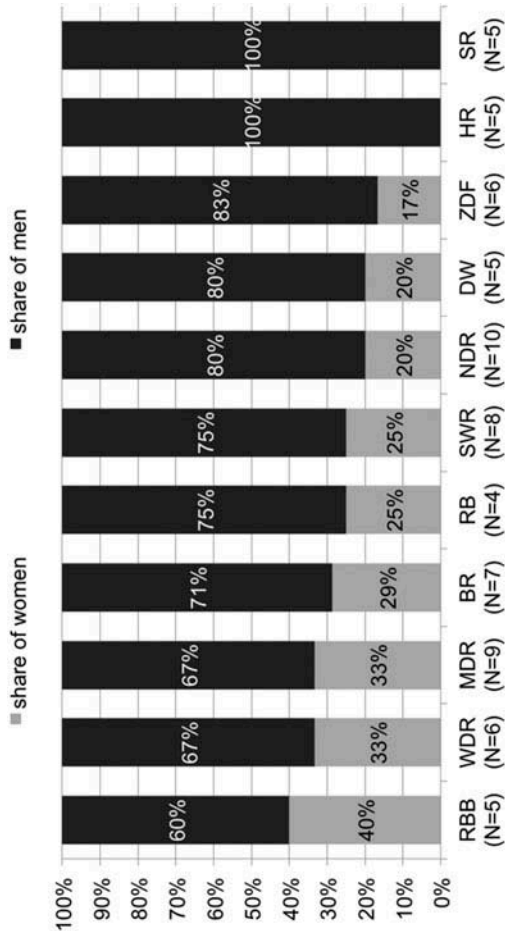
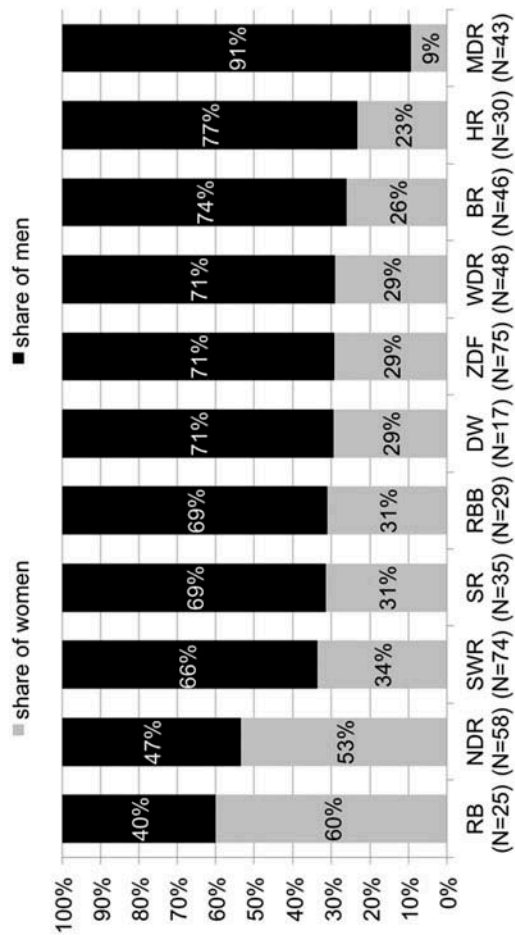


Figure 3
Share of Women on Supervising Broadcasting Councils of Public Broadcasting Organizations



representation of 53%, the NDR broadcasting council accomplishes the statutory required ratio.

Contrary to the NDR and RB examples, WDR shows that precise statutory provisions do not necessarily lead to a better representation of women on these councils. The state broadcasting law for the WDR requires a gender quota for the council of at least 40% (Gesetz über den Westdeutschen Rundfunk Köln, 2011, § 15(1)). With a female proportion of 29%, this is far from being fulfilled.

The SWR recently added a passage to its law to realize gender equality. It says 50% of the delegated members must be female or, if another person is delegated as a replacement of a former member, this person should be a woman if the former member was a man, or a man if the former delegate was a woman—a so called “zipper” quota (Staatsvertrag über den Südwestrundfunk, 2013, § 14(6)). This leads to a quota of 34%.

RBB and SR demonstrate that a less precise law leads to less than an equal representation of women on broadcasting councils: The broadcasting state treaty of Berlin and Brandenburg (RBB) as well as the legal regulations for the broadcasting council of the Saarland broadcasting corporation (SR) have led to 31% proportion of females. Instead of insisting on a precise quantitative gender quota, their laws simply say: If another person is delegated as a replacement of a former member, this person should be a woman if the former member was a man or a man if the former delegate was a woman. They also include the loose wording that female members should be given “adequate consideration” (Saarländisches Mediengesetz, 2013, § 27(3); Staatsvertrag über die Errichtung, 2013, § 14(3)).

The Deutsche Welle (DW) law also only contains a somewhat loose regulation: When selecting members, it should be with a view towards the equal participation of women and men (Deutsche-Welle-Gesetz, 2004, § 29(4)). At 29%, DW’s proportion of women in broadcasting councils is below par.

Also below par is the female proportion on the ZDF broadcasting council (29%). The state treaty for the Second German Television (ZDF) also only contains a phrase pertaining to “adequate consideration,” supplemented by the request for organizations that delegate at least two members to delegate one female member in the process (ZDF-Staatsvertrag, 2009, §21(5)).

Although the legal text of the Bavarian broadcasting Law contains a precise gender quota for the broadcasting council of the BR, it will not contribute to a gender balance, since it demands a minimum of only five female members. Beyond that, the law calls for equal participation of women and men (in this generalized wording), which would never be reached with only five female council members (Gesetz über die Errichtung, 2012, Art. 6(3)). According to our analysis, the female proportion here is 26% (12 out of 46 members).

HR and MDR are at the bottom of the list. The poor representation of women in these councils is the result of a lack of any regulations regarding a gender balance. The Hesse media law only stipulates that the state women’s council is allowed to delegate a member; the further composition of the council is not regulated at all (Gesetz über den Hessischen Rundfunk, 2010, §5(2)). With seven women out of 30 members, the female proportion of the HR broadcasting council is the second lowest (23%). The situation on MDR’s

broadcasting council (9%) is even worse. This is unsurprising, given that the MDR state treaty has no gender requirements (Staatsvertrag über den Mitteldeutschen Rundfunk, 1991, § 19(1)).

In general, our results indicate that precise legal regulations or stipulations of female representation on broadcasting councils predominantly did lead to higher (or even the highest) female proportions on these councils. The more precise a regulation and the higher the respective quantitative specification, the higher is the de facto proportion of female council members.

Administrative Councils. According to our findings, the general female proportion on the administrative councils of all public broadcasters is 30%. We also find legal regulations regarding the composition of the administrative councils in some state broadcasting laws. For instance, the statutory provision of the NDR state treaty stipulates that six out of the twelve members should be women (NDR-Staatsvertrag, 2005, § 24(1)), which has de facto been achieved in the NDR administrative council.

We find a similar situation at Radio Bremen (RB). The law demands that four out of nine members should be female (44%), which is in fact the case (Radio Bremen Gesetz, 2014, §12(1)). The WDR law even demands an above-average proportion of women—five out of nine members should be female (Gesetz über den Westdeutschen Rundfunk Köln, 2011, § 20(1)). However, in this case, the reality is different: only four members are women (44%). Still, together with RB, WDR has the second highest female proportion of all administrative councils (Figure 4).

For RBB's administrative council, the law requires that at least three out of seven members must be women, which is the de facto current status (Staatsvertrag über die Errichtung, 2013, §19(1)). The SWR recently added a regulation regarding the composition of its administrative council: 40% of members must be women (Staatsvertrag über den Südwestrundfunk, 2013, § 20(2)). But the proportion is only 27%. SR achieves a higher female proportion (29%) on its administrative council without any legal regulation or recommendation.

There are also no legal regulations for HR, ZDF, BR, DW, and MDR regarding a gender-balanced administrative council. On the administrative councils of these public broadcasting organizations one can only find one or two women and, in the case of ZDF, three.

Similar to the broadcasting councils, our results for the administrative councils indicate that if a legal regulation/recommendation exists (NDR, RB, WDR, RBB), the female proportion of these councils is higher than on those without such regulations, with the exception of SWR.

Private Broadcasting Corporations and State Media Authorities (SMA)

Proportion of Females in Decision-Making Positions of Private Broadcasting Corporations.

Our results (Figure 5) show that the top leading and decision-making positions at ProSiebenSat.1 Media AG/ProSiebenSat.1 TV Deutschland GmbH are dominated by

Figure 4
Share of Women on Administrative Councils of Public Broadcasting Organizations

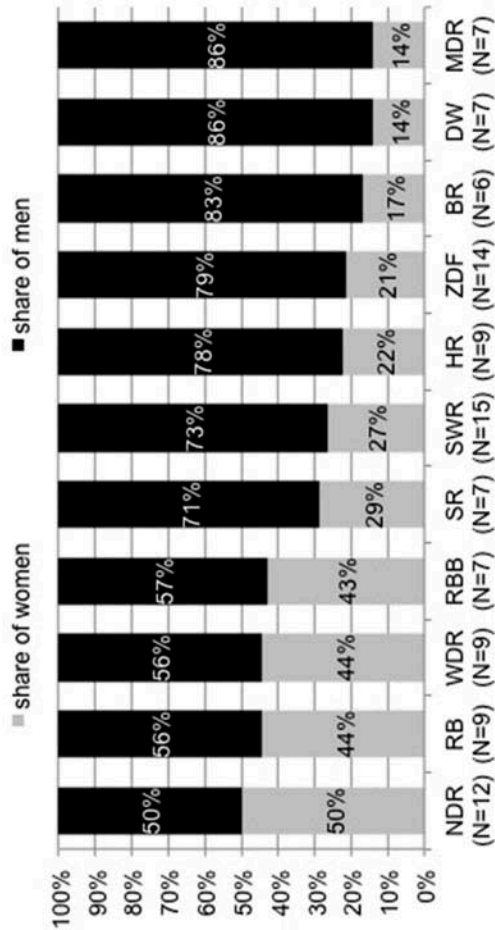
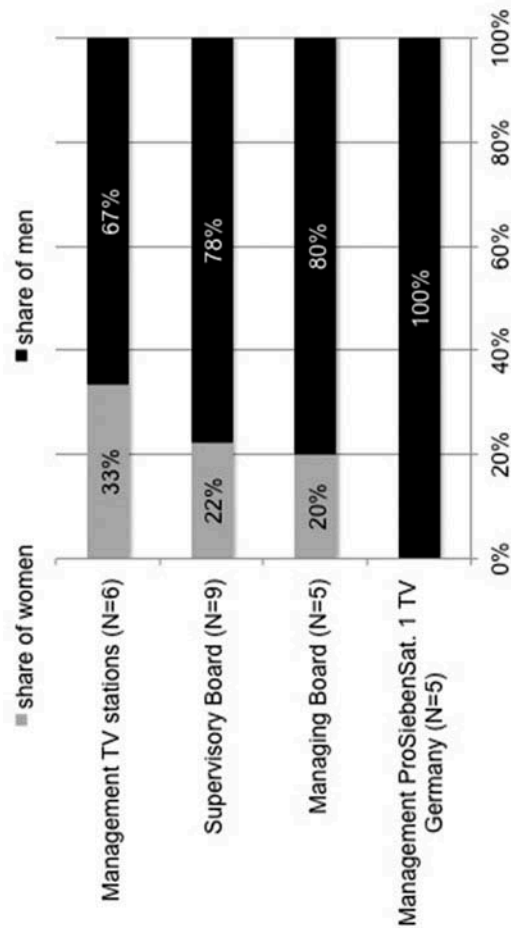


Figure 5
Share of Women at ProSiebenSat.1 Media AG/ProSiebenSat.1 TV Deutschland GmbH (No Regulation)



males. The female proportion in all managing positions of the TV stations is 33%, of the supervisory board 22%, and of the managing board of the incorporation 20%. The management of ProSiebenSat.1 TV Deutschland GmbH is 100% male (ProSiebenSat.1 TV Deutschland GmbH, 2014). Put together, that gives us a female proportion of 20% across the decision-making positions.

There is also not much to say about the proportions of females in the leading and decision-making positions of the Mediengruppe RTL Deutschland: Anke Schäferkordt is Managing Director of Mediengruppe RTL Deutschland and RTL Television as well as co-CEO of the RTL Group. Men fill the 10 other management positions, which results in a female proportion of 9% (Mediengruppe RTL Deutschland, 2014).

In the following section, we present the results of the representation of women in top leading and decision-making positions of the supervisory bodies responsible for private broadcasting corporations in Germany—the 14 so-called State Media Authorities (SMAs)—and their concrete Länder media councils.

Proportion of Females in Leading Decision-Making Positions of the 14 SMAs for Private Broadcasting Corporations and Their Länder Media Councils. As noted, the 14 SMAs in Germany responsible for private broadcasting are in charge of licensing and controlling as well as structuring and promoting private television and radio. The independent SMAs of the states must ensure that the provisions for private broadcasters are adhered to (The Media Authorities, 2014). Taken together, we found a female proportion of 29% here. Men dominate all positions at the SMAs, especially the highest (director of the authority) and the technical director of operations position (Figure 6). With the exception of the directors of operations, there is clearly a better representation of women in the middle management level (27–46%). This is particularly true in the business area community broadcasting which together with the legal directorate positions almost achieves gender balance (46% female proportion).

The representation of women in leading and decision-making positions differs significantly between the 14 SMAs (Figure 7). In Saxony (SLM) as well as in the SMA of Hamburg/Schleswig-Holstein (MA HSH) not a single woman fills a leading and decision-making position. At the other end of the spectrum are the SMAs of Berlin-Brandenburg (mabb), Hesse (LPR), and Mecklenburg-West Pomerania (mmv), with female proportions between 50% and 67%.

For all *Länder media councils* of the 14 SMAs (Figure 8) we find an average female proportion of 32%. The individual proportions differ significantly between the Länder media councils.

With the exception of Berlin-Brandenburg, all media state laws contain a statutory provision on female representation on the media council of each SMA. Still, the media council of the Berlin-Brandenburg SMA (mabb) has a proportion of 57% female members—the highest of all Länder media councils. It is interesting, in this context, to note that mabb's media council members—in contrast to all others—are not appointed from socially relevant groups; they are elected by the Berlin City Parliament and the Parliament of Brandenburg.

Figure 6
Share of Women in all 14 State Media Authorities (SMA) by Position (No Regulation)

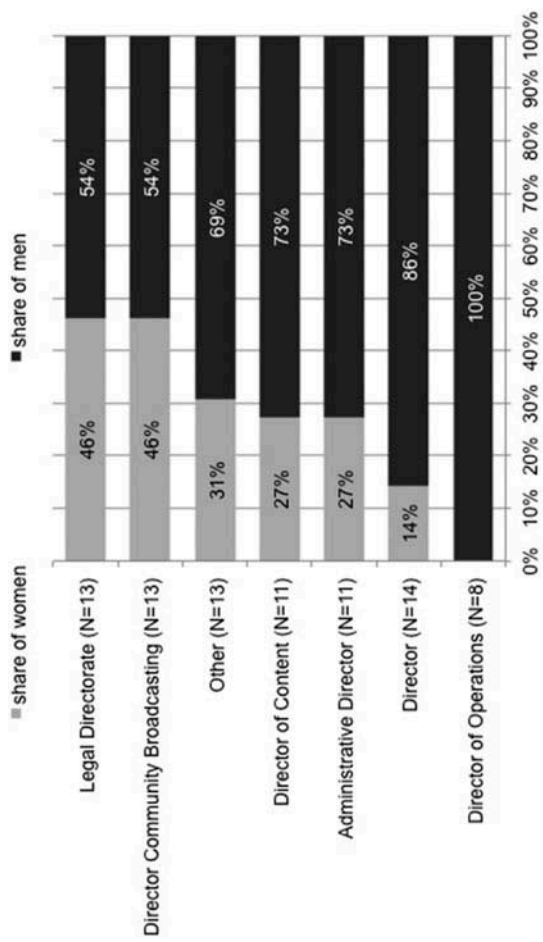


Figure 7
Share of Women in the 14 State Media Authorities (SMA) by Authority (No Regulation)

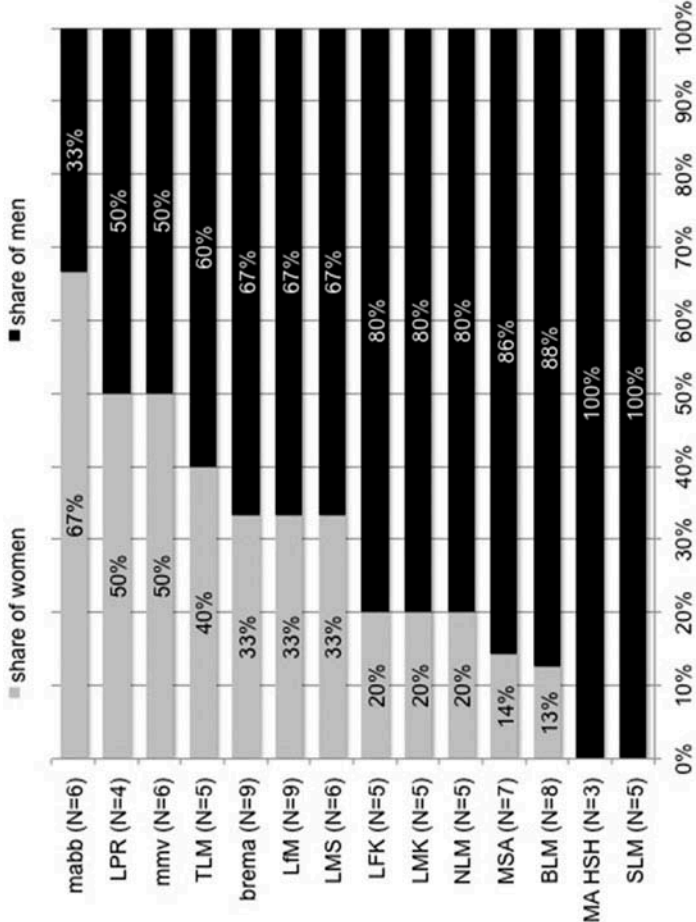
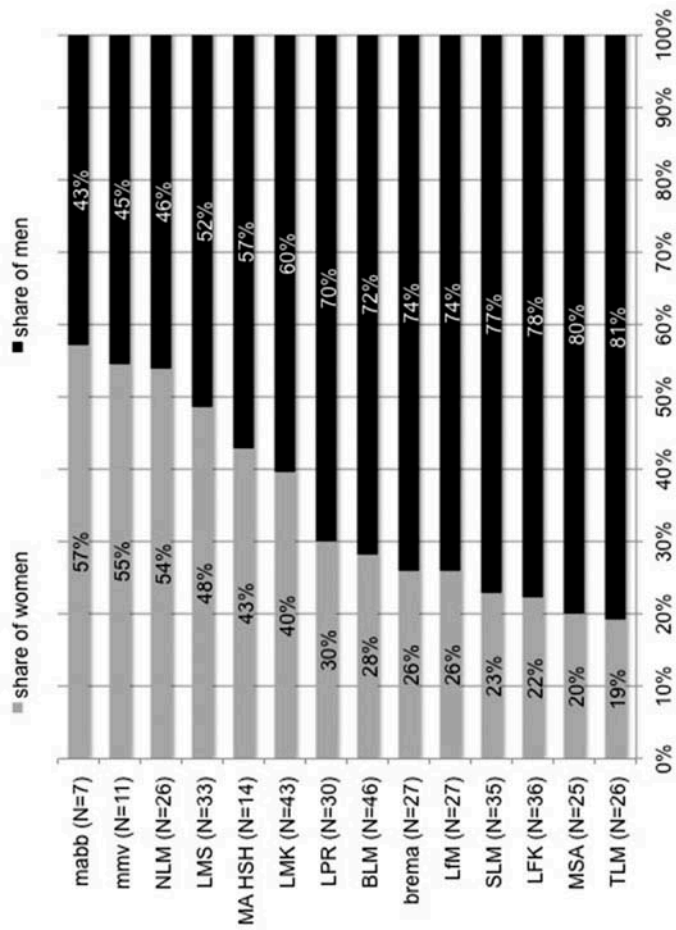


Figure 8
Share of Women on the Länder Media Councils of the 14 SMAs



The media councils of the SMAs of Mecklenburg-West Pomerania (mmv) and Lower Saxony (NLM) also attain a female proportion higher than 50%. This is quite surprising, given that their media laws contain fairly vague regulations on gender-balanced compositions in the media councils. Lower Saxony's state media law also stipulates a zipper quota: Organizations and groups that appoint a member shall alternately send a man or a woman in the case of a planned member change. Organizations and groups that delegate two members must send a woman and a man. If these regulations are not fulfilled, the media council's chairman must be informed of the reasons in writing (Niedersächsisches Mediengesetz, 2010, § 39(4)). Mecklenburg-West Pomerania's media law contains a similar regulation (Rundfunkgesetz für das Land Mecklenburg-Vorpommern, 2015, §52(2)).

The media councils of Saarland (LMS) and Hamburg/Schleswig-Holstein (MA HSH) achieve female proportions of just below 50%—although Saarland's media law contains no passage on the female composition of its media council and Hamburg/Schleswig-Holstein's law only requires "adequate consideration" of women and "gender-balanced candidate proposals" for the appointment of media councils (Staatsvertrag über das Medienrecht, 2011, § 41(1), §42(2)).

The council of Rhineland-Palatinate (LMK) has a female proportion of 40%. In Rhineland-Palatinate's law, the specified groups are called to "increasingly nominate women;" in addition, replacements of members must be of the (respective) opposite gender (Landesmediengesetz Rheinland-Pfalz, 2013, § 40(4)).

We found a considerably lower female proportion on the media council of the SMA of Hesse (LPR) (30%). Just like Hesse's broadcasting law for public broadcasting, the media law for private broadcasting does not contain any statutory provisions regarding women's representation on Hesse's media council. In contrast to that of Hesse, the media law for the Bavarian SMA (BLM) contains a precise quantitative regulation (similar to the law for the Bavarian public broadcaster BR), but the required quota of women (five; 11%) is very low. Beyond that, the law requires that the delegating groups "work towards equal participation of women and men" on the media council (Gesetz über die Entwicklung, Förderung und Veranstaltung, 2015, Art. 13). This has failed, since the female proportion on the council is only 28%, although it is more than the prescribed quota of 11%.

The law of Bremen's SMA (brema) includes a precise 50:50 regulation, but only for appointment onto the media council. Furthermore, it states that a male member should be followed by a female one (in the following term of office), and vice versa (Bremsches Landesmediengesetz, 2012, §50a(3)). This leads to a female proportion of 26%.

The SMA of North-Rhine-Westphalia (LFM) reaches the same proportion (26% women). Its law requires that the specified groups must consider women and men alternately with each term. Eight members are appointed by the state parliament, of which at least three must be female (Landesmediengesetz Nordrhein-Westfalen, 2014, § 93(2), (7)).

The situation on the media councils of the SMAs of Saxony (SLM), Baden-Württemberg (LFK), and Saxony-Anhalt (MSA) is even worse (23%, 22%, 20%). For these media councils with a (very) low proportion of women, we can also show a

connection between this low proportion and the legal regulation on women's representation: Saxon's media law for private broadcasting as well as Baden-Württemberg's media law only contain vague phrasings concerning the "adequate consideration" of women (Gesetz über den privaten Rundfunk, 2015, § 29(1), Landesmediengesetz Baden-Württemberg, 2016, §41(3)). The media law of Saxony-Anhalt (MSA) makes no statutory provision on the gender composition of the media council.

The legal regulation for the SMA of Thuringia (TLM), which has a media council with only 19% women, is fairly unusual. It states that during the appointing process, the council must "work towards" the "adequate consideration" of women. Should fewer than five women be present on the council, the council members shall appoint, in consultation with women's organizations, as many women as it takes to make it five female members. These women shall represent working women, particularly women actively involved in education (Thüringer Landesmediengesetz, 2008, § 45(4)). What "women actively involved in education" means (does it include a female parent, for instance) is not specified. In our view, this (gendered) limitation itself is problematic; comparable limitations do not exist for men.

Discussion: The More Precise the Law, the More Women "in Power"?

Our results show that women in public and private broadcasting in Germany are still clearly underrepresented in leading and decision-making (administrative management) positions as well as in supervisory bodies and broadcasting councils. Considering the latter, this is very surprising, given that equal opportunity regulations have long existed in the broadcasting sector and have sought to foster a better women's representation in the various bodies and councils.

For the public broadcasting organizations of ARD, ZDF, and DW, we found female proportions in all decision-making positions beyond editorial business areas (intendants and all types of directors—legal, technical, etc.) of 23%, 32% on the respective broadcasting councils, and 30% on the administrative councils.

In the private broadcasting corporations we examined, women are represented with an average proportion of just 17% in leading and decision-making positions beyond editorial departments. This is beyond the various proportions at public broadcasting organizations. In the respective positions of the SMAs for private broadcasting corporations, the female proportion is higher than in the private broadcasting stations: Females have a 29% proportion of the leading and decision-making positions across the 14 SMAs, and a 32% proportion on their various media councils.

What is striking is that female representation on the public and private broadcasting and media councils—institutions regulated by law—is higher on average than in the leading and decision-making top positions of the actual broadcasting corporations and organizations (where there are no statutory provisions on gender

quotas and/or proportions). Therefore, the reasons for higher female proportions on councils could either be the existing legal regulations on concrete gender quotas on those councils, or the fact that some council members are recruited from the parliaments, which have a comparatively high female proportion. In general, we can gather from our results that the more precise and strict the regulation and the higher the quantitative requirements, the higher is the proportion of female representation.

Our case study also shows that equal opportunity laws and regulations in the broadcasting sector do not automatically and in every case lead to more women in decision-making positions on supervisory and administrative bodies. The analysis showed that a regulation's wording is a determining factor. We revealed how regulations subtly undermine equal opportunity and equal treatment measures simply through vague *may*, *shall*, and *ought to* formulations in the laws. These formulations are the result of (political) compromises with conservative positions during the various legislative procedures. This also applies to strict but non-binding regulations without any further consequences (sanctions) when not fulfilled; clearly, they do not work. Such non-binding regulations create significant problems for attempts to further increase female representation in decision-making and supervisory positions in the broadcasting sector: The officials in charge can always claim that the law in question respects female advancement and affirmative action while, at the same time, nothing changes. This is a perfect scenario to explain how and why existing legal measures designed to help women advance fail and why it is apparently better to dispense with any equal opportunity/treatment regulation than to act on the basis of a non-binding wishy-washy policy on gender issues lacks any mandatory aspect.

At the outset, we proposed that public institutions in particular should show a capacity for innovation and set an example. If the legislative authorities responsible for public institutions fail to deal with what is preventing public institutions from doing more concerning gender balance, for instance, via negotiated agreements and sanctions, then what does "regulated by law" mean?

Equalizing the representation of adequately and equally qualified women in decision-making positions of organizations and corporations, increasing their representation in political and social decision-making processes in general, and sharing power equally between (equally qualified) men and women are the prerequisites for the prospering of democracy in Europe. Therefore, we call for stronger and stricter efforts concerning the continuous monitoring and evaluation of the effect(s) of existing affirmative action, equal opportunity, and/or equal treatment laws/regulations in the regulated broadcasting sector. Our analysis suggests that such efforts need to implicitly include a critical and accurate analysis of the various laws' wordings and their application and implementation in practice. Further studies might overcome the present study's limitations and might lead to a deeper understanding of the process and its challenges through triangulation: quantitative data, analysis of laws, and in-depth interviews with council members, with organizations/groups they represent or with expert advocates for affirmative action and quota regulation. Further research could also investigate on the history of the

legislative compromises that led to respective laws, regulations, and policies. Furthermore, acknowledging the particular problems and circumstances of policy implementation and formation might allow a broader contextualization of the issue within literatures on policy studies, and especially studies of policies for gender equity. Particularly, we need international studies which compare circumstances and data across countries.

Endnotes

- 1 This report ranks countries according to their ability to close the gender gap in four fundamental categories: economic participation and opportunity; educational attainment; political empowerment; health and survival.
- 2 To avoid any misunderstandings: Where existing, gender sensitive affirmative action/anti-discrimination laws can only be applied and executed to candidates who, in comparison with their competitor(s), are equally educated, just as educated as required, or better educated than required or than their competitor(s). The very same anti-discrimination law(s) sanction(s) any breach of this strict rule. At least, this is the case in most EU countries and also includes quota regulations.
- 3 TV market shares in Germany: The four most successful TV broadcasters are ZDF (public) (13.3%), ARD/Das Erste (public) (12.5%), RTL (private) (10.3%), and SAT1 (private) (8.1%). Radio market shares: private radios 11.83 million listeners per hour; public radio (ARD only; ZDF is not allowed to offer radio programs) 11.71 million listeners per hour. Source: AGF/GfK Statista 2015, <http://de.statista.com/statistik/daten/studie/214350/umfrage/marktanteile-der-tv-sender-in-deutschland/>
- 4 International comparative studies of anti-discrimination/affirmative action/equal pay laws and regulations are very rare owing to fundamental differences between the various national systems of regulation, and labor market legislation in particular. One of the very rare examples is Gunderson's (1994) comparative description and analysis of general gender-equity laws in Australia, Canada, the UK, and the U.S.
- 5 After the BBC, the world's second largest (non-profit) public broadcaster (in terms of budget as well as employees, of which there are 23,000).
- 6 Second German Television; non-profit institution founded by the German federal states by federal treaty.
- 7 In Germany, only the 16 Länder/states have legislative competence for broadcasting laws, not the federal government. However, agreements between two or more states are possible as interstate treaties.
- 8 Deputy positions have generally not been included since, in most cases, the deputy director/intendant is also director of another business unit.
- 9 That is, for example, two out of six positions filled with women makes a female proportion of 33%; with only one woman more (three out of six), a fifty-fifty gender balance would be achieved.

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References

- AGF/GfK Fernsehforschung. Marktanteile der AGF- und Lizenzsender 2013 [TV Scope TV panel. Market Shares of AGF- and Licensed Private Commercial Broadcasters 2013] (2014). Retrieved from <http://www.agf.de/daten/tvdaten/marktanteile?name=marktanteile>
- ARD. Rundfunkrat [broadcasting council]. (2014). Retrieved from <http://www.ard.de/home/intern/fakten/abc-der-ard/Rundfunkrat/456538/index.html>
- Arkkelin, D., & Simmons, R. (1985). The "good manager:" Sex-typed, androgynous, or likable? *Sex Roles*, 12, 1187–1198.
- Bremisches Landesmediengesetz (BremLMG). (2012). [State media law Bremen]. Retrieved from <http://www.bremische-landesmedienanstalt.de/brema/rechtsgrundlagen/gesetze.html>
- Charter of Fundamental Rights of the European Union. (2007). *Article 23 – Equality between women and men. Official Journal of the European Union C 303/01*. Retrieved from <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1460374375381&uri=CELEX:12007P/TXT>
- Cishecki, M. (2002). *Co-regulation: A new model of media regulation*. Paper presented to the expert group meeting on participation and access of women to the media, and the impact of media on, and its use as an instrument for the advancement and empowerment of women, Division for the Advancement of Women (DAW) of the United Nations, Beirut (Lebanon), November 12–15, 2002 (EGM/MEDIA/2002/EP.3). Retrieved from <http://www.un.org/womenwatch/daw/egm/media2002/reports/EP3Cishecki.PDF>
- Deutsche-Welle-Gesetz [Deutsche-Welle-law]. (2004). Retrieved from <http://www.dw.com/poppups/pdf/1275486/dw-gesetzpdf.pdf>
- die medienanstalten. (2014). *Jahrbuch 2013/2014. Landesmedienanstalten und privater Rundfunk in Deutschland*. Berlin: Vistas Verlag. Retrieved from http://www.die-medienanstalten.de/fileadmin/Download/Publikationen/ALM-Jahrbuch/Jahrbuch_2014/Jahrbuch_2013-14_Druckversion.pdf
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109, 573–598.
- European Commission. (2012). *Progress on equality between women and men in 2011. A Europe 2020 initiative*. Luxembourg: Publications office of the European Union. Retrieved from http://ec.europa.eu/justice/gender-equality/files/progress_on_equality_between_women_and_men_in_2011.pdf
- European Commission. (2013, 25 January). *Regulatory pressure gets the ball rolling: Share of women on company boards up to 15.8% in Europe*. European Commission press release (Reference: IP/13/51). Retrieved from http://europa.eu/rapid/press-release_IP-13-51_en.htm
- European Commission Research Directorate-General. (2000). *Science policies in the European Union—Promoting excellence through mainstreaming gender equality*. A report from the ETAN expert working group on women and science. Luxembourg: Office for official publications of the European communities. Retrieved from ftp://ftp.cordis.europa.eu/pub/improving/docs/g_wo_etan_en_200101.pdf
- Fröhlich, R., & Holtz-Bacha, C. (1995). *Frauen und Medien. Eine Synopse der deutschen Forschung [Women and media. A synopsis of German research]*. Opladen: Westdeutscher Verlag.
- Gesetz über den Hessischen Rundfunk vom 2. Oktober 1948 [Law on public broadcasting of Hesse from October 2, 1948]. (2010). Retrieved from http://www.hr-online.de/website/derhr/home/download.jsp?key=standard_document_852480&row=0&rubrik=2558
- Gesetz über den privaten Rundfunk und neue Medien in Sachsen (Sächsisches Privatrundfunkgesetz SächsPRG). (2015). [Law on private broadcasting and new media in Saxony]. Retrieved from <http://www.slm-online.de/wp-content/uploads/2015/05/saechsprg.pdf>

- Gesetz über den Westdeutschen Rundfunk Köln [Law of the public West German Broadcasting Corporation Cologne]. (2011). Retrieved from http://www1.wdr.de/unternehmen/organisation/rechtsgrundlagen/rechtsgrundlagen_gesetz100.pdf
- Gesetz über die Entwicklung, Förderung und Veranstaltung privater Rundfunkangebote und anderer Telemedien in Bayern (Bayerisches Mediengesetz - BayMG) [Law on developing, promoting and operating private broadcasting programs and other telemedia in Bavaria]. (2015). Retrieved from https://www.blm.de/files/pdf1/BayMG_2015-Dezember.pdf
- Gesetz über die Errichtung und die Aufgaben einer Anstalt des öffentlichen Rechts "Der Bayerische Rundfunk" (Bayerisches Rundfunkgesetz – BayRG) [Law on the formation and tasks of the public broadcaster "Bavarian Broadcasting Station"]. (2012). Retrieved from <http://www.br.de/unternehmen/inhalt/organisation/bayerisches-rundfunkgesetz100.html>
- Gottfried, H., & O'Reilly, J. (2002). Re-regulating breadwinner models in socially conservative welfare regimes: Comparing Germany and Japan. *Social Politics*, 9, 29–59.
- Gunderson, M. (1994). *Comparable worth and gender discrimination: An international perspective*. Geneva and Washington, D.C.: International Labour Office.
- Hausmann, R., Tyson L. D., Bekhouche, Y., & Zahidi S. (2013). *The global gender gap report 2013*. Cologny/Geneva: World Economic Forum. Retrieved from http://www3.weforum.org/docs/WEF_GenderGap_Report_2013.pdf
- Heilman, M. E., Block, C. J., Martell, R. F., & Simon, M. C. (1989). Has anything changed? Current characterizations of men, women, and managers. *Journal of Applied Psychology*, 74, 935–942.
- Holtz-Bacha, C. (1990). Frauen—gesellschaftlich relevant? Bei der Rundfunkaufsicht bleiben die Männer weitgehend unter sich [Women—socially relevant? At the supervisory boards for broadcasters men are still dominating]. *Medium*, 20, 66–67.
- Keil, S. (2000). *Einsame Spitze? Frauen in Führungspositionen im öffentlich-rechtlichen Rundfunk* [Lonely at the top? Women in leading management positions at public broadcasting]. Münster: LIT.
- Landesmediengesetz Baden-Württemberg [Media law of Baden-Württemberg]. (2016). Retrieved from http://www.lfk.de/fileadmin/media/recht/LmedienG_Dezember-2015.pdf
- Landesmediengesetz Nordrhein-Westfalen [Media law of North Rhine-Westphalia]. (2014). Retrieved from <http://www.lfm-nrw.de/medienrecht/landesmediengesetz-nrw.html>
- Landesmediengesetz Rheinland-Pfalz [Media law of Rhineland-Palatinate]. (2013). Retrieved from http://www.lmk-online.de/fileadmin/user_upload/Bilder/01_Die_LMK/06_Rechtsgrundlagen/Landesmediengesetz_2013.pdf
- Lauzen, M. M., & Dozier, D. M. (1999). The role of women on screen and behind the scenes in the television and film industries: Review of a program of research. *Journal of Communication Inquiry*, 23, 355–373. doi:10.1177/0196859999023004004
- Libertus, M. (2004). Essential aspects concerning the regulation of the German broadcasting system. Historical, constitutional and legal outlines. *Working Papers of the Institute for Broadcasting Economics*, No. 193. Retrieved from [http://www.rundfunk-institut.uni-koeln.de/de/startseite/publikationen/arbeitspapiere/kategorien-der-arbeitspapiere/einzelsicht-rundfunkfinanzierung/?tx_news_pi1\[news\]=3259&cHash=78b13f7785234dd5cba42212b042c03c](http://www.rundfunk-institut.uni-koeln.de/de/startseite/publikationen/arbeitspapiere/kategorien-der-arbeitspapiere/einzelsicht-rundfunkfinanzierung/?tx_news_pi1[news]=3259&cHash=78b13f7785234dd5cba42212b042c03c)
- Mediengruppe RTL Deutschland. (2014). Management der Mediengruppe RTL Deutschland [The management of Media Group RTL Germany]. Retrieved from http://www.medien-gruppe-rtl.de/de/pub/ueber_uns/management.cfm
- NDR-Staatsvertrag [NDR state treaty]. (2005). Retrieved from https://www.ndr.de/der_ndr/unternehmen/staatsvertrag100.pdf
- Neumark, D., & Stock, W. A. (2006). The labor market effects of sex and race discrimination laws. *Economic Inquiry*, 44, 385–419. doi:10.1093/ei/cbj034
- Niedersächsisches Mediengesetz (NMedienG) [Media law of Lower Saxony]. (2010). Retrieved from <http://www.nlm.de/42.html>

- Powell, G. N., & Butterfield, D. A. (1994). Investigating the "Glass Ceiling" phenomenon: An empirical study of actual promotions to top management. *Academy of Management Journal*, 37, 68–86. doi:10.2307/256770
- ProSiebenSat.1 TV Deutschland GmbH. (2014). Die deutsche Sendergruppe der ProSiebenSat.1 Group [The German broadcasting group of ProSiebenSat.1 Group]. Retrieved from <http://www.prosiebensat1.de/page/konzernstruktur>
- Radio Bremen Gesetz [Law of Radio Bremen]. (2014). Retrieved from <http://www.radiobremen.de/unternehmen/organisation/gesetz100.pdf>
- Rundfunkgesetz für das Land Mecklenburg-Vorpommern [Broadcasting law of Mecklenburg-West Pomerania]. (2015). Retrieved from <http://www.medienanstalt-mv.de/media/law/48/attachment.pdf>
- Saarländisches Mediengesetz. [Media law of the Saarland]. (2013). Retrieved from http://www.lmsaar.de/wp-content/uploads/2014/01/l_2_SMG.pdf
- Schein, V. E. (1973). The relationship between sex role stereotypes and requisite management characteristics. *Journal of Applied Psychology*, 57, 95–100.
- Schein, V. E. (2001). A global look at psychological barriers to women's progress in management. *Journal of Social Issues*, 57, 675–688.
- Schulz, W., Held, T., & Dreyer, S. in cooperation with Wind, T. (2008). *Regulation of broadcasting and internet services in Germany. A brief overview*. Retrieved from http://www.hans-bredow-institut.de/webfm_send/124
- Staatsvertrag über das Medienrecht in Hamburg und Schleswig-Holstein (Medienstaatsvertrag HSH) [State treaty of the media law in Hamburg and Schleswig-Holstein]. (2011). Retrieved from http://www.mahsh.de/cms/upload/downloads/Rechtsvorschriften/1.1_MStV_HSH_Internet.pdf
- Staatsvertrag über den Mitteldeutschen Rundfunk (MDR) [State treaty of the public broadcasting corporation of Central Germany] (1991). Retrieved from <http://www.mdr.de/presse/unternehmen/download1278.html>
- Staatsvertrag über den Südwestrundfunk [State treaty on the public Southwest Broadcasting Corporation]. (2013). Retrieved from http://www.swr.de/-/id=12673462/property=download/nid=7687068/l3e12x/staatsvertrag_ueber_den_suedwestrundfunk.pdf
- Staatsvertrag über die Errichtung einer gemeinsamen Rundfunkanstalt der Länder Berlin und Brandenburg [State treaty on the formation of a public broadcasting corporation of the states Berlin and Brandenburg]. (2013). Retrieved from https://www.rbbonline.de/content/rbb/rbb/unternehmen/der_rbb/struktur/grundlagen/rbb_staatsvertrag.file.html/140121-rbb_StV2013.pdf
- The Media Authorities—Profile. (2014). Retrieved from <http://www.die-medienanstalten.de/en/profile.html>
- Thüringer Landesmediengesetz [Media law of Thuringia]. (2008). Retrieved from http://www.tlm.de/tlm/die_tlm/rechtsgrundlagen/gesetze/thueringer_landesmediengesetz/
- Weichselbaumer, D. (2004). Is it sex or personality? The impact of sex stereotypes on discrimination in applicant selection. *Eastern Economic Journal*, 30, 159–186.
- Weischenberg, S., Malik, M., & Scholl, A. (2005). Journalismus in Deutschland [Journalism in Germany]. *Media Perspektiven*, 7, 346–361.
- ZDF-Staatsvertrag [ZDF state treaty]. (2009). Retrieved from <http://www.zdf.de/ZDF/zdfportal/blob/26073604/1/data.pdf>
- Zoonen, L. v. (1994). *Feminist media studies*. London, Southand Oaks (CA) and New Delhi: Sage.



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Twitter Use During TV: A Full-Season Analysis of #serviziopubblico Hashtag

Luca Rossi^{1b} and Fabio Giglietto^{1b}

Several recent reports pointed out how the practice of using a “second screen” while following a television program is becoming an increasingly widespread phenomenon. When the secondary device is used to read or to comment about a watched program, most of the discussion takes place on popular social media such as Facebook and Twitter. Previous research has shown that the analysis of these contents could lead to a better understanding of the behavior of networked publics and of the structure of the show itself. Nevertheless most of the existing research is focused on the content only and focused on a single episode analysis or on big media events. Leveraging this background, this article presents instead a study focused on the relationships between content and users across an entire airing season of a TV program. Through a quantitative network analysis of the tweets produced during 25 episodes of the Italian political talks show Servizio Pubblico, we identified a small loyal group of viewers. Despite the differences in quantity of content produced, the loyal viewers do not show any sign of forming a community-like structure. We also performed a qualitative analysis of the tweets produced during one specific episode and discussed the elements of the TV show that generated the higher level of engagement on Twitter.

TV audience practices have always been characterized by meaningful social interactions taking place before, during, and after the show (Katz & Lazarsfeld, 1955). Nevertheless, this social side of TV has never been more visible than today. Thanks to the convergence between mass and social media, audience interaction with TV content has reached an unprecedented level both in terms of volume and visibility. In this article, we discuss how Twitter is used as a second screen to communicate and comment on a TV show (specifically, a political talk show). The practice of using a second digital

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Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/hbem.

device while watching television is becoming a widespread phenomenon worldwide. In 2012, 88% of U.S. tablet owners and 86% of U.S. smartphone owners said they used their device while watching TV (Nielsen, 2012) and more recently in Italy (where the data for this study have been collected) 40% of Internet users engaged with social TV activities at least once a month (Marinelli & Andò, 2014) and 2.6 million TV related tweets were created during the month of September 2014 (Nielsen, 2014). While these practices can clearly be framed within the larger concept of complementary simultaneous media use (Han & Lee, 2014), Twitter-specific practices have been explored extensively both in terms of what kind of content is produced during these activities and in terms of what social relations are established—through these communications—between the viewers and between the audience and the TV show.

Despite the fact that the literature about the Twitter-based second screen, and specifically social TV, is flourishing, a systematic study focusing on an entire season of a show is still missing and the largest part of the existing research focuses on the analysis of commentaries created during single episodes of a TV program (Doughty, Rowland, & Lawson, 2012) or of big and unique TV events (Highfield, Harrington, & Bruns, 2013).

While this has undoubtedly produced relevant results, we claim that some of the open questions can be fully answered only through large longitudinal studies that allow researchers to look beyond contents and observe the slow emergence of communities of contributors while avoiding possible distortions due to the specific nature of unique media events (Dayan & Katz, 1992).

This study attempts to fill this gap investigating, with longitudinal data, to what extent viewing and tweeting about a political talk show can generate over time the emergence of community-like structures among active viewers. At the same time, we are addressing the question of whether this ongoing online conversation is mainly a comment on what is happening on the TV screen or if the TV content works as a trigger for more autonomous debates. On these premises, we formulated the following research questions:

- RQ₁: Given a full season of a TV show, is it possible to identify a group of loyal social-TV viewers? Is this group of loyal participants behaving differently from a more casual audience?
- RQ₂: Is the Twitter conversation mainly made of comments about what is happening on the TV show or, on the contrary, do topics raised by the TV show ignite autonomous debates?

In order to answer these questions, we focused—as described in the methodology section—on the Italian political talk show *Servizio Pubblico* aired on La7 from October 26, 2001 to June 30, 2011.

The article is structured as follows: first we introduce the relevant theoretical background for Twitter based social TV, then we introduce the specific TV show we are using for the research, finally we present and discuss the data.

Background and Related Works

As pointed out by Deller (2011), Twitter based research on second screen practices lies at the intersection of several research traditions. Tweeting while watching TV can be described as a form of social and active participation with media products. This kind of active participation has been described by Carpentier (2011), Jenkins (2006), and by the early work of Dayan and Katz (1992), but in addition to these forms of mediated participation, Twitter use seems characterized by the emphasis on its "liveness" (Couldry, 2004; Deller, 2011; Jenkins, 2009).

The concept of liveness underlines the idea of media as a social frame for a common experience and Twitter, within this perspective, offers the socio-technical platform to participate live in this moment (Deller, 2011). Bourdon's (2000) originally defined *liveness* as the audience "watching the same event at the same time as everyone else." Twitter social TV makes this liveness visible: Users are not only watching the same event at the same time but also can take part in a conversation that goes well beyond their living room (D'heer & Courtois, 2014). These aspects are largely emphasized by Twitter Inc. itself when it openly admits to focusing its attention on live TV experience (Goldman, 2011). Scholars observed that the live aspect of this activity constitutes the core element that engages the users in a communal discussion (Harrington Highfield, & Bruns, 2012). Using a hashtag, Twitter users can address the entire community of viewers outside of the single user's network of followers (Brunns & Burgess, 2011).

Despite these considerations the available literature, mainly based on empirical research, appears to be in an early stage of development with several exploratory studies often not referencing each other, even when dealing with the same television program. Most of these studies have focused on the analysis of tweets produced during the airtime of popular live TV events, such as sport competitions, political debates, and popular entertainment. Recently Highfield and colleagues (2013) showed how the analysis of the Twitter backchannel during the 2012 edition of the Eurovision song contest revealed the intersection between a general transient audience of the show and specific loyal fan communities. On a more comparative perspective, Doughty et al. (2011) analyzed the distribution of a Tweet's length belonging to two different corpuses of data retrieved using the official hashtags of two popular UK programs: *The X Factor* and *BBC Question Time*. Although the analysis may be biased by the frequency of retweets in the corpus, it is interesting to note that even a simple descriptive statistical approach may reveal interesting insights into the behavior of participatory audiences. The prime time show *The X Factor* also attracted the interest of other researchers. In an exploratory study, Lochrie and Coulton (2012) analyzed the frequency over time of tweets sent by mobile devices containing the #xfactor hashtag, observing a correlation between the level of interaction among Twitter viewers and the narrative of the show. This finding is confirmed by a similar study that attempted an automatic topic segmentation of the 2008 U.S. presidential debate based on the terms used by commenters on Twitter.

The pattern of segmentation obtained by this model was compared with the manual segmentation of the event performed by the editors at C-SPAN resulting in a high level of accuracy (Shamma, Kennedy, & Churchill, 2009). The conclusions of this study highlight the importance of going beyond quantitative analysis focusing on the actual content of the Tweet. While the amount of data available often discourages attempts to employ approaches based on manual coding, Wohn and Na successfully compared two datasets of tweets retrieved respectively during the airing of President Obama's Nobel Prize speech and an episode of the talent show *So You Think You Can Dance* (Wohn & Na, 2011).

Twitter-based audience research often implies the existence and the visibility of community-like structures of users defined by a shared media-based experience. These communities are perceived as potentially different from the classical concept of community that has been widely studied in network analysis (Fortunato, 2010) and are defined by interactions and connections among the viewers/commenters. These Twitter-based communities can be defined and interpreted using two different approaches that define the network to be analysed. A first approach—that we will define as the structural approach—uses the nodes of the network to represent the Twitter users while users' relationships of following and follower are represented as directed edges connecting the nodes (Doughty, Rowland, & Laswon, 2012; Kwak, Lee, Park, & Moon, 2010). A second approach—that we will define as the topical approach and which we are adopting in this article—looks at users participating in a common space of mutual visibility defined by a shared hashtag (Bruns & Burgess, 2011). In this common space users are represented as the nodes of the network and Twitter messages, based on mentions, replies, and retweets, are represented as the edges connecting the nodes. While both approaches can provide valuable information about Twitter users, the topical approach seems to be more suitable to explore second screen practices and it has recently been used to show how different TV genres produce different networks of interactions. Doughty and colleagues (2012) showed how viewers of celebrity-oriented shows use Twitter as a way to connect with the celebrities through mentions and retweeted messages while the audience of current affairs shows interacts more with other viewers and engages in more complex debates. In another relevant paper, Rossi and Magnani (2012) pointed out the effects of the online conversations happening on the topical networks, on contributors' structural networks.

Despite the promising nature of this research, they are all based on the analysis of temporally limited datasets. This limit makes it difficult to say if and to what extent the observed phenomena could be different in a longitudinal perspective.

Servizio Pubblico: Media Evolution and Political Power

Before we move into the analysis of Twitter data, it is necessary to briefly introduce *Servizio Pubblico*, the Italian political talk show we are using for our analysis. Although in many aspects *Servizio Pubblico* is a classical example of an Italian

political talk show, aired on a weekly basis and mainly focused on discussing current affairs, it also had a specific political and social value that deserves to be explained. To fully understand the role played by *Servizio Pubblico* within the contemporary Italian media scene, its large political implications, and the many aspects of groundbreaking innovation that it presents, it is necessary to frame the show and its host, the popular journalist Michele Santoro, within the larger picture of the Italian television system and its connections with the political system.

Michele Santoro is an openly left-wing supporter, and his rhetoric led to his great success and created many critics throughout his career. In 2002 Prime Minister Silvio Berlusconi, during a press conference in Bulgaria, said that Santoro and two other well-known characters of Italian television were engaging in a “criminal use of the public broadcasting service and that it was a responsibility of RAI’s management to prevent this.” Consequently RAI’s management cancelled Michele Santoro’s show and the journalist sued RAI for unfair dismissal. In 2005 he won the case and went back on the air in 2006—when a new government, headed by Romano Prodi, was leading the country.

In 2010, with Silvio Berlusconi leading the country for the third time, the RAI board of directors decided to stop all the news programs and political talk shows during the month leading to the local elections. Michele Santoro, supported by a large movement of public opinion, organized a crowd-funded event named *raiperunanotte* (RAI for one night) that was broadcast using a mix of local broadcasters, online platforms, and satellite broadcasters. The show was a huge success reaching, including all the broadcasters, 13% of the TV share and counting more than 125,000 online viewers.

Most likely due to this experience, Michele Santoro decided that the Italian media scenario was mature enough to host a TV show produced independently that would use, as a broadcasting strategy, a mix of local TV stations and online platforms. Therefore in 2011 Santoro decided to start the project of a political TV talk show partially funded by a public subscription, broadcast through a mix of local TV stations, Internet streaming, and satellite television (SKY Italia). *Servizio Pubblico* was therefore planned, from the very beginning, as a multi-platform product, aiming at mixing more traditional technologies (local and satellite channels) with online streaming. From a financial point of view, the show was partially crowd funded. Approximately 100,000 citizens contributed more than 1 million Euros. The first season of the show had 26 live episodes, 8 of which aired in 2011 and 19 in 2012. The initial response to the show was incredibly good for such an unusual broadcasting experiment, and the first episode reached an average TV share of 12% and more than 300,000 online viewers. During the season, the number of viewers declined reaching an average TV share of approximately 7%. Online engagement was actively fostered by the makers of the show who created an official Facebook page, Twitter account and hashtag, who routinely asked for audience opinion on topics covered by the show on Twitter and Facebook, and frequently posted highlights and excerpts of statements made by the guests. Nevertheless, social media feedback was only tangentially integrated into the structure of the show itself, mainly by means of the aforementioned audience opinion polls.

Method

During the 2011/2012 TV season, we collected—from October 26, 2011 to June 30, 2012—the tweets containing the #serviziopubblico hashtag. The resulting dataset consists of 153,492 tweets produced by 31,733 distinct users. The tweets were acquired through DiscoverText “Live standard Twitter import,” which is based on Twitter Search API. The exported dataset was then cleaned up with OpenRefine to the output format of YourTwrapperKeeper in order to use the tools developed by Bruns (2012). While spam is a common phenomenon on Twitter, we realized during the content analysis (see RQ₂ paragraph) that filtering by such a specific hashtag drastically reduced (we identified zero spam tweets out of more than eight thousand) the presence of irrelevant or unsolicited content. In addition to the tweets, we received from the producers of *Servizio Pubblico* the official scripts of the show with a minute-by-minute description of the discussed topic for every episode. (Table 1).

Following a well-established literature (Bruns & Stieglitz, 2013), we classified a Tweet as a genuine reply if it starts with the @mention of a Twitter username, as a retweet when a Tweet starts with RT (or another less common variation such as MT or via) @mention and as original tweets when it is not a @reply nor a retweet.

In order to analyze tweets published during the TV show airtime, we split the main dataset obtaining 25 (due to an outage of the acquiring platform, the tweets from one episode are missing) sub-datasets containing the messages published between 9:00 p.m. and 0:30 a.m. (Table 2.)

Table 1
Full Dataset Statistics

	<i>N</i>	%
Original tweets	79,108	51.54%
Genuine replies	13,409	8.74%
RT	60,975	39.73%
With URL	20,545	13.38%
Total	153,492	100%

Table 2
Aggregate Statistics Per Episode (n = 25)

	<i>mean</i>	<i>sd</i>
Tweets	5,207.48	2,149.42
Original tweets	2,860.2	1,153.32
RT	1,916.44	868.05
With URL	382.72	212.34
Audience	1,714,635	418,269.20
Share	7.28	1.61

Analysis

RQ₁

The first goal of the data analysis was to attempt a preliminary description of the audience not of a single episode but as a group of viewers spanning over the 25 episodes in order to verify the existence of a group of active viewers *loyal* to the show. Previous research on Twitter use during TV shows has focused mainly on the analysis of single episodes lacking the amount of data needed to provide a truly longitudinal analysis. While focusing on single episodes it is surely possible to provide useful insights on the viewers' practices, it is almost impossible to observe audience evolution over time, and it is even harder to observe the emergence of a TV-show based Twitter community.

A preliminary analysis of the full dataset of tweets leads us to the detection of the very usual skewed distribution in content production where a minority of users is responsible for the creation of a large amount of content (Bruns & Stieglitz, 2013). In our case, 1% of the users are responsible for the creation of 28% of the content. The analysis of the users and of users' production over time made it possible to identify a very small group of users ($n = 177$) that tweeted during at least half of the episodes (>12). We defined those as *core group*. This core group of viewers showed some level of twitter-based loyalty toward the show. We then defined the users that were not in the core group as *peripheral users*. The core group counts for a mere 0.78% of the total tweeting users, but it is solely responsible for 17.2% of the tweets and for 15.1% of the retweets (Table 3) scoring, on average, 5.97 tweets per episode per user.

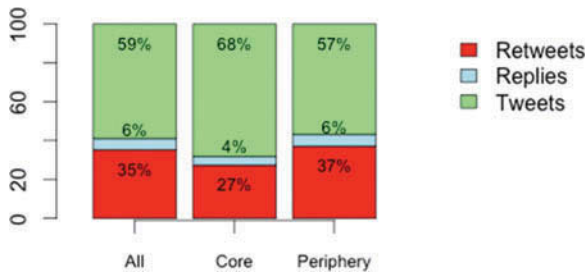
The identification of a core group of loyal users leads us to two more questions: Do members of the core group behave differently from average users? Is it possible to define the core group in terms of different practices?

Data that can be read in Table 3 and in Figure 1 show how members of the core group have almost the same level of replying and retweeting as the members of the peripheral group. When we take into consideration the conversational practices (replies and retweets) that happened during airtime, we do not observe any major difference. While the reply rate, the percentage of replies over the total number of tweets, remains almost constant, the retweets rate of the core group is slightly lower than the rate observed for peripheral users. These data indicate that, although the

Table 3
Core Group and Peripheral Group Behavior (Tweets Produced During Airing Time)

	<i>N</i>	<i>Tweets</i>	<i>Retweets</i>	<i>Replies</i>	<i>Tweets per user (mean)</i>
Core group	177	26,456	5,670	1,308	149.4
Peripheral group	31,556	127,036	31,757	6,608	4
All users	31,733	153,492	37,427	7,916	4.1

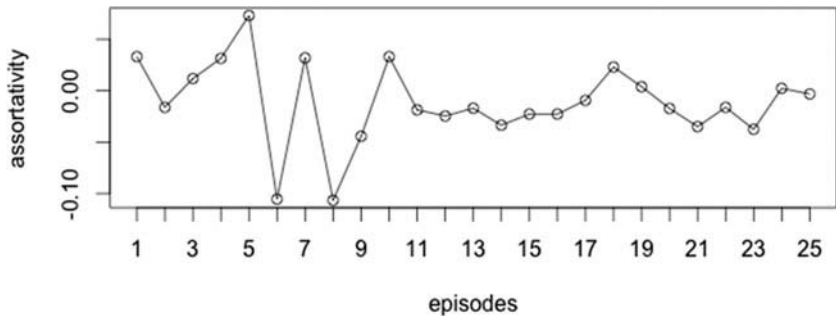
Figure 1
Division Between Tweets, Retweets and Replies per Every Group of Users.



volume of participation is extremely different, members of the core group seem to behave in a way that is not significantly different from peripheral users' behaviour. Similarity of tweeting practices suggests that despite the difference in amount of content produced, both peripheral users and core users participate in the same event adopting the same communication strategies. An indirect confirmation of this similarity can be found observing the value of assortativity for the topical network defined by both retweets and replies among the users during the entire season. Assortativity (Newman, 2002) is a network metric that measures the preference for network's nodes to be connected to others that are similar according to a given property. In our case we have measured the assortativity based on whether the nodes belonged to the core or to the peripheral group. Assortativity will be positive if similar nodes (e.g., two nodes from the core group) are mainly connected to each other. Otherwise, in case nodes from the core group are preferentially connected with nodes from the peripheral group, assortativity will have a negative value. In our network the value of 0.019 demonstrates that neither of these options is verified and there is no significant preference when it comes to node-to-node interaction. The longitudinal nature of our data allows us to test if the low value of assortativity is due to the compression of a whole season of Twitter activity into a single network. Figure 2 illustrates the assortativity level for every episode in our dataset showing how assortativity varies for every episode without following any clear path and how it is always close to zero, the value that represents the absence of assortativity.

This brought us to the question of whether the core group and the peripheral group could be observed in any other way than using their level of activity. Would it be possible, despite the several similarities in their behaviour that we have pointed out so far, that members of the core group produce, through their continuous participation to the show, any kind of community-like formation that becomes visible over time? To test this hypothesis, we followed the study on Twitter usage during TV shows realised by Doughty and colleagues (2012) and we applied community detection techniques. Following the aforementioned study, we first tried to describe the network using metrics relevant for community detection (clustering coefficient

Figure 2
Evolution of Assortativity Value Between Core Group and Peripheral Group Over 25 Episodes.



and reciprocity), then we observe if those evolve over time and finally we explore the two groups of users we have identified.

The clustering coefficient (Holland & Leinhardt, 1971), sometimes referred to as transitivity, is the measure of the probability that the nodes adjacent to a node are themselves connected: Given a node A connected to a node B and a node C, the clustering coefficient will measure the probability that B and C will be connected. Clustering coefficients are thus an indication of the degree to which nodes are tightly connected together in groups and of the size of these groups compared to the whole network. In our specific example it provides a measurement of the extent to which retweets and mentions between users define tightly connected groups.

Reciprocity, the second metric that we used, measures, in directed graphs, the probability that connections between nodes are reciprocated. In our case, this means if user A retweets or mentions user B, to what extent user B does the same.

Following what we have done before, we have observed these metrics on the *conversational network* defined by all the explicit interactions between Twitter users (replies and retweets).

Table 4 compares clustering coefficient and transitivity measures on the conversational network of all the episodes of *Servizio Pubblico* with the values measured by Doughty and colleagues (2012) on one episode on the BBC show *BBC Question Time*. These values are aligned with what was observed by Doughty and colleagues (2012) and show a remarkable difference with what was previously observed on Twitter in general (Kwak et al., 2010). The values from Table 4 show how, despite the high level of interaction between the users, there is a low level of reciprocity (therefore many unidirectional interactions) and a modest presence of tightly connected clusters of users.

The availability of longitudinal data allows us to investigate if, during the development of the season, reciprocity and clustered structures amplified, decreased, or

Table 4
Clustering Coefficient and Reciprocity for the #serviziopubblico conversational Network Compared With #bbqt Network Defined in Doughty et al. (2012)

	#serviziopubblico	#bbqt
Clust. coefficient	0.277	0.116
Reciprocity	4.46%	2.17%

remained stable. To evaluate this aspect we observed the trends of reciprocity and clustering coefficient over the various episodes. As it can be observed in Figures 3 and 4, these values changed drastically during the season but do not seem to follow any clear path or trend.

The values in Figures 3 and 4 are compared with the values measured in random graphs having the same number of nodes and edges. This allows us to point out that if, on the one side, the measured levels of clustering coefficient and reciprocity are produced by actual social phenomena (and they are not a random effect of the network structure), on the other side their value is extremely low.

The observed data also suggest that different episodes of the show produce different levels of community-like activities (clustering coefficient and reciprocity) among the users. This might be due to the topic of every episode being more or less well-suited for Twitter based discussion or comment. A more careful analysis of these data, comparing them with the topic of every episode, might provide useful information for those producers who would like to more wisely use Twitter as the platform for the future social television experience. In the last part of the analysis for RQ₁ we

Figure 3
Evolution of Clustering Coefficient Over 25 Episodes. Red Line Shows the Clustering Coefficient for a Random Graph With the Same Number of Edges and Nodes as the Corresponding Twitter Conversation Network.

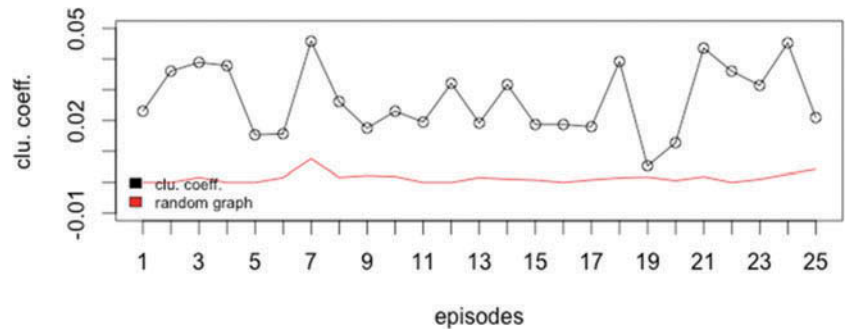
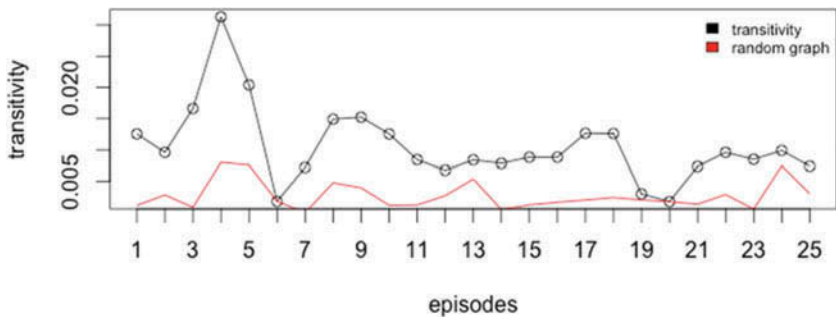


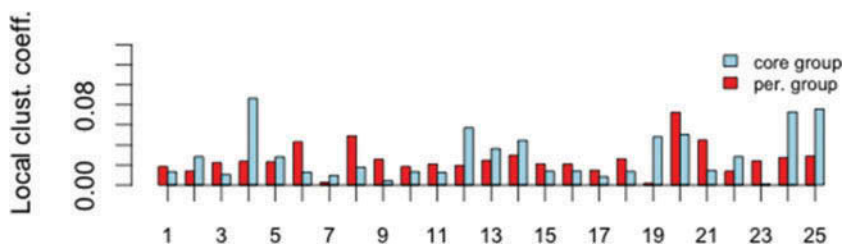
Figure 4
Evolution of Transitivity Over 25 Episodes. Red Line Shows the Transitivity for a Random Graph With the Same Number of Edges and Nodes as the Corresponding Twitter Conversation Network.



explore what is the role of the core group and of the peripheral group within the dynamic of community formation that we have explored so far.

Figure 5 shows, for each episode, the average value of local clustering coefficient for the users belonging to the core group and for those belonging to the peripheral group. Local clustering coefficient is a localized version of the clustering coefficient and it measures, per every single node in the network, how close are the node's neighbours to become a clique (a fully connected subgraph) (Luce & Perry, 1949). A consistently higher value of local clustering coefficient for the *core* or the *peripheral* group will indicate a more clustered activity performed by one of the two groups. Nevertheless Figure 5 shows no consistency with the measured values that are, depending on the episode, higher for the core group or for the peripheral group.

Figure 5
Local Clustering Coefficient Measured for the Core Group and for the Peripheral Group.



RQ₂

After the analysis of the participating users and their conversational networks, we focused on the analysis of the conversations that were taking place during the show. What was the Twitter backchannel used for? What was the function of the tweets and the expectations of the users? In order to investigate this aspect, we performed a qualitative content analysis of all the tweets produced during a single episode. The chosen episode was aired on February 23, 2012 and was titled “Celentano C’è.” The episode was structured, as usual, with a set of live interviews and hosted debates. The episode reached an audience of 1,688,000 viewers (6.71% share) and during airtime, 8,604 tweets were produced by 2,812 distinct users. All tweets have been manually coded by the two authors in order to provide a content analysis of what was tweeted about the show. The intercoder reliability, tested on a random sample of 250 tweets created during the airtime of a different episodes, was Krippendorff’s alpha > 0.7. This was then compared with the actual script of the show in order to understand how what was happening on TV influenced what was being tweeted and vice versa.

To code the tweets we decided to follow the coding matrix proposed by Whon and Na (2011) in their research on shared TV experiences via social media messages. The use of the same coding schema gives comparable results and a solid methodology. Wohn and Na’s (2011) coding schema is structured on two axes that define the message according to the topic of the message. The inbound/outbound axis defines the messages according to their points of interest that can be inside the author or outside him/her. The objective/subjective axis defines the message according to the level of subjectivity of the text.

These double axes schema produce a matrix of four possible coding options:

1. Emotion (subjective-inbound): tweets focused on personal feelings generated by what is happening on TV. Emotion tweets do not try to propose opinions but, in a more direct way, express user’s feelings toward what he/she is seeing on TV often with the use of strong words, e.g., «*Celentano I love you! #serviziopubblico*» [22:45] or «*Celentano is a jerk! #serviziopubblico*» [22:44].
2. Opinion (subjective-outbound): Opinion tweets express a subjective approach toward something that is happening on the screen. Here there is not just the simple expression of personal feeling but a more elaborated position often with the attempt to stimulate a debate or seek an answer, e.g., «*#serviziopubblico For the first time I agree with Belpietro, Am I high ?* » [22:28].
3. Attention-seeking (objective-inbound): Attention-seeking tweets explicitly target the other users by trying to grab their attention. Usually these tweets raise questions or make very provocative statements. The goal here is just to get more attention in a different way from what happens with the Opinion tweets where the construction of a debate is the final goal, e.g., «*Have I missed*

anything? Any crucial information? Always the same bung of people, right? #serviziopubblico » [00:15].

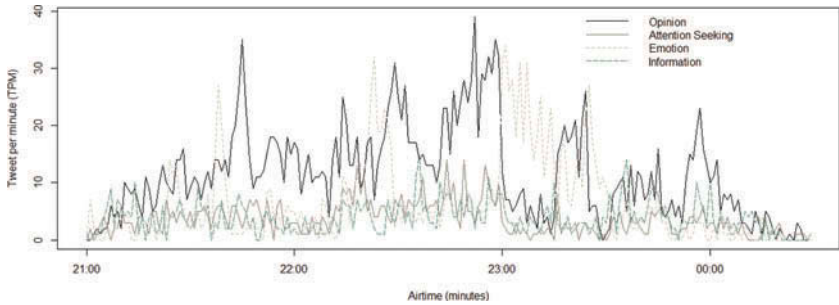
4. Information (objective-outbound): Information tweets try to provide more objective and detailed information about what is happening on TV. Usually these tweets offer some kind of live coverage or report sentences and facts. However, purely informative tweets are rare. Most of the time, information is used to give context to an opinion. This practice has been studied in previous research (Shamma et al., 2009) proposing an interesting future direction of analysis, e.g., « Marco Travaglio says "RAI seems a detached office of the Vatican" » [23:35].

The comparison between the coded tweets and the official script of the TV show allowed us to outline the actual use of Twitter as a backchannel platform. As shown in Table 5, most of the tweets were expressing opinions about the show (29.1%) followed by 14.3% of tweets that were expressing emotions. Tweets coded as Information and Attention-seeking are less frequent with respectively 9.6 and 9.2%. While these data give a rather detailed picture of Twitter usage during the whole show, it is interesting to analyse how the different usages evolved during the airing time. Figure 6 shows a detailed evolution of every kind of message during the show. It appears clear that, while the expression of opinions, as well as information and attention-seeking tweets, are spread throughout the whole show from the beginning to the end, tweets expressing emotions show a rather low baseline and two major peaks. Users react to very specific moments of the show changing their usual twitter use and switching to a more emotion-oriented use in response to specific moments, topics, or people. Superimposing the script of the show to the timeline of analyzed tweets, we observed that not only do Twitter users react in real time to what happens on the screen by changing their tweeting attitude, but also that their tweeting topics are, in most cases, almost perfectly synchronized with the topics discussed in the show. Thus, while the tweeting style may change during the show in response to

Table 5
Percentage of Codes in the Analysed Episode

<i>Coding</i>	<i>%</i>
Retweet	32.6%
Opinion	29.1%
Attention seeking	9.2%
Emotion	14.3%
Information	9.6%
Reply	4.7%
Unrelated	0.5%

Figure 6
Evolution of Every Type of Message During the Show of Feb. 23, 2012.



specific topics (or, in our case, guests), most of the commentary is synchronized with the topics that are being discussed on the show.

Conclusions

In this article we have explored the tweets collected during an entire season of a TV show. Though the main contribution of this work is to show how a longitudinal analysis of the data provides more insights into the connected audiences' behavior than what can be obtained through a punctual data collection, we have also produced minor contributions during the research process. Our analysis confirmed the existence of two different audience groups: a larger group that we have labeled peripheral group, but that could be composed by casual viewers of the show, and a smaller group, that we labeled core group, that has some level of loyalty toward the show. This core group of users is also the most active with a rate of activity even higher than the one that could be assumed, taking into account the participation inequality often found in online social networks (Stewart, Lubensky, & Huerta, 2010). At the same time we highlighted how the core group does not show a more clustered network structure nor a higher level of reciprocity. This indicates that despite the difference in the quantity of participation there are no signs that suggest a distinct type of engagement nor the emergence of a community-like structure neither for the core group or for the audience in general.

In addition to the identification of these two different groups of users, the coding of the tweets produced during one of the episodes indicated how users tend to tweet about what is going on during the TV show instead of using the Twitter space for autonomous conversation. While the kind of messages that can be tweeted varies significantly during the show, it appears clear that the essence of the social TV experience is the shared experience of a live event. Within this perspective, Twitter seems to be an enlarged living room where chatting and

commenting about what is happening on TV takes place in the very same way it was observed in early audience studies. As Deller (2011) points out, this focus on a live sharing experience emphasizes the two aspects that, according to Jenkins, describe Twitter: "Here it is" and "Here I am." "Here it is" is a moment of content sharing while "Here I am" is a moment of life sharing. Both these moments converge into social TV practice where media content is the background for a shared personal experience.

As previously noted, the analysis of an entire season of tweets about a TV program significantly extends the scope of previous similar works providing insights and information that would not have been available with a single-episode focus. The focus on active viewers' behaviour along an entire season of a show is crucial to understand the pattern of participation and therefore the reasons that push the viewer to engage with an episode. Combining the analysis of tweets created during the airtime and the patterns of engagement along the different episodes, it would be possible to classify an active viewer of a political talk show as loyal to the show or instead a political activist who engages with the show only when certain topics are discussed or political leaders are present. Moreover, the methodology proposed in this article provides a set of reusable tools and methodologies ready for similar full-season datasets in a comparative perspective (among different shows in the same TV genre, or among different genres).

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References

- Bourdon, J. (2000). Live television is still alive: On television as an unfulfilled promise. *Media, Culture & Society*, 22, 531–556.
- Bruns, A. (2012). How long is a tweet? Mapping dynamic conversation networks on Twitter using Gawk and Gephi. *Information, Communication & Society*, 15, 1323–1351.
- Bruns, A., & Burgess, J. E. (2011). *The use of Twitter hashtag in the formation of ad hoc publics*. Paper presented at 6th European Consortium for Political Research General Conference. Reykjavik.
- Bruns, A., & Stieglitz, S. (2013). Towards more systematic Twitter analysis: Metrics for tweeting activities. *International Journal of Social Research Methodology*, 16, 91–108.
- Carpentier, N. (Ed.). (2011). *Media and participation: A site of ideological-democratic struggle*. Wilmington, NC: Intellect Books.
- Couldry, N. (2004). Liveness, "reality," and the mediated habitus from television to the mobile phone. *The Communication Review*, 7, 353–361. doi:10.1080/10714420490886952
- D'heer, E., & Courtois, C. (2014). The changing dynamics of television consumption in the multimedia living room. *Convergence: The International Journal of Research into New Media Technologies*, doi:1354856514543451.

- Dayan, D., & Katz, E. (1992). *Media events: The live broadcasting of history*. Cambridge, MA: Harvard University Press.
- Deller, R. (2011). Twittering on: Audience research and participation using Twitter. *Participations*, 8.
- Doughty, M., Rowland, D., & Lawson, S. (2011). *Co-viewing live TV with digital backchannel streams*. In Proceedings of the 9th international interactive conference on Interactive television - EuroITV '11. New York, NY: ACM Press.
- Doughty, M., Rowland, D., & Lawson, S. (2012). Who is on your sofa? In *Proceedings of the 10th European conference on Interactive TV and video—EuroITV '12*. New York, NY: ACM Press.
- Fortunato, S. (2010). Community detection in graphs. *Physics Reports*, 486, 75–174.
- Goldman, D. (2011). Twitter CEO: "We're saving live TV," CNNMoney.com. Retrieved from http://money.cnn.com/2011/02/14/technology/twitter_mwvc/index.htm
- Han, E., & Lee, S. W. (2014). Motivations for the complementary use of text-based media during linear TV viewing: An exploratory study. *Computers in Human Behavior*, 32, 235–243.
- Harrington, S., Highfield, T., & Bruns, A. (2012). More than a backchannel: Twitter and television. *Audience interactivity and participation*, 13–17.
- Highfield, T., Harrington, S., & Bruns, A. (2013). Twitter as a technology for audiencing and fandom. *Information Communication Society*, 1–25. doi:10.1080/1369118X.2012.756053
- Holland, P. W., & Leinhardt, S. (1971). Transitivity in structural models of small groups. *Comparative Group Studies*, 2, 107–124.
- Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York, NY: New York University Press.
- Jenkins, H. (2009). *The message of Twitter: "Here it is" and "here I am."* Retrieved from http://henryjenkins.org/2009/08/the_message_of_twitter.html
- Katz, E., & Lazarsfeld, P. F. (1955). *Personal influence the part played by people in the flow of mass communications*. Glencoe, IL: Free Press.
- Kwak, H., Lee, C., Park, H., & Moon, S. (2010). What is Twitter, a social network or a news media? In *Proceedings of the 19th international conference on World Wide Web* (pp. 591–600). New York, NY: ACM.
- Lochrie, M., & Coulton, P. (2012). Tweeting with the telly on! 2012 IEEE Consumer Communications and Networking Conference (CCNC), (pp. 729–731), IEEE.
- Luce, R. D., & Perry, A. D. (1949). A method of matrix analysis of group structure. *Psychometrika*, 14, 95–116.
- Marinelli, A., & Andò, R. (2014). Rethinking the TV experience. *L'esperienza della Social TV in Italia*, Research report. Retrieved from http://digilab.uniroma1.it/sites/default/files/allegati_notizie/Social_Tv%20cartella_stampa_definitiva.pdf
- Newman, M. E. (2002) Assortative mixing in networks. *Physical Review Letters*, 89, 208–701.
- Nielsen. (2012). Double vision—Global trends in tablet and smartphone use while watching TV, Nielsen Wire. [nielsen-wire](http://nielsen-wire.com).
- Nielsen. (2014). *Nielsen misura la Social TV | Nielsen Europe Insights*. Nielsen Europe Insights. Retrieved from <http://www.nielseninsights.eu/articles/nielsen-misura-la-social-tv>
- Rossi, L., & Magnani, M. (2012). *Conversation practices and network structure in Twitter*. Paper presented at International AAAI Conference on Weblogs and Social Media.
- Shamma, D. A., Kennedy, L., & Churchill, E. F. (2009). Tweet the debates. In *Proceedings of the first SIGMM workshop on Social media—WSM '09*, New York, NY: ACM Press.
- Stewart, O., Lubensky, D., & Huerta, J. M. (2010). Crowdsourcing participation inequality. In *Proceedings of the ACM SIGKDD Workshop on Human Computation—HCOMP '10*, New York, NY: AMC Press.
- Wohn, D. Y., & Na, E-K. (2011). Tweeting about TV: Sharing television viewing experiences via social media message streams. *First Monday*, 16.



Integrating Social Media Into the Workplace: A Study of Shifting Technology Use Repertoires

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Integrating Social Media Into the Workplace: A Study of Shifting Technology Use Repertoires

Justin A. Walden

Research indicates that people are increasingly spending time with social media and other information communication technology. However, scholars have not fully examined how employees as holistic media consumers utilize social media in multiple contexts. Through in-depth interviews (N = 29), this study demonstrates that even as social media are embedded in organizational media use routines, employees question this technology for 2 reasons: It distracts from tasks and threatens personal privacy. These concerns often, but not exclusively, relate to employee age and the amount of time they have worked for the company. The study concludes by arguing that social media's arrival in the workplace may exacerbate tensions and problems that are associated with presence-creep and the distortion of the work-life balance.

In today's digitally networked global economy, the boundaries between personal and professional identities and between work and home spaces are being re-shaped. Indeed, changing global market conditions and the increased availability of information communication technology are facilitating the blurring of lines between employees' home and work environments (Deuze, 2007; Raine & Wellman, 2012). Concerns about the precarious nature of work (with employees having an increasingly tenuous grasp over their employment) and the increased expectation that employees remain constantly connected to work have been raised by scholars such as Deuze (2007), Gregg (2011), and Gill and Pratt (2008). Along with these concerns are questions about how and when it is appropriate to utilize various digital platforms and communication devices. Most often, these discussions have occurred with respect to the work-life balance and the ways in which employees are coping with the intrusion of work-related communication technology into their personal lives. Overlooked in the literature, to this point, is another consideration: How rules influence the use of personal social media in the workplace.

If we acknowledge that behaviors are often socially negotiated and interpreted (i.e., people learn from others about how to act), it becomes important to examine

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the processes by which social rules are developed and maintained with respect to communications technology. In treating the workplace as a distinct system, a line of structuration-guided scholarship (e.g., Orlikowski, 1992; Sinclair & Vogus, 2011; Watson-Manheim & Belanger, 2007) has considered the relationship between social exchange and rule development and agency-imbued individuals' experiences with technology. This scholarship holds that rules as structures influence human behavior and these rules are established in response to technological and social factors. Although evidence suggests that our personal and professional media identities are merging, a deeper consideration of how one's personal and professional networks are arranged and the meanings that workers give to their various audiences is needed. It is also worthwhile to investigate the socially negotiated development of rules for acceptable social media use in the workplace. This case study of a small United States company explored the influence of individual backgrounds on the development of organizational media use routines and the crossover of media consumption activities into multiple realms.

Literature Review

The economic downturn of the 21st century's first decade and broader changes relating to globalization have left employees, particularly well-paid and high-status workers, in a more precarious situation than a generation ago (Gill & Pratt, 2008; Gregg, 2011). Work today is seen as less secure and more centered on the individual, with employees bearing the brunt of finding, negotiating, and securing work (Deuze, 2007; Gill & Pratt, 2008). Along with these structural changes, the explosion of mobile information and communication technologies in the last fifteen years has made work inherently more accessible than ever before. Employees can now easily check email, work remotely, and stay abreast of work issues from home and while they travel. This has given rise to more flexible work schedules and explicit (from corporate) and implicit (from peers) expectations that employees remain constantly connected to their jobs (Gill & Pratt, 2008; Gregg, 2008; 2011). This is best understood as a process of "presence bleed," where work-related communication platforms and devices creep into spaces and times that were previously off limits (Gregg, 2011). Quite simply, employees face more pressure to remain virtually "on" even when they are not in the physical environment of work. This has implications for the divide between work and home: "[F]acilitated by advancements in information and communication technologies ... work and leisure can increasingly be seen as extensions of each other" (Deuze, 2007, p. 30). This transition to a media-saturated environment involves personal information spaces, which are spheres of individual technology use that are habitually incorporated into everyday life (Deuze, 2007). Personal information spaces are physical (the location of where we consume media such as the office or home and the devices that we use to consume media) and experiential (interacting and communicating with people).

A significant body of literature considers the various issues involved in the maintenance of the work-life balance (e.g., Denker & Dougherty, 2013; Gregg, 2011; Greenhaus, Collins, & Shaw, 2003; Hill, Hawkins, Ferris, & Weitzman, 2001). It would be shortsighted to argue that technology alone is responsible for reshaping the boundaries between our personal and professional lives. Yet of these factors, technology, along with communication, plays a central role in structuring social life (Orlikowski & Yates, 1994). Industry research bears this out. U.S. adults consumed more than 11 hours of media each day in 2011 on average (EMarketer.com, 2012). Furthermore, U.S. adults spend, on average, 23 hours per week communicating with each other via social media, phones, and email (EMarketer.com, 2013). This research indicates that personal and professional activities are often intermingled when we engage with technology. Reflecting this, contemporary business literature holds that employees who use social media in their personal lives expect similar tools at work (Holmes, 2012).

In addressing the implications of the use of technology in multiple contexts, it is helpful to consider the composition of individuals' various professional and social networks. The widespread adoption of mobile technologies and social media has given rise to what Raine and Wellman (2012) called networked individualism, which is the idea that people function more as connected individuals and less as embedded group members in networks. Networks are larger, more diversified, and prone to change in this generation than in prior generations. Raine and Wellman (2012) argue that mobile and social technologies have not isolated people as was initially feared but instead, they have reconfigured social relations in such a way that people have more freedom to move from group to group. Related to this, the concept of context collapse describes the flattening out of multiple distinct audiences in one's social network (Vitak, 2012). Rather than making each audience distinct, social media erase the lines between temporal, social, and spatial boundaries to the point where one's audiences are treated as one large homogenous group (Vitak, 2012). This is seen as problematic in the context of work, as employees have developed strategies to ward off context collapse and to maintain a degree of separation from work and home (Vitak, Lampe, Ellison, & Gray, 2012).

The increased potential for peer-interaction outside of the workplace on social media brings to mind privacy-related questions involving the maintenance of professional/personal boundaries. The rise of interactive media and the new capabilities of networks to carry mass amounts of information have given rise to a digital enclosure for consumers (Andrejevic, 2002; 2009). The enclosure of personal information is a form of exploitation in which companies have unequal access to data collection, storage, and manipulation. From the consumer's perspective, entry into a digital enclosure is frequently predicated on surveillance or monitoring (Andrejevic, 2009). This has implications that can be applied to the professional space. Twitter tweets, Facebook status updates, and other social media posts that are shared and seen by one's co-workers all have the potential to contribute to a subculture of support in the workplace (Gregg, 2011). However, scholars have not fully explored the relationship between the surveillance proclivities of employers and this support

environment (Gregg, 2011). As we consider employee boundary maintenance behaviors, it becomes important to look at the rules that develop around social media use in the workplace.

Media Use Routines in Context

One way to think about the adoption and patterning of technology into our lives is through media choice and routine. Giddens (1984) argued that "routine (whatever is done habitually) is a basic element of day-to-day social activity" (p. xxiii). Actions have a habitual quality that is deeply embedded in the structured routines of everyday life (Taneja, Webster, Malthouse, & Ksiazek, 2012). Structuration theory offers insight about the development of media use routines and rule-development. According to structuration, people influence the creation of and are influenced by the iterative reproduction of social norms (structures) in social systems (Giddens, 1983; 1984). Structure has three dimensions: signification (rules that constitute meaning); domination (rules that determine the nature of power), and legitimation (rules that are interpreted and sanctioned by agents) (Giddens, 1984). In other words, agents' meaning-making, power, and normative sanctions are all intertwined in human action. Structuration is further predicated on the notion that agents and structure exist as a duality and are linked (Giddens, 1984). Rules-guiding structures are both the medium and outcome of the daily conduct in which actors engage.

Structuration theory has informed multiple studies on organizational routines and technology (e.g., Orlikowski, 2000; Orlikowski & Yates 1994; Taneja et al., 2012; Vallaster & de Chernatony, 2006). With these routines, embedded structures in organizations shape the action taken by employees and are modified through social interaction. Coworkers engage with each other, social exchange happens, and informal and formal rules develop. This, by extension, can influence employees' technology use (Orlikowski, 1992). Two terms frame the routinized use of technology at work, genres and repertoires. A genre is a socially recognized communication action that is habitually enacted by members of a community for a social purpose (Orlikowski & Yates, 1994). Community members enact a genre by drawing on their tactic and explicit knowledge of genre rules (Orlikowski & Yates, 1994). Genres include memos, meetings, and videos among other forms and genre repertoires are collections of individual genres. Genres are enacted through genre rules and discursive structures that are manifested in multiple organizational and social contexts (Heracleous, 2006). Related to the notion of genres, Watson-Manheim and Belanger (2007, p. 268) held that a communication media repertoire is a "collection of communication media and identifiable routines of use for specific communication purposes within a defined user community." Once established, these repertoires frame the expectations for community members' continued interactions with media. Social exchanges are incorporated into media use repertoires, which are comprised of both technology and technology-use routines in defined user communities (Watson-Manheim & Belanger, 2007).

People create their own repertoires of selective media use based on the many options before them (Taneja et al., 2012). Individuals use media to accomplish a purpose, observe consequences of usage, and then modify usage based on interpretations of usage consequences. This adaptation becomes patterned as part of media use routines in systems, particularly in organizations. Institutional conditions influence the development of norms of communication media usage, both directly and indirectly, by influencing perceptions of capabilities of media (Taneja et al., 2012). Emerging from the technology that scholars examined in the initial structuration studies of the 1990s, social media offer a new set of resources for the maintenance of norms and behavior in social systems. More to the point, Sinclair and Vogus (2011) argued that "social networking technology provides a continuous feedback loop that results in new sources of structure (new tasks, new styles of interacting) that support new decision processes and outcomes..." (p. 298). This feedback loop is involved in the reshaping and redevelopment of personal information spaces and reconsideration of personal and professional roles. Social media are capable of spanning more boundaries than prior technologies given their pervasiveness and expected use in personal and professional contexts (Deuze, 2007; Gregg, 2008; 2011).

In summary, a literature review suggests that more attention has been placed on the creep of work into workers' personal lives, and not the reverse. In other words, scholars have not fully examined the rules for acceptable personal social media use at work. To advance the literature in this area, this study investigated the processes by which the rules governing social media use were socially negotiated in a professional setting. Specifically, this study considered employees' responses to the introduction of social media as personal media spaces into the workplace by addressing the following research question:

RQ₁: How have employees' boundary-related rules between personal and professional contexts influenced the incorporation of social media into technology use repertoires at work?

In answering this question it was expected that the discussion would yield insight into organizational media repertoire development, demonstrate how context-appropriate social media use develops in the workplace, and allow for a discussion of the applied management implications of the introduction of social media at work.

Methods

For this study, in-depth interviews were conducted with 29 employees at a 250-person company, "RanStar." Respondents included two executives and an information technology specialist who provided company background information at the start of the project and 26 frontline employees who discussed their experiences with technology.

Study Procedures

Seven companies were originally approached in the Northeast United States to serve as a potential research site for this study. RanStar agreed to participate on the condition that they receive an executive summary of the report. Interviews were conducted over a yearlong period from 2012 to 2013, with twenty-three occurring in RanStar's offices and six interviews occurring via telephone. Fourteen men and fifteen women participated. On average, respondents had worked at RanStar for 9.0 years. Interviews were recorded and transcribed, while all employees received a pseudonym for confidentiality. A company manager, who was not interviewed or present for interviews, randomly selected an initial group of employees who volunteered to participate. The semi-structured interviews involved high-level questions about technology in multiple contexts and then detailed follow-up questions about this use (see Appendix).

Research Site

RanStar has three primary divisions (support/administration, research/development, and sales) and annual revenue of greater than \$20 million, which is generated through selling multiple services and products in the technology sector. Most employees work in a three-floor building at the company's Northeast U.S. headquarters, and a small number of employees work in offices outside of the U.S. The lone non-native English-speaking respondent had spoken the language professionally for at least 15 years. Employees generally believe RanStar is a good company to work for and evidence such as industry awards and employee surveys support this. Company executives and managers reported few administrative issues, while frontline employees largely indicated that they were happy with work and their peers. RanStar did not have an official policy regarding social media use at work at the time of the study.

Data Analysis

Ongoing data analysis and interpretation through the data collection process fit with both the grounded theory (Dey, 1999) and case study (Yin, 2009) approaches. The case study approach involves multiple tactics and has flexibility provided the researcher thoroughly describes the selected phenomena under consideration and engages in rigorous data analysis (Yin, 2009). Coding of emergent categories and concepts, detailed memoing throughout data collection, and various member checking and data validation activities gives grounded theory a strong foundation from which interpretations can be logically drawn (Charmaz, 2006). Researcher memos were embedded in the interview transcription files as initial data analysis points. This initial analysis considered themes, commonalities, and differences relating to

employee backgrounds. Specifically, the analysis evaluated attitudes about the introduction of social media into the workplace based on the employee's department, whether or not they were a manager, amount of time at RanStar, and amount of social media they reported using outside of work.

From memos and initial data analysis, lower and higher order concepts emerged as concepts and categories respectively. With structuration's focus on the interplay between rules and agents' behavior, initial categories included "sanctioned" and "unsanctioned" media use and "formal" and "informal" social rules. With a second round of data analysis, these categories became "social monitoring" and "work routines." At the conclusion of the initial interviews, high-level findings and interpretations were shared by the researcher with the RanStar liaison. This member checking helped with respondent and reliability checks. Although theoretical saturation is often used with qualitative interviewing, Dey (1999) suggested a more appropriate term of suggestive saturation. In suggestive saturation, the researcher stops data collection when they feel the data can no longer generate new ideas. About halfway through interviews, several consistently voiced views about technology at RanStar were observed and this served as the foundation for the study's findings.

Findings

In response to this study's research question, analysis of interview data revealed that the incorporation of social media into technology use routines at RanStar has been contested because of concerns about out-of-work monitoring of personal behavior and concerns about monitoring of in-work behavior. Although social media have been touted for their ability to provide instant feedback to support group decision-making in the workplace (Sinclair & Vogus, 2011), findings reveal that this feedback affordance prompts privacy questions among employees. Although rarely verbalized in direct person-to-person communication, these concerns contribute to the development of the overall company culture. Furthermore, these concerns are disrupting the integration of social media into technology use repertoires at work and are preventing social media from being fully maximized by employees for company-sanctioned tasks. With structuration's focus on the production and reproduction of social norms, the study offers several rules for social media in this section.

Social Media Monitoring

Analysis of qualitative interviews shows that personal social media contribute to environmental surveillance in the workplace on multiple levels. The data further support the idea that employees seek to maintain a clear separation between their professional and personal audiences (Gregg, 2011; Vitak et al., 2012). A contribution of this study is to show that surveillance was related to two factors: Age and employee tenure with the company. Veteran employees and older employees were

more likely to limit social media use at work and to see social media as threats to productivity, while younger and more junior employees were usually more inclined to utilize Facebook, Twitter, and other sites during the day for a mix of personal and professional purposes. Additionally, employees who had worked for the company for longer tended to be more explicit in their comments about at-work monitoring of employees (checking to see who was using social media as a distraction in the physical office) than junior employees.

Although respondents were careful to not outwardly criticize individual peers, several veteran employees expressed frustration with general social media use in the office. Consider a midlevel manager with extensive professional experience:

We have people in this company obviously who spend more time on Facebook than others. If I were to try to correlate that, I'd think the more junior roles, for whatever reason, maybe they're not mentally stimulating or challenging enough to the people, or maybe those people are just at a stage in their lives where they're more interested in the social aspects of life than they are in say, career aspects.

This manager believed the company could adopt a Facebook-type site internally that encourages users to contribute personal content, yet "I just can't see any immediate or obvious reason why we would do it." Chuck, who has worked for RanStar for more than a decade, was also dismissive of this technology: "Younger people who grew up with that stuff, they'll embrace it and see really a need for the social media aspects of it. But I don't." These two senior employees, who said they do not use social media at home, criticized the use of this technology at work, which is in line with several peers.

Several respondents reported either watching their peers use social media or having had the experience of being watched. To the former point, Kara, a mid-level manager who has been with the company for a decade offered these comments:

I know that as I walk through the building I see a lot of people on Facebook and they're not using it work-wise. I think there's just, there are certain ... I don't know what I want to say, it's not genres but ... there are certain cliques or groups that would probably be lost if we didn't allow it.

Selecting her words carefully, Kara said it is "odd" seeing employees who recently have joined the company use Facebook and the company's internal chat program for non-work purposes rather than work tasks. Kara's use of "odd" and "lost" suggests a negative attitude toward social media, which, as expressed in other venues and interactions with peers, reveals the tension involved in social media's emergence in the workplace as a media genre. Though rarely expressed in verbal communication, this monitoring of employee behavior in the office serves as a distinct non-verbal communicative action and signal to employees that overuse of this

technology is not acceptable. Thus a rule for social media can be seen in this context: *Personal social media use is allowed provided it is discreet and not a significant distraction.*

Interviews indicated that there are potential concerns at RanStar with another type of monitoring. Employees who reported the greatest amount of personal social media use tended to be worried about their peers' following their out-of-work behaviors on social networking sites. The result tended to be a separation of social networks to minimize context collapse (Vitak et al., 2012). Seventeen employees reported either having few to no coworkers as social media friends or strongly controlling the access of their colleagues to their social media profiles. These employee-preferred distinctions between professional and personal media spaces are seen in several comments, including a manager with more than a decade with the company, Isabel. In both areas of home and work social media use, Isabel is "keeping people up to date" with information. Although Isabel acknowledged that these two media routines cross over, she added that, "I don't want my colleagues to know if I go out on a Friday night and get drunk. My private life is my private life and my work life is my work life." Isabel is guarded about what is posted to her personal social media; this respondent reported no coworkers as Facebook friends. Also consider Rachel, who has "quite a few" coworkers as Facebook friends. Yet Rachel, who has been with the company for ten years, rarely interacts with these peers online "because even though it's the [RanStar] network, it's still kind of like personal stuff." The overlap between personal and professional routines appears to have made heavy social media users uncomfortable.

According to Linda, a five-year veteran of the company who works in sales, Facebook is "a fun way to share family photos and vacation photos and that kind of thing. But we're not closely watching each other on the social networking site." Linda said it would be "Big Brother like" if people used Facebook to keep tabs on their coworkers. Respondents indicated concern that personal or sensitive information that is posted to personal social media accounts will be misinterpreted by their peers and will cause a problem at work. Added Lane, who had been with the company for less than a year at the time of data collection: "One picture on Facebook may look bad and people can read into things." Related to this, Mirella, who has been with RanStar for more than two decades, said people struggle with boundaries on social media: "It seems like there are people that have ... a hard time figuring out what's appropriate to share and what isn't. It's a privacy kind of thing." Mirella's comments were directed toward her peers, yet she indicated that she was not on Facebook or Twitter herself.

Prior research indicates that social media use varies considerably by age (Duggan & Brenner, 2013) and age appeared to partially influence attitudes toward social media at RanStar. Respondents consistently voiced uneasiness about social media in the workplace. There was also a clear sense that employees should keep their social media audiences distinct. Yet the reasons for the concerns and for employees' desires to ward off context collapse appeared to vary by age and by the amount of experience with the company. In particular, employees who were the most critical

about the loss of productivity due to social media had extensive professional backgrounds and were older than the average respondent. Senior employees delegitimized social media because of the potential to distract people from work. On the other hand, the concerns about privacy intrusion were more strongly voiced by employees who were either recently hired or younger than the rest of their peers. Junior employees were also more inclined to reveal that they accessed personal social media at work. In light of this analysis, another rule can be described at RanStar: *As employees grow into their work roles and as they are gradually exposed to the company's culture, they are expected to subject their intra-organizational interactions to strict scrutiny and to censor contact with their peers via social media.*

Established Media Use Repertoires

Interview data indicate that when social media are embedded into peer-supported structures and media use repertoires at RanStar, a clear understanding exists that the technology will be used to for the greater good of the company. Research and development staff who work with internal clients make use of internal blogs for task completion and troubleshooting. Consider Linda, who posts when she completes a hard task. The post alerts her teammates when problem is solved and shares knowledge. For Linda, blog posts are easier to find than other content such as HR policies on the intranet:

With a blog, it's more like, "Hey I found this really cool thing that's applicable across the board. I'm going to tag it in ways that will allow you to find it if you're doing that kind of search." Then you can go crazy and read what you want.

Similarly, Chuck's team blogs when troublesome tasks are resolved. For example, this group was confronted by an esoteric yet minor problem that delayed a project. A peer spent several hours researching the topic and blogged about it. According to Chuck, who is a senior employee, "Hopefully by him blogging it and letting everybody out there know about it, it'll be out there, a permanent record." In one context (personal), Chuck does not see the point of social media and is critical of this technology. However, in another context (professional), Chuck is an active internal blog user. These blogs are sanctioned social technology at work.

Despite concerns about personal social media distractions and employee desires to keep personal and professional social networks separate, use of internal blogs, to varying degrees, is encouraged for the betterment of the company. Additionally, RanStar's intranet, Net-Source, has several interactive features that prompted several employees to liken it to personal social media. Net-Source allows employees to keep profiles that the entire company can see. The intranet also features company photos and news about social events. These affordances enabled new employee Julia to see several similarities between at-work and at-home social media use. Like with personal social media, Net-Source serves a surveillance function as people post their daily

work schedules, when they take time off, and project updates. According to Julia, Net-Source is:

like Facebook at work. Some of the things that people post are more personal in nature and you can see what everyone is doing. We don't have status updates but you can log onto people's pages and see if they're busy or free. I think there are a lot of similarities between the two. This is more professional obviously.

Furthermore, employees rely on social media to communicate externally with clients and other stakeholders. Twenty of 29 respondents reported either having active LinkedIn accounts or had publicly searchable LinkedIn profiles. There appears to be pressure in the organization to adopt this platform. Elaina, a manager who had been with the company for almost 10 years, recalled discussing an issue with an executive. As the conversation ended, the topic of LinkedIn was raised and the executive encouraged Elaina to join the site. This prompted her to consider joining LinkedIn: "There is an allure to it. I probably should sign up." New hire Autumn only checks her Facebook account from her personal phone, which is beyond the reach of the company's IT staff and somewhat hidden from view. When she checks Facebook, it is usually for a "very brief" moment. Yet Autumn sees no issue with keeping LinkedIn open on her work computer to participate in professional conversations: "It helps strengthen the professional relationship." Also consider Lila, who keeps personal social media use at work to a minimum. However, Lila regularly accesses her LinkedIn account at work: "I'll stay logged in to respond to discussions and things like that." This perspective relates to Sophie, a longtime employee who uses LinkedIn to connect with clients in sales situations: "If you send them a message to them on LinkedIn, they reply."

Another example of using social media for professional purposes is new hire Lane, who reported accessing Facebook to get contact information for clients that he personally knows. Lane is careful about not posting personal information to Facebook that reflects poorly on him, and he also uses the site to facilitate professional conversations during the workday. This supports the idea that professional networking is a new form of labor that is required to demonstrate ongoing employability (Gregg, 2011). Although few other respondents mentioned using Facebook for professional communication, this example highlights the blurring of professional and personal social media boundaries. Lane, Autumn, Lila, and Sophie all belong to teams whose primary responsibility includes working with external clients rather than having a job that requires to work primarily with internal staff (who usually make the greatest use of internal blogs). Another rule can be seen in this context: *Employees who primarily work with external clients are expected to engage with clients through their social media accounts.*

Finally, the focus of this study was on at-work social media use. It should also be noted that employees rarely reported using technology to work from home. This was a function of organization culture (they are not pressured by the company) and individual choice. Lila, who regularly uses LinkedIn at work, was clear in stating

that she disengages from these tools outside of the workplace: "At home, it's my non-technology time. We don't need Facebook. We don't need email. I'm completely disconnected." This perspective resonated with many of Lila's peers as only six respondents reported regularly checking e-mail and doing RanStar work at home. A manager who was not among the main respondents confirmed this idea in a post-project interview.

Discussion

There is a need to both contextualize and compare technology use across multiple contexts (Deuze, 2007; Orgad, 2009; Webster, 2011). It is simply not enough to treat spheres such as personal and professional as distinct without fully exploring the role of technology in linking these areas. To advance theory and to help with applied management practice, it is helpful to understand the experiential patterns and communication exchanges that connect media use routines in multiple virtual and physical contexts. This study advances both areas by looking employees' experiences with a set of tools (social media) that are largely considered personal in nature.

Findings indicate that social media are being contested as they integrate with communication media repertoires in the workplace. Three primary (and sanctioned) uses for social media at work were documented in this study: accessing Facebook and Twitter for mental breaks during the day; sharing task-related information tips on internal organizational blogs; and communicating with professional clients via personally maintained social networking sites such as Facebook and LinkedIn. To the first point, younger employees and those who had most recently joined the company were more willing to use social media for breaks during the day and to communicate with peers at RanStar who were in another part of the building. These networks are carefully maintained and employees frequently self-censor their posts. To the latter two points, team structure appeared to influence rule-development with respect to social media adoption. Internal-facing teams tended to make strongest use of blogs and the company's intranet, which are company-provided and company-sanctioned tools. External-facing team members reported the greatest amount of use of Facebook and LinkedIn for professional purposes.

Two surveillance activities highlight the tensions involved in maintaining personal and professional boundaries and they disrupt social media's incorporation into technology use repertoires. Recall that one respondent said it would be "Big Brother like" if they were friends with a large number of coworkers on Facebook and if most employees learned about each other's personal activities via social media. Frequent social media users, who were most often junior employees, appeared apprehensive about the virtual monitoring of their behaviors by senior peers and were concerned that some posts/activities will be misconstrued. Additionally, these users are aware that they are being monitored in the physical office space. From the other side, several senior employees acknowledged that excessive social media use should be kept in check and that they perceived this

use to be a distraction at work. This study is one of the first to document these distinctions and to note the problems associated with in-person monitoring of social media behaviors.

Findings reveal that the rules for social media use are influenced by both organizational and individual factors. Employees at RanStar, at the time of data collection, were adjusting to the presence of social media at work. Boundaries with respect to accessing social media at work and interacting with peers outside of work were beginning to develop. Although the company had not formally required employees to network with external clients and although there was no policy that limited excessive social media use, these pressures appeared to be informally exerted by the organization and tacitly understood by employees. Simultaneously, employees expressed an overriding preference to distinguish professional from personal networks, which further limited the viability of social media as a set of knowledge-sharing and productivity-enhancing tools. These are part of the structure of legitimation at RanStar, where employees understand and interpret rules (Giddens, 1984). Also in the language of structuration, these rules develop in response to agency-imbued actors' intentions and actions. This study is one of the first to consider the application of structuration and the development of socially negotiated rules governing social media in the workplace.

It has been argued that social media's feedback loop can streamline and enhance group decision-making on projects (Sinclair & Vogus, 2011; Treem & Leonardi, 2012). On one hand, social media may make it easier for employees to work on projects across geographic boundaries and flexible work schedules. Employees do not all have to be in the same place at the same time to collaborate at work. On the other hand, findings from this study show that social media also have the potential to further contribute to the process of presence bleed. Employees of all ages and time with the company sought to separate their professional and personal relationships for fear that either social media posts would either be misinterpreted or that their personal privacy would be encroached upon. This supports research that shows employees are developing strategies to manage context collapse (Vitak et al., 2012). RanStar has an intranet where employees post their schedules and project updates. Additionally, during the normal course of the day when employees take breaks, many office doors and windows are open and it is relatively easy for employees to view each other's computer screens. Thus virtual and in-person observation of employee behavior happens at work.

Just as work has intruded into private spaces, personal social media have been introduced into the workplace and this offers the potential for intra-employee tension. Although employees went to great lengths to not criticize any peers by name, it was also clear that there were concerns with respect to this issue. One senior employee struggled to find the right words before finally admitting that some employees would be "lost" without Facebook or Twitter at work. Generational and experiential differences may contribute to misunderstanding about the role of social media in the workplace, which may further exacerbate these tensions and may limit the application of this technology. Furthermore, the pressure for employees to network

with their peers and clients in accounts that are also largely personal in nature contributes to the reshaping of personal and professional boundaries. For this study, the organizational culture at RanStar meant that employees rarely reported pressure to work at home in off-hours. However, for firms that place more stringent requirements for at-home work, this link between personal and private on social media may be even more problematic.

Scholars should continue to explore the overlap between professional-oriented and personal social media use. In this respect, future studies could address how employees define the terms "personal" and "professional." It is also imperative to take a more detailed look at any additional technology related activities (e.g., checking personal email at work and work-related email at home) that are utilized along with social media in boundary setting. This would fit into the emerging research on technology use routines (e.g., Watson-Manheim & Belanger, 2007; Taneja et al., 2012). The literature would also benefit with additional discussion about the ways in which organizations are formally and informally communicating expectations for boundary-spanning technology use. Evidence in this study suggests that employees are uncomfortable with the bridging of personal and professional networks that occurs via social media. With the focus of this study on employee-employee interactions, the role of the organization in setting rules for technology use was not fully explored. Conventional business thinking (and professional commentaries) holds that social media are a necessary component of successful organizational communication. Yet at what point does strategic organizational deployment of social media become problematic monitoring from the organization and employee perspectives? Such issues will need to be addressed as media routines and boundary setting behaviors are explored in subsequent studies.

From an applied management perspective, social media should not be viewed as a cure-all for employee communication. Although commentaries such as Holmes (2012) argue social media are necessary for business today, incorporating it into everyday organizational culture is not without risks. Simply introducing organizational social media profiles, discussion boards, and microblogging platforms without considering their effects on intra-employee relationships is potentially problematic for managers. RanStar's case demonstrates that broader organizational conditions and structures may simply inhibit the widespread adoption of interactive technologies. Organizational productivity expectations and employee concerns about both task completion and privacy limit the extent to which certain social media are utilized and this also limits the degree to which employees engage with peers on social networking sites outside of the regular work day.

As a limitation, case study results may not be generalizable to other contexts (Yin, 2009). This calls for research at other study sites. Concerns about privacy, for example, might be attenuated at larger firms where employees do not know each other as intimately as at RanStar. It is also possible that employees in larger companies would more openly express frustrations about social media if they perceive a greater likelihood of anonymity than those in the tight knit company of RanStar. Additionally, the physical layout of RanStar's headquarters, which consists of rows of

offices in close proximity on three floors, may have heightened the concern about social media use being monitored.

Conclusion

Combined with in-person meetings with peers and supervisors, virtual meetings and discussions on intranets and blogs, and casual interactions during breaks, social media are an added layer for surveillance in the workplace. In this respect, use of Facebook, Twitter, and other emerging technologies enable employees to keep track of one another in yet another context. This additional monitoring may exacerbate tensions and problems that are associated with presence-creep and the distortion of the work-life balance. This study provides empirical evidence that age, employees' tenure with their company, and team structure all contribute to the rule development and negotiation of social media's role in the workplace. The rules for social media use at work are complex—and no doubt vary from organization to organization. However, this study further demonstrates that social media have markedly divided functions in the context of work. Employees expect that social media will be made available for personal use during the workday (such as taking a break). Employees also enjoy interacting with their peers that they have carefully screened and allowed into their networks. Yet even with these uses, social media are criticized and their potential as a set of socialization and knowledge-sharing tools is not fully realized. Thus the rules are a manifestation of the complex division between personal and professional boundaries that employees conscientiously erect in the face of ongoing pressure to merge these realms.

References

- Andrejevic, M. (2002). The work of being watched: Interactive media and the exploitation of self-disclosure. *Critical Studies in Media Communication*, 19, 230–248.
- Andrejevic, M. (2009). Privacy, exploitation, and the digital enclosure. *Amsterdam Law Forum*, 1. Retrieved from <http://amsterdamlawforum.org/article/view/94/168>
- Charmaz, K. (2006). *Constructing a grounded theory: A practical guide through qualitative analysis*. New York, NY: Sage.
- Denker, K. J., & Dougherty, D. (2013). Corporate colonization of couples' work-life negotiations: Rationalization, emotion management and silencing conflict. *Journal of Family Communication*, 13, 242–262.
- Deuze, M. (2007). *Media work*. Malden, MA: Polity Press.
- Dey, I. (1999). *Grounding grounded theory—Guidelines for qualitative inquiry*. San Diego, CA: Academic Press.
- Duggan, M., & Brenner, J. (2013). The demographics of social media users-2012. Retrieved from <http://www.pewinternet.org/2013/02/14/the-demographics-of-social-media-users-2012/>
- Emarketer.com. (2012). Media multitasking brings challenges and opportunities for marketers. Retrieved from <http://www.emarketer.com/Article/Media-Multitasking-Brings-Challenges-Opportunities-Marketers/1008924>

- Emarketer.com. (2013). Social usage involves more platforms more often. Retrieved from <http://www.emarketer.com/Article/Social-Usage-Involves-More-Platforms-More-Often/1010019>
- Giddens, A. (1983). Comments on the theory of structuration. *Journal for the Theory of Social Behavior*, 13, 75–80.
- Giddens, A. (1984). *The constitution of society*. Berkeley, CA: University of California Press.
- Gill, R., & Pratt, A. (2008). In the social factory? Immaterial labour, precariousness and cultural work. *Theory, Culture & Society*, 25, 1–30.
- Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2003). The relation between work–family balance and quality of life. *Journal of Vocational Behavior*, 63, 510–531.
- Gregg, M. (2008). Testing the friendship: Feminism and the limits of online social networks. *Feminist Media Studies*, 8, 197–223.
- Gregg, M. (2011). *Work's intimacy*. Cambridge: Polity Press.
- Heracleous, L. (2006). *Discourse, interpretation, organization*. Cambridge: Cambridge University Press.
- Hill, J., Hawkins, A. J., Ferris, M., & Weitzman, M. (2001). Finding an extra day a week: The positive influence of perceived job flexibility on work and family life balance. *Family Relations*, 50, 49–58.
- Holmes, R. (2012). The \$1.3 trillion price of not tweeting at work. *FastCompany.com*. Retrieved from <http://www.fastcompany.com/3000908/13-trillion-price-not-tweeting-work>
- Orgad, S. (2009). Question two: How can researchers make sense of the issues involved in collecting and interpreting online and offline data? In N. K. Baym & A. N. Markham (Eds.), *Internet inquiry, conversations about method* (33–53). Thousand Oaks, CA: Sage Publications.
- Orlikowski, W. J. (1992). The duality of technology: Rethinking the concept of technology in organizations. *Organization Science*, 3, 398–427.
- Orlikowski, W. J. (2000). Using technology and constituting structures: A practice lens for studying technology in organizations. *Organization Science*, 11, 404–428.
- Orlikowski, W. J., & Yates J. (1994). Genre repertoire: The structuring of communicative practices in organizations. *Administrative Science Quarterly*, 39, 541–575.
- Raine, L., & Wellman, B. (2012). *Networked—The new social operating system*. Cambridge, MA: The MIT Press.
- Sinclair, J. K., & Vogus, C. E. (2011). Adoption of social networking sites: An exploratory adaptive structuration perspective for global organizations. *Information Technology and Management*, 12, 293–314.
- Taneja, H., Webster, J. G., Malthouse, E. C., & Ksiazek, T. B. (2012). Media consumption across platforms: Identifying user-defined repertoires. *New Media & Society*, 14, 951–968.
- Treem, J. W., & Leonardi P. I. M. (2012). Social media use in organizations: Exploring the affordances of visibility, editability, persistence, and association. *Communication Yearbook*, 36, 143–189.
- Vallaster, C & de Chernatony, L. (2006). Internal brand building and structuration: The role of leadership. *European Journal of Marketing*, 40, 761–784.
- Vitak, J. (2012). The impact of context collapse and privacy on social network site disclosures. *Journal of Broadcasting & Electronic Media*, 56, 451–470.
- Vitak, J., Lampe, C., Ellison, N., & Gray, R. (2012). Why won't you be my Facebook Friend?: Strategies for dealing with context collapse in the workplace. In *Proceedings of the 7th Annual iConference* (pp. 555–557). New York, NY: ACM. doi:10.1145/2132176.213228
- Watson-Manheim, M. B., & Belanger, F. (2007). Communication(media repertoires: Dealing with the multiplicity of media choices. *MIS Quarterly*, 31, 267–293.
- Webster, J. G. (2011). The duality of media: A structural theory of public attention. *Communication Theory*, 21, 43–66.
- Yin, R. (2009). *Case study research- Design and methods* (Fourth Edition). Thousand Oaks, CA: Sage Publications.

Appendix

Interview Questions

- What is your role with RanStar?
- How long have you worked here?
- How do you use technology at home?
 - What about Twitter, Facebook and other social media?
 - Do you submit content to these sites or just read?
 - What hardware (phones, computers) do you own?
 - Please describe the last time you used social media at work.
- At work, what communications technologies do you use?
 - Please describe your use of RanStar's intranet.
 - Do you primarily read or primarily submit content?
 - Do you post personal information or non-work thoughts?
 - How often do you use personal social media at work?
 - What are the general perceptions of personal social media use at work?
- Please compare your use of the intranet with outside social media use.
 - Do you see any similarities?
 - What are the differences?