

# A social cognitive approach to traditional media content and social media use: Selfie-related behavior as competitive strategy

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## Abstract

Mass media systems play increasingly prevalent roles in our lives. However, the relationship between traditional mass media exposure and behavior on social media is unclear, particularly in the context of selfie-related behavior, which includes capturing, editing, and sharing images of oneself. In the tradition of social cognitive theory, we argue that reality television (RTV) models a value system focused on the self and competition with others, and hypothesize a model where self-worth based on competition mediates the relationship between RTV viewing and selfie-related behavior. Path analysis results from survey data ( $N=334$ ) support the mediation model. Selfie-related behavior was explicated and measured via novel instruments. Audience variables including online network size and diversity also played roles in selfie editing and sharing, as did specific social media platforms. Results are discussed in the context of evolving media systems.

## Keywords

Mass media, reality television, selfies, self-worth, social cognitive theory, social media

Self-presentation is the attempt to control images of oneself through selective self-disclosure before real or imagined audiences (Goffman, 1956). This goal-directed behavior is intended to generate a strategic image and influence how audiences perceive and

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interact with us. Today, digital images play a prominent role in self-presentation, although relatively little research focuses on selective self-presentation in this context (Hancock and Toma, 2009). The current research focuses on a particular type of image-centric self-presentation behavior: *the selfie*.

A selfie is defined as an image of oneself, taken by oneself. Although the term first appeared on Flickr in 2004, its use has skyrocketed (Bennett, 2014). In 2014, *Time* magazine designated selfie as one of the most used buzzwords (Fausing, 2014). Approximately 91% of teens from Bangkok, Berlin, Moscow, New York, and Sao Paulo post selfies on Instagram (Manovich et al., 2014). During the process of capturing selfies, individuals can observe their own image, adjust their facial expression, and so on. Meanwhile, image-editing tools help enhance selfie quality by enabling us to easily improve the appearance of the subject and the overall composition.

Despite the popularity of selfies, research at this stage generally focuses on the identification and clarification of selfie-related behavior (e.g. Barry et al., 2017; Sorokowski et al., 2015). For example, selfies contain unique facial and other cues that are not available in other types of digital images, including duck face, pressed lips, and emotional positivity (Qiu et al., 2015). Research also indicates significant relationships between selfie posting behavior and personality traits like narcissism (Sorokowski et al., 2015), extraversion (Sorokowska et al., 2016), and the need for popularity (Kim and Chock, 2017). Sung et al. (2016) took a step forward suggesting attention seeking and predict intention to post selfies. However, research explicating the relationship between content and consumption of traditional mass media and selfie-related behavior is absent.

The volume of reality television (RTV) programming has grown dramatically over the past 20 years (Yahr et al., 2015). Viewers watch as regular individuals transform into celebrities and participate in mass and undirected self-disclosure of their private thoughts and feelings about themselves and others. Social cognitive theory (SCT; Bandura, 1989) suggests that heavy viewers are more likely to internalize and model this celebrity-like behavior, and social media provide the tools required to do so. With the advent of social media, our role in the media ecosystem has shifted from content consumer to producer. Viewers can easily and inexpensively replicate celebrity behavior by curating online profiles consisting of carefully crafted digital images of themselves in the form of selfies. Evidence shows that heavy RTV viewers use social media to compete for attention (Stefanone and Lackaff, 2009); however, there may also be negative consequences of this behavior.

Individuals who share selfies may receive criticism, which could negatively affect their esteem and relationship satisfaction, and extant research suggests social comparison online supports this contention (Vogel et al., 2014). Social media platforms enable selective self-presentation, so comparisons made are often to idealized representations of others. These comparisons have been linked to envy, which can damage subjective well-being (Krasnova et al., 2013). Extrapolating from these findings, our research seeks to (a) understand whether heavy RTV consumption influences development of self-worth based on competition, (b) how self-worth explains selfie-related behavior, and (c) how these behaviors impact the perceived quality of interpersonal relationships.

In terms of social media platforms, previous research (Charteris et al., 2014) shows that ephemeral communication technologies like Snapchat furnish young adults with

independent spaces for underlife activity (i.e. how young people contest mainstream discursive practices; Goffman, 1961) and distance themselves from other social groups. However, few empirical studies have examined the strategic preference for specific social media platforms. Therefore, the current study also seeks to explore differences in selfie-related behavior across distinct social media platforms.

Below, we begin by reviewing relevant literature on self-presentation and present SCT as the framework to understand the relationship between traditional mass media and social media use. Then, we review contingencies of self-worth (CSW), which are hypothesized to mediate the relationship between traditional and social media use. Finally, audience characteristics are discussed in terms of the size and diversity of online social networks and cross-platform differences. We expect that online network composition adds explanatory power to models explaining selfie-related behavior.

## Contemporary self-presentation

Self-presentation is defined as the process of selecting and packaging information about one's self in order to create intended impressions upon audiences (Goffman, 1956). Individuals make routine self-presentational choices regarding what and how much information to disclose, how to disclose it, and whom to disclose it to. Self-presentation decisions are guided by complex relationships between competing motivations (Altman, 1975). On one hand, self-presentation fulfills fundamental needs for social connectedness and belonging and is intrinsically rewarding (Tamir and Mitchell, 2012). However, sharing information about one's self also carries risks since individuals sacrifice a degree of privacy (Altman, 1975) and open themselves to potential criticism. Therefore, self-presentation decisions reflect a balance of conflicting desires aimed at maximizing strategic rewards and minimizing personal risks (Petronio, 2002).

Communication technologies enable new possibilities for optimizing risk–reward ratios. For example, we balance the need to appear attractive with authenticity by engaging in subtle, albeit calculated deception (Toma et al., 2008). Such strategy is facilitated by computer-mediated communication's (CMC) support of *selective self-presentation*, a carefully controlled and orchestrated type of self-presentation (Walther, 1992), which is more easily achieved in asynchronous, text-based CMC (Walther, 1996), but is less well understood in the context of digital image sharing.

In the current research, we focus on expanding knowledge about self-presentation by exploring the antecedents, processes, and outcomes related to a dominant mode of self-presentation today: *the selfie*. Below, we articulate three critical phases of selfie-related behavior, including the capture, editing, and sharing of digital images of ourselves.

### Capturing selfies

The first step in selfie-related behavior is capturing digital images of one's self. During the process of capturing selfies, individuals use hand-held devices (e.g. mobile phones) to observe real-time images of themselves. They typically experiment with and adjust their poses and facial expressions to obtain desirable images (Qiu et al., 2015). Compared to digital images captured by *other* individuals, selfie-takers have total control over the

composition of their selfies. In this way, technology optimizes users' ability to strategically present and manage the impressions they give to others. For example, common practices include tucking one's chin or tilting the head to achieve the most flattering angle. Often individuals capture many images while they practice smiling, pouting, and so on. These strategies are employed with the end goal of optimizing presentation of self, although access to simple, efficient editing tools to further enhance these digital images is nearly ubiquitous.

### *Editing selfies*

Digital images can be edited by using free and widely accessible image-editing software. Common image-editing applications give users a multitude of options. Thus, we differentiate between two different, strategic selfie editing behaviors: individuals can choose to edit the *subject* (i.e. themselves) and the overall *composition*.

Subject editing involves changes made to enhance the physical features of the selfie-taker and is typified by enlarging eye pupils, sharpening jawlines, and removing cosmetic blemishes. These techniques enable subtle changes to digital images intended to enhance appearance.

Composition editing involves manipulating the overall image to enhance or correct brightness, contrast, or saturation effects through the use of filters. Filters allow easy smoothing or other kinds of enhancement. Upon capturing and optimizing selfies, individuals are finally faced with making decisions about which images to share with their audiences and which platform to use (e.g. Facebook and Snapchat).

### *Sharing selfies*

Finally, decisions about sharing these products of optimized self-presentation online must be made. Although individuals can be selective about sharing information, digital content is shared and pushed across broad audiences comprised of diverse relationships (Gilbert and Karahalios, 2009). However, selfie-takers likely leverage the affordances presented by social media platforms to further enhance their self-presentation. Given that what we share online provides information about our identity (Pempek et al., 2009; Siibak, 2009), we argue that desirable images are selected for sharing and individuals strategically select media platforms depending on audience norms and expectations related to each platform.

Platforms like Facebook and Snapchat allow users to communicate by sharing content that reflects their interests and thoughts (Bayer et al., 2015). The affordances associated with each platform also influence self-presentation decisions. For example, images shared via Snapchat are automatically deleted after they are viewed, while images posted to Facebook and Instagram are more permanent. In addition, Snapchat's *My Story* function allows users to selectively share images sequentially to convey personalized stories with select others. These stories are also automatically deleted after 24 hours. This idiosyncratic functionality of Snapchat minimizes the risks of sharing personal information even if users have large and diverse networks, thus optimizing the risk–reward ratio which motivates behavior that minimizes vulnerability while satisfying self-disclosure goals (Jourard, 1971).

In addition to the actual process involved in capturing, editing, and sharing selfies outlined above, questions persist about why selfie-related behavior is so popular. Understanding the motivation for selfie-related behavior can be informed by a growing body of scholarship suggesting that individuals learn about the primacy images of themselves have, and the value of sharing those images, from traditional mass media content. In the tradition of SCT (Bandura, 1989, 2001), we argue there is a connection between heavy consumption of RTV programming, which promotes a culture of competition, and the selfie-related behavior discussed herein.

## SCT and RTV

SCT explicates how and why individuals acquire and maintain certain behaviors by engaging in modeling, which involves observing, interpreting, and adjusting their own behavior in response to other observed behavior. Bandura (1989) notes whenever individuals observe behavior, modeling may occur, and television is a particularly influential source of observable behavior.

RTV is a dominant component of the contemporary television landscape. Nabi et al. (2003) define RTV as “programs that film real people as they live out events (contrived or otherwise) in their lives, as these events occur” (p. 304). RTV first appeared in the top 10 viewership rankings in 2000 and, since then, has consistently captured the largest percentage of audience share watching the top 10 broadcast programs (Nielsen, 2017a). Nielsen’s (2017b) ratings also track communication about television programming and report that exchanges via social media about RTV programming are the most common, which suggests increased cognitive engagement with RTV content.

RTV participants reveal themselves both physically and emotionally to audiences (Madsen and Brinkmann, 2012). As Aslama and Pantti (2006) argue, self-disclosure is usually in monologue form which gives the impression the speaker is honestly revealing their inner emotions. Although there are a wide range of different kinds of RTV programming, it generally models similar communication behavior consistent with non-directed self-disclosure to broad and often unknown audiences, which is analogous to sharing content via social media (Stefanone and Lackaff, 2009). Self-disclosure and competition for attention are hallmarks of RTV content.

Stefanone and Lackaff (2009) explored the relationship between RTV viewing and behavior on social media. They found heavy RTV viewers modeled the communication and self-disclosure behavior observed in that programming. Heavy viewers spent more time managing their social media profiles, cultivated larger audiences, and shared more digital images, compared to light viewers. Findings suggest that heavy viewers were more likely to engage in the celebrity-like behavior modeled in RTV programming, consistent with SCT.

We begin our hypotheses by replicating and extending the research reviewed above demonstrating the link between traditional mass media consumption—operationalized as RTV viewing—and one specific form of digital image sharing: the selfie. Therefore, we propose a main effect between time spent viewing RTV and the three self-related behaviors:

H1: RTV viewing has a positive relationship with selfie (a) capturing, (b) editing, and (c) sharing.

While SCT explains the relationship between traditional and new media use, other individual-level variables should further explain selfie-related behavior. Previous research shows that relationship development and social control are primary self-presentation goals (Derlega and Grzelak, 1979). Here, the high numbers of shared images reflect the value that individuals attribute to presentation goals. The decision to share images of one's self is also likely a function of that individual's self-worth. We leverage Crocker's (2002) CSW to better explain the relationship between self-presentation and self-esteem in the context of selfie-related behavior.

## CSW

Self-esteem was initially conceptualized as global judgments of self-worth, respect, and acceptance (Rosenberg, 1965). Alternative perspectives argue that assessing multiple domain-specific evaluations of the self in areas such as competition, academics, and so on, offer an increasingly nuanced conceptualization of esteem (Rosenberg, 1965; Woike and Baumgardner, 1993). The CSW model presents one such framework (Crocker and Wolfe, 2001; Wolfe and Crocker, 2003). Among the seven domains proposed by Crocker et al. (2003), the competition contingency reflects valuing outperforming others (Crocker, 2002). In terms of social media use, Stefanone et al. (2011) found that public-based contingencies like competition explained generic digital image sharing online. Basing self-worth on competition in particular likely explains selfie-related behavior beyond the variance explained by controlling for RTV consumption alone.

The first step in our theoretical argument states that RTV models a value system based on competition, and that heavy viewers are likely to model these competitive behaviors on social media via selfie-related behavior (H1). We argue that selfie-related behavior is how individuals compete for attention online. These behaviors include sharing stylized, optimized selfies to online audiences. Furthermore, research shows that RTV programming highlights competition between characters on these shows (e.g. Barton, 2009; Orbe, 2008). In RTV programming, competing with others to attain goals is a common feature. Individuals compete for professional opportunities (e.g. *America's Got Talent*, *The Voice*, *Top Chef*). Some shows pit individuals against one another to win monetary prizes (e.g. *Survivor*, *The Amazing Race*) or the chance to find love (e.g. *The Bachelor*). Furthermore, all these shows portray regular folks on television and require those individuals to engage in non-directed self-disclosure. Thus, we argue that *competition*-based CSW mediates the relationship between RTV and selfie behavior.

Some research focuses on selfie sharing behavior online, for example, Bayer et al.'s (2015) study on motivations for sharing selfies on *Snapchat*. However, few have studied motivational reasons for doing so. While Sung et al. (2016) posit the influential roles played by attention seeking, communication, and archiving selfies as predictors of posting selfies, we argue that there is a gap as to what drives individuals to use selfie-related behaviors as a means to compete for attention within their social network.

We argue for the mediation model because RTV viewers observe behavior that emphasizes the value of competition. Crocker et al. (2003) argue that CSW is a function

of our success and failures while competing in these domains, and our successes guide which domains we come to base our self-worth in. However, we extend the theoretical arguments around CSW and argue that traditional mass media is an influential source of information individuals use over time to select which contingencies to compete in. Incorporating SCT can help inform the development of CSW identification beyond current explanations. Thus, we argue heavy RTV viewing is associated with competition-based CSW and from the larger theoretical perspective, competition-based CSW should mediate the relationship between RTV and selfie-related behavior.

Notably, more than half of young television viewers watch videos or discuss media content with their friends (Lenhart et al., 2007; Nielsen, 2017b). Research suggests that discussing content consumed via traditional mass media reinforces and increases the effects of exposure to television programming. Stefanone and Lackaff (2009) found RTV consumption predicted sharing digital images online, and the effect of this relationship was strongest for participants who discussed RTV content with their friends. Directly related to the current study, Chae (2017) found that individuals are motivated to edit selfies in pursuit of idealized self-presentation online. Thus, in the continuing effort to extend these results, we propose the following hypothesis:

H2: For participants who discuss RTV, competition-based CSW mediates the relationship between RTV viewing and (a) capturing, (b) editing, and (c) sharing selfies.

As outlined above, celebrity culture promotes norms that value competition for attention, and evidence shows that women are more likely to use digital images for impression management (McAndrew and Jeong, 2012). Recall that Stefanone et al. (2011) found that women shared more images of themselves online, opposed to men. However, little research has investigated gender differences in the context of selfie-related behavior online (e.g. Sorokowski et al., 2016).

We argue that women take *more* selfies to increase the probability of capturing highly desirable images of themselves, opposed to men. They should also be more likely to optimize those images by editing them. Yet, in modeling celebrity-like behavior and competing for attention, we argue that women will share *fewer* selfies than men because males are less likely to be self-conscious of their appearance (Sparkes, 2015) and have lower levels of body dissatisfaction after exposure to idealized images of appearance (Krawczyk and Thompson, 2015). Thus, we propose the following hypotheses:

H3: Female participants are more likely to capture and edit selfies, opposed to male participants.

H4: Female participants post fewer selfies, opposed to male participants.

Apart from being influenced by traditional mass media and self-worth, individuals are also likely influenced by the affordances of and audience segmentation on different social media platforms. We elaborate by addressing cross-platform differences and online social network characteristics below.

## Platforms, audiences, and relationships

Idiosyncratic platform affordances likely influence self-presentation decisions. For example, Snapchat is distinct from other media platforms because shared content has a finite life span (Charteris et al., 2014). The image self-destruct mechanism enables users to capture and share temporary moments rather than posting more permanent images. Senders determine how long images can be viewed, and if receivers try to capture these images, Snapchat notifies the senders which effectively discourages the behavior. Snapchat is unique because of what happens to messages after they are viewed: they are deleted from the entire network (Poltash, 2012), which minimizes privacy risks. By providing users with increased control over shared content, we hypothesize the following:

H5: Participants post more selfies on Snapchat than Facebook.

A common strategy for optimizing the disclosure risk–reward ratio is to establish thresholds within which disclosers share personal information with trusted recipients (Pearce and Sharp, 1973). Individuals minimize vulnerability by being selective with audiences (Jourard, 1971). Alternatively, optimizing risk–reward ratios can occur via interactions with strangers who lack access to the discloser’s inner social circle and future interaction is not expected (Albrecht and Adelman, 1987).

These mitigation strategies generalize to selfie sharing behavior via social media platforms with different audience characteristics. Facebook and Snapchat offer individuals platforms to connect and interact with others. Social network sites connect supernets (Donath, 2007), which include weak and strong tie audiences and increased diversity due to inclusion of multiple disparate social groups (e.g. family, friends, co-workers). According to Lee-Won et al. (2014), the proportion of different categories of relationship ties within networks influences self-presentation. When networks are comprised of strong ties, individuals tend to be truthful and are less likely to engage in idealized self-presentation. Similarly, Stefanone et al. (2011) found that individuals with larger strong tie networks spent less time managing their profiles. Idealized self-presentation is less important in established relationships.

There is a positive relationship between effort managing self-presentation and network diversity. In the current study, self-presentation is optimized via selfie subject- and composition-editing behavior, and we argue individuals who identify with competition-based CSW have more diverse audiences online, and that diversity should predict selfie-related behavior. For example, capturing, editing, and sharing selfies can beautify images that are shared with the goal of building relationships among diverse audiences, many of whom are likely weak ties. Thus, we propose the following hypothesis:

H6: Audience diversity has a positive relationship with (a) capturing, (b) editing, and (c) sharing selfies.

Extant research also suggests that audience size moderates the relationship between audience diversity and strategic self-presentation behavior (Bazarova and Choi, 2014). Individuals with larger online social networks should spend more energy editing the digital content they create. Thus, we propose the following hypothesis:

H7: Audience size moderates the relationship between audience diversity and selfie-related behavior so that individuals with large *and* diverse audiences are more likely to edit their selfies.

Finally, abundant research has documented the role played by self-presentation in the creation and continuation of interpersonal relationships (e.g. Greene et al., 2006). Individuals strategically post content to achieve social rewards that include social validation, self-expression, and relational development (Derlega and Grzelak, 1979). Capturing, editing, and sharing selfies likely help individuals to attain these social rewards. We evaluate this proposition by hypothesizing the following:

H8: There is a positive relationship between selfie (a) capturing, (b) editing, and (c) posting with overall relationship satisfaction.

## Method

### *Participants and procedure*

An online survey was conducted at a large Northeastern University. Undergraduate students, who are among the heaviest SNS users, were recruited and given research credit for participation (see Smith and Anderson, 2018, for demographics of social media users). Informed consent was obtained, and all procedures were approved by the Institutional Review Board.

A total of 334 complete responses were collected over 6 days. The majority of participants were men ( $n = 191$ ; 57.2%). There were 63 first-year students (18.9%), 123 sophomores (36.8%), 75 juniors (22.5%), and 57 seniors (17.1%). Participants most often identified themselves as Caucasian Americans (53.3%), followed by Asian (21%), Other (9.6%), Hispanic (7.2%), African American (6.9%), Native American (1.5%), and Singaporean (0.3%). Table 1 summarizes means, standard deviations (*SDs*), and correlations for variables described below.

### *Measurement*

*RTV consumption* was measured on a scale ranging from 1 = “never” to 7 = “always.” Respondents were asked, “How often do you watch each of the following TV shows?” and were presented a list of the 15 top-rated RTV programs, including *Top Chef*, *Project Runaway*, *America’s Got Talent*, *The Voice*, *Keeping Up with the Kardashians*, and so on ( $M = 2.30$ ,  $SD = 1.25$ ,  $\alpha = .89$ ).

*RTV discussion* was measured with a two-item scale evaluating the extent to which participants discussed RTV programming with their friends, similar to Stefanone et al. (2011). Using the same 7-point scale, participants reported how often they watched RTV with someone else and the frequency of communicating with others about the programming ( $M = 3.02$ ,  $SD = 1.67$ ).

*Competition-based CSW* was measured using the five Likert-type items and the same 7-point scale developed by Wolfe and Crocker (2003). These items were used to measure the competition-based ( $M = 4.53$ ,  $SD = 1.12$ ,  $\alpha = .84$ ) contingency.

**Table 1.** Zero-order bivariate correlations among key variables.

Variables	1	2	3	4	5	6	7	8	9	10
Selfie taking frequency	–									
Selfie posting frequency	.64**	–								
Subject editing	.04	-.07	–							
Composition editing	.11	-.04	.63***	–						
RTV consumption	-.10	-.10	.48***	.37***	–					
RTV discussion	-.01	-.01	.36***	.38***	.62***	–				
Audience size	.08	.08	-.01	.04	.02	.15**	–			
Audience diversity	.15*	.18***	.04	.17**	.07	.16**	.29***	–		
Competition CSW	.10	.01	.19***	.16**	.02	-.06	.08	-.02	–	
Relationship satisfaction	-.12	-.13*	-.21***	.03	-.01	.08	.08	.08	-.02	–

RTV: reality television; CSW: contingencies of self-worth.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

*Audience size and diversity* were measured by asking participants, “Of the number of friends or followers you have on social media platforms, how many are family members ( $M = 35.31$ ,  $SD = 77.66$ ), co-workers ( $M = 18.77$ ,  $SD = 43.72$ ), school friends ( $M = 269.59$ ,  $SD = 245.92$ ), neighbors ( $M = 9.37$ ,  $SD = 22.73$ ), friends know through hobbies ( $M = 92.97$ ,  $SD = 156.50$ ), and friends know through religious organizations ( $M = 12.27$ ,  $SD = 38.77$ )?” A composite variable of audience size was created by adding the numbers of followers/friends ( $M = 421.28$ ,  $SD = 368.66$ ). On a scale ranging from 1 = “no friends on social media” to 7 = “all six segments on social media,” a composite of social network diversity was created ( $M = 5.14$ ,  $SD = 1.47$ ).

*Selfie-related behavior:* First, *selfie taking* was assessed by asking respondents to report the number of selfies—images of themselves, taken by themselves—they took during the past week ( $M = 10.78$ ,  $SD = 19.80$ ). We developed a new 13-item scale ( $\alpha = .93$ ) to measure the *selfie editing* construct. Through exploratory factor analysis with principal components extraction with varimax rotation (Kaiser-Meyer-Olkin = .924, Bartlett’s test:  $\chi^2 = 1972$ ,  $p < .01$ ), a two-factor solution emerged explaining 68.20% of the total variance (see Table 2 for summary). Examination of the scree plot confirmed the two-factor solution.

The first factor was comprised of elements related to overall *composition editing* ( $M = 3.70$ ,  $SD = 1.40$ ,  $\alpha = .86$ ), while the second factor included elements related to *subject editing* ( $M = 2.67$ ,  $SD = 11.57$ ,  $\alpha = .93$ ). The final measures of these constructs are reported in Table 2 with factor loadings and Cronbach’s alpha, two of the most frequently used tests for checking construct validity and reliability (Straub, 1989). All items met the commonly used .40 minimum level, and the Cronbach’s alphas were all well above the .70 threshold (Gefen et al., 2000).

*Selfie posting* was measured by asking participants to report the number of selfies they posted to social media during the past week ( $M = 4.31$ ,  $SD = 14.82$ ). Platform differences were accounted for by asking, “During the last week, how many selfies did you

**Table 2.** Measurement items, factor loadings, scale reliabilities, and descriptive statistics.

Variables	Items	Loading	Cronbach's $\alpha$	$M$ ( $SD$ )
Key factors in selfie editing				
Subject editing	I retouch my selfies	.67	.93	2.67 (1.57)
	I enhance the skin tone of my selfies	.79		
	I beautify my complexion in my selfies	.86		
	I slim the size of my face in my selfies	.89		
	I eliminate my acne in my selfies	.78		
	I automatically enhance my selfies by just clicking one button	.68		
Composition editing	I rotate or crop my selfies	.60	.86	3.70 (1.40)
	I manipulate the brightness of my selfies	.86		
	I manipulate the exposure of my selfies	.81		
	I apply filters to my selfies	.80		
	I make my selfies black and white	.53		

*SD*: standard deviation.

post on each of the following platforms: Facebook ( $M=1.07$ ,  $SD=4.44$ ) and Snapchat ( $M=7.94$ ,  $SD=16.98$ )?"

*Relationship satisfaction* was measured using three items adapted from Diener et al.'s (1985) Life Satisfaction Scale. Items included "In most ways my relationships are close to my ideal," "The conditions of my relationships are excellent," and "I am satisfied with my relationships" ( $M=5.20$ ,  $SD=1.18$ ,  $\alpha=.92$ ).

### Data analysis

We use SPSS 24.0 for descriptive and correlational analyses. Mplus 7.3 was used for structural equation modeling, which tests global model adequacy by simultaneously estimating structural coefficients and statistical significance for all coefficients. We also conducted overall goodness-of-fit tests. This is indicated when nonsignificant  $\chi^2$  has a ratio that is less than 5 for  $\chi^2/df$ , root mean square error of approximation (RMSEA) is less than .05, comparative fit index (CFI) is above .90, Tucker–Lewis index (TLI) is above .90, and standardized root mean square residual (SRMR) is less than .08 (Kline, 2005). At the local level, standardized regression coefficients for the hypothesized relationships were assessed based on statistical significance at the .05 alpha level.

### Results

Approximately 65% of participants reported capturing selfies during the past week. Participants took on average 10.78 ( $SD=19.80$ ) selfies and posted 4.31 ( $SD=14.82$ ) to social media platforms. The correlation between capturing and posting selfies was .52,  $p<.001$ . Our final model with competition CSW had an overall good model fit

**Table 3.** Measurement items, factor loadings, scale reliabilities, and descriptive statistics.

Variables	<i>M</i> ( <i>SD</i> )		<i>F</i>	<i>p</i>
	Females	Males		
RTV watching	2.66 (1.22)	2.04 (1.21)	20.78	.0001***
RTV discussion	3.43 (1.62)	2.69 (1.64)	18.00	.0001***
Selfie capturing	8.92 (13.96)	13.44 (25.82)	2.68	.103
Composition editing	3.92 (1.25)	3.38 (1.53)	7.83	.006**
Subject editing	2.73 (1.54)	2.60 (1.61)	0.37	.54
Selfie posting	2.08 (3.91)	7.49 (22.30)	6.99	.009**

*SD*: standard deviation; RTV: reality television.

\*\*\* $p < .01$ ; \*\* $p < .001$ .

( $\chi^2 = 25.75$ ,  $df = 14$ ,  $\chi^2/df = 1.84$ , RMSEA = .049, CFI = .972, TLI = .903, SRMR = .029; see Figure 1 for conceptual model and Figure 2 for final model). The rest of this section addresses this model.

At the local level, no relationship between RTV viewing and selfie taking frequency was found. Relationships between RTV viewing and subject editing ( $\beta = .36$ ,  $p < .01$ ), and between RTV viewing and composition editing ( $\beta = .38$ ,  $p < .001$ ) were meaningful. The relationship between RTV viewing and selfie posting was negative ( $\beta = -.25$ ,  $p < .01$ ). Thus, H1 was partially supported.

Our results indicate a moderating effect of RTV discussion on the relationship between RTV viewing and competition CSW, such that heavy viewers who also discuss content reported higher completion-based CSW ( $\beta = .09$ ,  $p < .01$ ). Results also indicate positive and significant relationships between competition CSW and both composition ( $\beta = .18$ ,  $p < .01$ ) and subject editing ( $\beta = .18$ ,  $p < .05$ ). Competition CSW was not a significant predictor of the frequency of selfie capturing or posting. For participants who discuss RTV, competition CSW mediated the relationship between RTV viewing and both composition and subject editing; H2 was partially supported.

On average, participants reported low levels of RTV consumption ( $M = 2.30$ ,  $SD = 1.25$ ), with women ( $M = 2.66$ ,  $SD = 1.22$ ) watching significantly more RTV than men ( $M = 2.04$ ,  $SD = 1.21$ ,  $F = 20.78$ ,  $p < .001$ ) (see Table 3). Female participants also reported discussing RTV content with friends more often ( $M = 3.43$ ,  $SD = 1.62$  vs  $M = 2.69$ ,  $SD = 1.64$ ,  $F = 18.00$ ,  $p < .001$ ) and engaging in composition editing ( $M = 3.92$  vs  $M = 3.38$ ,  $F = 7.83$ ,  $p < .05$ ) more often than males. Males reported posting ( $M = 7.49$ ,  $SD = 22.30$ ,  $F = 6.99$ ,  $p < .01$ ) more selfies than females ( $M = 2.08$ ,  $SD = 3.91$ ). However, females ( $M = 8.92$ ,  $SD = 13.96$ ) did not differ from males ( $M = 13.44$ ,  $SD = 25.82$ ) in frequency of selfie capturing. Thus, H3 was partially supported and H4 was supported.

A *t*-test was used to test the difference in posting frequency between platforms. Participants posted an average of 7.94 ( $SD = 16.98$ ) selfies to Snapchat and an average of 1.04 ( $SD = 4.01$ ) selfies to Facebook. These variables were log-transformed to normalize the distributions. Participants posted significantly more often to Snapchat,  $t = 15.89$ ,  $p < .01$ , support for H5.

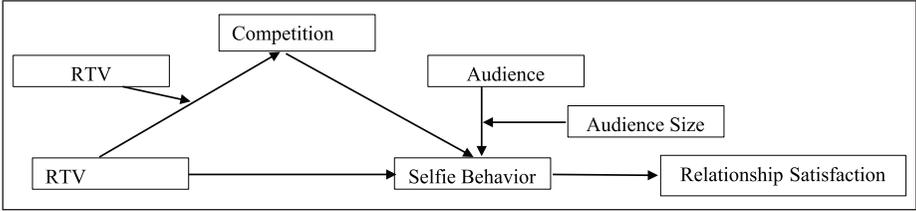


Figure 1. Conceptual model.

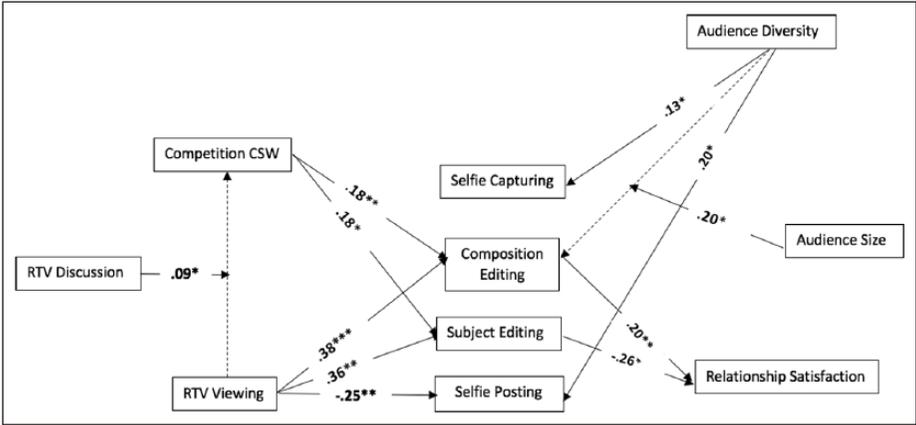


Figure 2. Final model. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Network diversity predicted taking ( $\beta = .13, p < .05$ ) and posting ( $\beta = .20, p < .05$ ) selfies but did not predict composition or subject editing; Thus, H6 was partially supported. However, audience size did moderate the relationship between network diversity and composition editing ( $\beta = .20, p < .05$ ). Participants with large and diverse audiences spent the most time optimizing digital content. H7 was supported.

Finally, in terms of relationship satisfaction, selfie taking and posting demonstrated no relationship. Subject editing and relationship satisfaction had a negative and significant ( $\beta = -.26, p < .01$ ) relationship. However, the relationship between composition editing and relationship satisfaction was positive ( $\beta = .20, p < .01$ ); H8 was partially supported.

### Discussion

The purpose of this study was to explore the relationship between traditional mass media (RTV), CSW, and subsequent social media use across platforms. We leveraged SCT to argue that RTV programming promotes a culture that values competition, which is an extension of research addressing origins of CSW. Heavy viewers tended to base their

self-worth on competitive behavior. Competition CSW mediated the relationship between RTV consumption and the three selfie-related behaviors explicated in this article. This is the first study to link traditional mass media use to selfie-related behavior, and to differentiate and operationalize the process of capturing, editing, and sharing selfies. To our knowledge, this is the first research suggesting that there are systematic cross-platform differences in selfie sharing behavior via social media, as well.

First, the overall mediation model was significant. The first step in this model showed RTV consumption and discussion explained competition CSW. Consistent with SCT, when individuals engage in discussion with others about television content, behaviors modeled on RTV are reinforced. This finding marks a theoretical contribution to the self-worth literature which is limited in terms of explanations about the processes behind how individuals develop identification with specific contingencies. These results show that the relationship between traditional and new media systems warrants additional inquiry.

Although extant research on selfie-related behavior suggests narcissism predicts selfie posting (Kim et al., 2016), we incorporated Crocker's (2002) scholarship on CSW to add more explanatory power to models predicting selfie-related behavior. Although competition CSW mediated the relationship between RTV viewing and composition—and subject-editing behavior—the relationships for capturing and sharing selfies were not significant. Consistent with our hypotheses, heavy viewers behaved more competitively by optimizing the visual characteristics of their selfies. They enhanced their selfies and functionally optimized self-presentation efforts. Interestingly, the process of editing selfies requires more energy and attention, compared to the acts of capturing and sharing selfies. Relatively less effort is needed to capture and share selfies, which may explain the pattern in these results.

One of the clearest findings highlights that although female participants capture selfies as frequently as males, they share significantly fewer selfies and are more likely to edit their selfies, compared to males. This is a clear indication that females are more selective in selfie posting, as expected. Males tend to share the images they capture, but females tend to be more mindful in terms of their online self-presentation. This is likely a reflection of the broader cultural value system prioritizing the importance of female image and appearance, which has been found in extant research on capturing digital images (Stefanone and Lackaff, 2009). Perhaps it is surprising that this value system persists today given the resources devoted to promoting interest in science, technology, engineering, and math among young women in the United States. The finding that female participants share far fewer selfies online is consistent with our conceptualization of selfies as part of a competitive enterprise where only the best images qualify for distribution.

We also observed systematic differences in selfie-related behavior between social media platforms. Participants demonstrated a clear preference for posting selfies via Snapchat. This difference is explained by affordances. Content shared on Snapchat is more or less temporary, which likely lowers concerns about how widely digital content will propagate across online networks. In addition, users have more control over audience selection on Snapchat, opposed to platforms like Facebook. This is a useful perspective to consider as the functionality and utility of social media tools continue to evolve, and the approaches users adopt to managing multiple audiences increase in sophistication.

As expected, audience characteristics also influenced selfie-related behavior such that large and diverse networks were associated with the most composition-editing behavior suggesting that selfie enhancement is a strategic and competitive self-presentation approach. Participants are aware of varying audience characteristics and adjust their behavior accordingly. Participants are savvy decision makers when it comes to generating and sharing content because when audiences consist of strong and weak ties, individuals invest more heavily in self-presentation effort to maintain or enhance their mediated relationships.

Interestingly, composition-editing behavior demonstrated a positive effect on relationship satisfaction, while subject editing had a negative effect. Recall that composition editing involves enhancing the quality of selfies *without* editing the facial features of the subject. This could reflect confidence about one's physical appearance. Alternatively, participants who only edit the composition may have more secure relationships with the audience they share selfies with, and thus are not motivated to manipulate the subject (their faces). It may also be the case that subject editing actually violates subtle interpersonal norms related to selfies. While the direction between composition editing and relationship satisfaction cannot be determined with the correlational data presented herein, future studies should attempt to identify if other factors, such as reciprocity through feedback, may alter the relationship between selfie editing behavior and relationship satisfaction.

Participants who indicated subject-editing behavior reported lower relationship satisfaction. Perhaps relationship satisfaction actually operates as the independent variable in this equation and drives editing behavior.

There are several limitations to the current work. For example, the list of RTV programming was not exhaustive. However, there is evidence that RTV programming is rather homogeneous. Regardless, future research could dedicate more resources to comprehensively assess this category of television consumption, and situate this part of participant's media diets within the larger context of their overall media consumption. In an effort to avoid participant fatigue, we were also forced to limit the number of items used to assess social media audience characteristics. We used a rather coarse measure to evaluate "global" social media audience size and diversity, but we acknowledge that there are likely systematic differences between platforms in terms of the composition of these variables. This would be a productive area for future research.

Overall, respondents indicated relatively low RTV consumption. Surprisingly, about 57% of participants indicated they did not watch RTV. This overall lack of variance limits the interpretability of the data. Limited heavy RTV viewers (only 3% in the current sample) made it difficult to detect differences in subsequent CSW characteristics and the full range of selfie-related behavior. Moreover, it would be beneficial to measure reality programming consumption *beyond* RTV. There are many popular reality programming options available through platforms like YouTube. YouTube is one of the most popular platforms used by young people to consume reality-type content (e.g. Burgess and Green, 2013). This would yield an increasingly diverse and representative sample of RTV programming which would yield a more overall model.

Overall, this study provides evidence about how content delivered via traditional media systems influences individual differences and new media use. Results contribute

to the growing literature focusing on the emergence and influence of CSW, and situate social media use in the broader context of mass media systems. The current research shows the potential benefits of employing increasingly global media perspectives in contemporary research addressing online behavior.

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