



Me versus them: Third-person effects among Facebook users

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Mina Tsay-Vogel

Boston University, USA

Abstract

The immense popularity of Facebook with more than 1 billion active users continues to spark the attention of communication scholars. While much is known about Facebook members' motivations, usage patterns, and gratifications obtained from this social networking site (SNS), minimal attention has been given to examine the perceived consumption and impact of Facebook on users themselves versus others. Applying the third-person effect (TPE) hypothesis to the context of social media, this research uniquely investigates the (a) difference in estimated Facebook effects on self versus others, (b) relationship between perceptions of Facebook use and estimated Facebook effects on self versus others, and (c) association between perceived desirability of Facebook as a social medium and estimated Facebook effects on self versus others. The aforementioned relationships are also moderated by gender and age. Implications for the relevance of TPE on users of SNSs are discussed.

Keywords

Facebook, media effect, perceived media effect, perceived media use, social media, social networking site, third-person effect

Introduction

Since the establishment of Facebook in 2004, this social networking site (SNS) has been adopted by more than 1 billion users, more than 80% of whom access Facebook through their mobile devices (Facebook, 2015). It is no surprise that this popular social networking

Corresponding author:

Mina Tsay-Vogel, Department of Mass Communication, Advertising & Public Relations, Boston University,
640 Commonwealth Avenue, Boston, MA 02215, USA.

Email: minatv@bu.edu

platform has generated the interest of scholars to investigate topics such as users' motivations for engagement (Waters and Ackerman, 2011), information exchange (Acquisti and Gross, 2006), attitude toward privacy (Debatin et al., 2009), social gratifications (Zhang et al., 2011), and impression formation (Van Der Heide et al., 2012), to name a few. In light of studies generally pointing to the influence of Facebook on relational maintenance (Ellison et al., 2007), self-disclosure (Barnes, 2006), social connectedness (Grieve et al., 2013), and distribution of information through comments, photos, videos, and music (Boyd and Ellison, 2007), an area that has received minimal attention is the *perceived effects* of SNSs on users themselves versus others.

Research examining the perceived influence of media has been principally applied to advertising (Henriksen and Flora, 1999), health (Wei et al., 2008), politics (Salwen, 1998), music (McLeod et al., 1997), violence (Hoffner et al., 2001), pornography (Lo and Wei, 2002), and so on. However, exploring perceptions of media influence in light of newer media (e.g. social media) has been relegated to the periphery. Due to continual advancements in emerging technologies and services that allow users greater control over information exchange, customization and personalization of content, and interactivity, it is imperative to explore how individuals view the impact of SNSs. To do so, the current investigation draws from the theoretical framework of Davison's (1983) third-person effect (TPE) hypothesis which suggests that people tend to perceive themselves to be less influenced by media than others. Such a proposition is predicated on a number of psychological mechanisms, including self-enhancement motivations, attribution biases, and schemas about media in general (Perloff, 1999). Whereas TPE has been widely supported in the context of traditional modes of communication (e.g. print, auditory, and visual) prior to the proliferation of social media platforms, it is unclear whether TPE still remains considering the evolving media climate which fosters the creation and exchange of information and ideas in virtual communities and networks. In particular, if individuals tend to underestimate the impact of media on themselves as compared to that on others, can we expect that TPE also occurs among users of SNSs, specifically Facebook?

TPE

The perception that others are more vulnerable to media influence than oneself best characterizes TPE (Davison, 1983). In other words, an individual believes that mediated messages do not have their greatest impact "on me or you, but on them" (Davison, 1983: 3). TPE has received considerable empirical support over the past decades (Cohen et al., 1988; Gunther, 1991, 1992, 1995; Gunther and Mundy, 1993; Gunther and Thorson, 1992; Paul et al., 2000; Perloff, 1989; Salwen and Driscoll, 1997). A key assumption of TPE is that estimates of media effects are distinct entities (i.e. people can differentiate communication effects on others and those on themselves) (Perloff, 1999). Some scholars have even referred to this estimated discrepancy in media effects as a "perceptual distortion" and suggest that most individuals are willing to accept this logical inconsistency (Tiedge et al., 1991).

The cognitive processes underlying TPE have generally pertained to how and why social comparisons and contrasts are made. Informed by attribution theory (Heider, 1958; Nisbett and Ross, 1980), TPE is fundamentally based on the desire to preserve a

positive self-concept, also referred to as the self-serving bias. Individuals are motivated to make downward comparisons (i.e. comparing themselves to those worse off) in order to maintain or enhance self-esteem (Arkin et al., 1980; Gunther, 1991). In fact, people will even make social comparisons to the point of upholding unrealistic positive images of themselves compared to others (Weinstein, 1980), producing an outcome that has often been termed as the “better-than-average” effect (Alicke et al., 1995). Hoorens and Ruiters (1996) suggest that for those who perceive media influence as indicative of undesirable traits, the notion that being able to resist media influence would indeed reflect being better off than others. However, if media influence is deemed desirable, the reverse would be true in that individuals would likely admit to being affected, resulting in a first-person effect (FPE) because such an influence is viewed as positive and highly valued.

Another explanation of TPE rests in the actor-observer attributional error (Gunther, 1991) which assumes that individuals have a tendency to underestimate the degree to which others take into consideration situational factors such as source intention. In addition, Perloff (1993) and Price et al. (1997) have suggested the partial influence of media schemas, or mental structures of preconceived ideas about the media, as producing these differential estimated media effects. For example, individuals tend to believe that media are powerful agents of change and adhere to stereotypes of the audience as being passive and normally susceptible to media influence. In turn, people are likely to logically infer that others are more vulnerable to media than themselves.

Application of TPE to Facebook

In light of extensive literature surrounding TPE, the contexts through which perceptual effects of media have been under scrutiny have occurred across different modes of traditional media such as print (e.g. newspapers) (Johnson et al., 2014), auditory (e.g. music) (McLeod et al., 1997), and visual (e.g. televised commercials) (Henriksen and Flora, 1999) forms of communication. However, to date, TPE has not been applied to newer forms of media that extend outside traditional media settings and environments (e.g. social media). Therefore, such an investigation warrants attention as studying variations in perceived media influence on self versus others in contemporary media climates may provide deeper insight into a more modern perspective of TPE.

Taking into account the popularity of SNSs due to the heavy usage patterns and technological capacities inherent in the Facebook environment (Ellison et al., 2007), Facebook serves as a relevant and suitable context for this study. Considering the psychological mechanisms (e.g. self-enhancement motivations, attribution biases, and schemas about media as having socially undesirable effects) that explain discrepancies in the perceived impact of media on self versus others, it is reasonable to expect similar TPE patterns among Facebook users. As increased information accessibility and control are even more prevalent in social media environments (Mangold and Faulds, 2009), users of Facebook are perhaps likely to overestimate the effects of Facebook on others more so than on themselves. This prediction is based on the notion that people are generally inclined to perceive themselves in the best light possible and to not admit to being succumbed by media influence as posited by Davison’s (1983) TPE hypothesis. With these theoretical considerations in mind, the following hypothesis is drawn:

H1. Facebook users will estimate greater Facebook effect on others than on themselves.

It is also important to consider demographic differences in information exchange and the use of SNSs as these individual differences may impact perceptions of the effect of social media. In terms of general information exchange, women have traditionally had a greater tendency to reveal more intimate content in face-to-face conversations than men (Jourard and Lasakow, 1958; Jourard and Richman, 1963). Such findings have been explained by sex roles, societal expectations, and the nature of socialization. Specifically, the stereotypical male is perceived as more independent, competitive, and unsympathetic as compared to females who are attributed as more dependent, emotional, and interpersonally oriented (Bardwick and Douvan, 1971; Maccoby and Jacklin, 1974). However, in the context of social media, evidence reveals more complex patterns in usage and motivations. In particular, females are more likely to use social networking for friendship, whereas males are more likely to use it for dating (Thelwall, 2008). Furthermore, Magnuson and Dundes (2008) found that females, to a greater extent, turn to social networking for validation, generally depending on others to help manage their sense of self. With regard to disclosures, males more readily reveal information about their sexual orientations, personal addresses, and mobile phone numbers and maintain a less private profile than do females (Acquisti and Gross, 2006; Taraszow et al., 2010; Thelwall, 2008).

In addition to gender differences, age differences in the use and perceptions of social networking have also emerged. Users aged between 18 and 22 years seem to be less aware of the potential risks of revealing personal information in their profiles than older users (Taraszow et al., 2010). Barnes (2006) indicated that teenagers and young adults disclose personal information more freely on SNSs and with less concerns about the invasion of privacy as compared to older adults. These patterns may not be surprising since Facebook originally included users who were exclusively college students in particular universities, gradually expanding its access to all college students, and now granting universal and global access. However, although the number of adults using SNSs has rapidly increased over the years, teens (13–17 years) and young adults (18–29 years) are the predominant users of social media (73% of teens online vs 47% of adults online use SNSs) (Lenhart et al., 2010). Due to potentially greater attraction to SNSs and digital resources among younger users and heightened privacy concerns about the public disclosure of identifying information among older users, age is an important variable to consider.

Therefore, predicting that individuals will report differences in Facebook effects on others and those on themselves, this research inquires whether gender and age moderate these estimated effects:

RQ1. Does estimated Facebook effect on users themselves differ across gender and age?

RQ2. Does estimated Facebook effect on others differ across gender and age?

Link between perceptions of Facebook use and effects

This study also suggests a link between estimated media use and effects. Traditional media effects theories have generally proposed and empirically supported that media

have an influence on audience's attitudes, perceptions, and behaviors (Bandura, 1982; McCombs and Shaw, 1993; Morgan et al., 2009). However, active audience theories suggest that media consumption is guided by the psychological and social needs of individuals and their motivation to actively select media for mood regulation purposes (Blumler and Katz, 1974; Zillmann, 2000). Marrying both perspectives, researchers have found that media use is a contributing factor to TPE (Eveland et al., 1999; McLeod et al., 1999), particularly as media effects require exposure to the media or content in question. For example, individuals may hold the belief that they are less influenced by media than others due to the perception that others are consuming more media in general. Thus, bearing in mind the theoretical link between perceived usage of a medium and perceived effects of the medium, it is reasonable to expect that users of Facebook will report greater use of Facebook by others as compared to themselves. In a similar vein, individuals who report greater Facebook use should also report greater effects of Facebook on themselves, and this pattern should also be true for the assessment of others. Therefore, the following hypotheses are drawn:

H2. Facebook users will estimate greater Facebook use by others than by themselves.

H3. Estimated Facebook use by users themselves is positively related to estimated Facebook effect on themselves.

H4. Estimated Facebook use by others is positively related to estimated Facebook effect on others.

Previously noted patterns of gender and age differences with regard to information exchange and social media use should also be taken into consideration. Thus, it is important to determine whether self-reported Facebook use and estimated use by others are different for males and females and younger and older users. Hence, the following research questions are raised:

RQ3. Does estimated Facebook use by users themselves differ across gender and age?

RQ4. Does estimated Facebook use by others differ across gender and age?

Nature of perceived Facebook effect and magnitude of TPE

An extension of TPE further considers that the nature of the message being evaluated influences the magnitude of TPE. Specifically, studies have supported the notion that perceived message desirability is negatively associated with the strength of TPE. Empirical support has shown that message topics such as seatbelt use (Gunther and Mundy, 1993), traffic safety (Hoorens and Ruiter, 1996), and the demonstration of prosocial behaviors, resistance to antisocial temptations, and concern for others (Duck and Mullin, 1995) lead to FPE. In such cases, people would report media messages as having greater impact on themselves as compared to others (Cohen and Davis, 1991; Price et al., 1998). In contrast, antisocial messages consequently result in more pronounced TPE such that individuals are more likely to report that other people are more impacted by a message when evaluating the effects of negatively valenced content. For example,

messages promoting diet pills (Gunther and Mundy, 1993), extreme right wing political affiliations (Hoorens and Ruiter, 1996), and violence, sexism, and racism (Duck and Mullin, 1995; Innes and Zeitz, 1988) manifest greater TPE. In light of the moderating effect of perceived message desirability on TPE, it is possible that the perceived desirability of a medium could have a comparable influence. Therefore, it is expected that if individuals perceive Facebook as a social medium that produces negative and harmful effects on users, a greater discrepancy in perceived Facebook effect on themselves versus others should result. In particular, the more that users of Facebook view its effects to be negative, the less they will report Facebook as influencing themselves and the more they will report Facebook as influencing others. The reverse should be true if users conceive Facebook as a positive influence on society, therefore leading to FPE. These proposed relationships are fundamentally grounded on self-enhancement motivations, particularly to protect and preserve one's sense of self and sharp judgment. Thus, the following hypotheses are drawn:

H5. The more negative the perceived Facebook effect, the greater the difference in estimated Facebook effect on users themselves versus others.

H6. The more negative the perceived Facebook effect, the less the estimated Facebook effect on users themselves.

H7. The more negative the perceived Facebook effect, the greater the estimated Facebook effect on others.

Likewise, it is critical to examine the degree to which gender and age have an impact on the aforementioned relationships. With regard to how the valence of the perceptions of Facebook's influence plays a role in users' estimated impact of Facebook on themselves and others, the following research question is addressed:

RQ5. Do gender and age moderate the relationships between the nature of perceived Facebook effect and the (a) difference in estimated Facebook effect on users themselves versus others, (b) estimated Facebook effect on users themselves, and (c) estimated Facebook effect on others?

Method

Participants and procedure

A total of 403 undergraduate students in communication courses at two large universities in the Northeastern and Central regions of the United States were recruited to participate in an online questionnaire approved by the Institutional Review Board. In the sample, 93.1% reported having an active Facebook account which served as the inclusion criterion for the study. Therefore, the analysis presented in this research is based on responses from 375 Facebook users due to the need for obtaining measures of Facebook use and perceived effects. Participants ranged in age from 18 to 55 years ($M = 19.64$ years, standard deviation [SD] = 4.34 years), with 21.8% males and 78.2% females.

Measures

Estimated Facebook effect. Traditional TPE studies measure the estimated effect of media on the self versus others by asking questions such as “What impact do media have on yourself/others?” (e.g. Gunther, 1991, 1992, 1995; Gunther and Mundy, 1993; Perloff, 1989; Salwen and Driscoll, 1997). Informed by these question formats, four Likert-scale items anchored by 1 (strongly disagree) and 7 (strongly agree) were developed and applied to the context of Facebook to assess individuals’ perceived impact of using Facebook on themselves. Items include the following: *My engagement with Facebook has an influence on me*, *My involvement with Facebook has an impact on me*, *I am influenced by Facebook content*, and *I am influenced by my use of Facebook* (Cronbach’s $\alpha = .95$). The same items were adjusted to measure the perceived impact of Facebook on others (Cronbach’s $\alpha = .96$). For instance, terms such as “me/my” were substituted with “them/other people’s.” An example item would be *Other people’s engagement with Facebook has an influence on them*. To eliminate order effects, all items measuring estimated Facebook effect on self versus others were randomly ordered.

Estimated Facebook use. Participants’ use of Facebook and their perceptions of how much others use Facebook were measured along two separate domains—duration and intensity. With regard to duration, individuals reported the average number of hours per day they use Facebook, along with an estimate of the average number of hours per day they think other people use Facebook. While studies have traditionally assessed media use in terms of duration, the richness of Facebook users’ experiences should also be considered. To assess intensity of use, measures were adopted from the intensity of Facebook use scale by Ellison et al. (2007). One item asked participants to report the number of total Facebook friends they have on an ordinal scale (0–10, 11–50, 51–100, 101–150, 151–200, 201–250, 251–300, 301–400, more than 400) and a series of six Likert-scale attitudinal items assessed users’ emotional connection with Facebook and extent to which they integrate Facebook into their daily lives, anchored by 1 (strongly disagree) and 7 (strongly agree). Sample items include the following: *Facebook has become part of my daily routine*, *Facebook is part of my everyday activity*, *I feel out of touch when I have not logged onto Facebook for a day*, and *I feel I am part of the Facebook community on campus*. Following the procedures of Ellison et al. (2007), individual items were first standardized and recoded to range from 0 to 1 before creating a mean index due to differing item scale ranges. The same items were used and adjusted to measure the perceived intensity of Facebook use by others. For instance, the term “my” was substituted with “other people’s.” An example statement would be *Facebook has become part of other people’s daily routine*. Items for the scales for self-reported intensity of Facebook use and perceived intensity of Facebook use by others were randomly ordered to eliminate order effects and had high internal consistency (Cronbach’s $\alpha = .86$ and $.84$, respectively).

Nature of perceived Facebook effect. A scale was created to measure the estimated valence of Facebook’s effect on users. The perceived nature of this effect was assessed by six Likert-scale items anchored by 1 (strongly disagree) and 7 (strongly agree) with three

items stating positive effects and three items stating negative effects. Example statements include the following: *I believe that the effect of Facebook on users is positive* (reverse-coded), *I believe that Facebook is a poor communication outlet*, and *I believe that the impact of Facebook on society is positive* (reverse-coded) (Cronbach's $\alpha = .83$). Note that higher mean scores for this variable indicate a stronger negative perception of Facebook with regard to its effects on users.

Results

A one-way repeated measures analysis of variance (ANOVA) was employed to examine the difference between estimated Facebook effect on others (Facebook effect_{others}) and estimated Facebook effect on themselves (Facebook effect_{self}). Findings indicated that Facebook effect_{others} ($M = 5.59$, standard error [SE] = .05) was significantly greater than Facebook effect_{self} ($M = 4.87$, $SE = .07$), Wilks $\lambda = .71$, $F(1, 372) = 151.95$, $p < .001$, partial $\eta^2 = .29$, showing support for H1.

A set of factorial ANOVAs were performed to determine whether Facebook effect_{self} and Facebook effect_{others} differ across gender and age, addressing RQ1 and RQ2, respectively. A median split was performed to dichotomize age into younger (<19.64 years; $n = 287$) and older (19.64+ years; $n = 116$) Facebook users. The analyses showed that females ($M = 4.97$, $SE = .08$) reported significantly greater Facebook effect_{self} than did males ($M = 4.51$, $SE = .15$), $F(1, 373) = 7.20$, $p < .01$, partial $\eta^2 = .02$, and younger users ($M = 4.99$, $SE = .08$) estimated significantly greater Facebook effect_{self} than did older users ($M = 4.54$, $SE = .14$), $F(1, 373) = 7.83$, $p < .01$, partial $\eta^2 = .02$. While there was no difference in Facebook effect_{others} between males and females, younger users ($M = 5.73$, $SD = .91$) estimated significantly greater Facebook effect_{others} than did older users ($M = 5.22$, $SD = 1.01$), $F(1, 371) = 21.48$, $p < .001$, partial $\eta^2 = .06$.

A series of one-way repeated measures ANOVAs were performed to test for differences between self-reported use of Facebook and estimated use of Facebook by others with regard to both duration and intensity of Facebook use. The analysis revealed that perceived duration of Facebook use by others ($M = 3.43$, $SE = .14$) was significantly longer than self-reported duration of Facebook use ($M = 2.32$, $SE = .12$), Wilks $\lambda = .84$, $F(1, 374) = 71.79$, $p < .001$, partial $\eta^2 = .16$. In addition, perceived intensity of Facebook use by others ($M = .86$, $SE = .01$) was significantly stronger than self-reported intensity of Facebook use ($M = .74$, $SE = .01$), Wilks $\lambda = .70$, $F(1, 373) = 162.90$, $p < .001$, partial $\eta^2 = .30$. Therefore, findings show support for H2.

Correlation analyses showed that self-reported Facebook use in terms of duration of use ($r = .32$, $p < .001$) and intensity of use ($r = .59$, $p < .001$) was positively related to Facebook effect_{self}, showing support for H3. In addition, estimated Facebook use by others in terms of duration of use ($r = .20$, $p < .001$) and intensity of use ($r = .45$, $p < .001$) was positively related to Facebook effect_{others}, showing support for H4.

A set of factorial ANOVAs were performed to determine whether self-reported Facebook use (duration and intensity) and estimated Facebook use by others (duration and intensity) differ across gender and age, addressing RQ3 and RQ4, respectively. The analyses showed no difference between males and females for duration of Facebook use; however, younger users ($M = 2.54$, $SE = .17$) reported significantly longer duration of

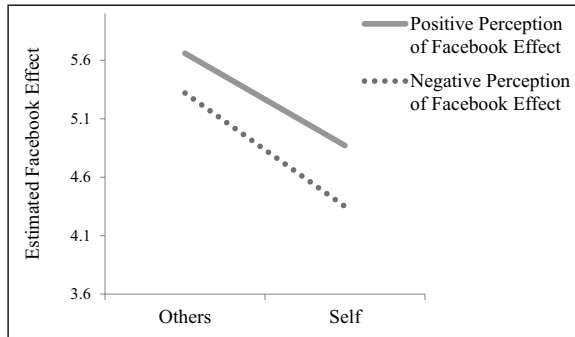


Figure 1. Relationship of nature of perceived Facebook effect to Facebook effect_{others} and Facebook effect_{self}

Facebook use than did older users ($M=1.72, SE=.26, F(1, 371)=7.13, p<.01$, partial $\eta^2=.02$). For self-reported intensity of Facebook use, results indicated that females ($M=.75, SE=.01$) reported significantly stronger intensity of Facebook use than did males ($M=.64, SE=.02, F(1, 370)=17.33, p<.001$, partial $\eta^2=.05$). In addition, younger users ($M=.73, SE=.02$) reported significantly stronger intensity of Facebook use than did older users ($M=.66, SE=.02, F(1, 370)=8.95, p<.01$, partial $\eta^2=.02$). With regard to estimated duration of Facebook use by others, although there was no difference between males and females, younger users ($M=3.46, SE=.16$) reported significantly longer duration of Facebook use by others than did older users ($M=2.50, SE=.25, F(1, 371)=10.31, p<.01$, partial $\eta^2=.03$). For estimated intensity of Facebook use by others, females ($M=.87, SE=.01$) reported significantly stronger intensity of Facebook use by others as compared to males ($M=.83, SE=.01, F(1, 371)=4.41, p<.05$, partial $\eta^2=.01$). Moreover, younger users ($M=.88, SE=.01$) reported significantly stronger intensity of Facebook use by others as compared to older users ($M=.81, SE=.01, F(1, 371)=9.07, p<.01$, partial $\eta^2=.02$).

A linear regression analysis showed that the more negative the perceived Facebook effect, the greater the difference between Facebook effect_{others} and Facebook effect_{self} ($\beta=.19, t=3.80, p<.001$), showing support for H5. When regressing perceived negative Facebook effect on Facebook effect_{self} and Facebook effect_{others} separately, results indicated that the more negative the perceived effect of Facebook, the less Facebook effect_{self} ($\beta=-.24, t=4.67, p<.001$) and the less Facebook effect_{others} ($\beta=-.11, t=2.18, p<.05$). While findings support H6, but not H7, it is important to note that whereas Facebook effect_{others} decreased with more negative perceptions of Facebook effect (contrary to the prediction), comparing the β coefficients for perceived negative Facebook effect shows that this variable is weaker at predicting the reduction in Facebook effect_{others} as compared to Facebook effect_{self}. Figure 1 displays the overall pattern for the relationship of the nature of estimated Facebook effect to Facebook effect_{others} and Facebook effect_{self}.

To address RQ5, a series of 2 (Gender: male, female) \times 2 (Age: young, old) \times 2 (Nature of Perceived Facebook effect: positive, negative) factorial ANOVAs were employed on (a) difference in estimated Facebook effect_{others} and Facebook effect_{self}, (b) Facebook

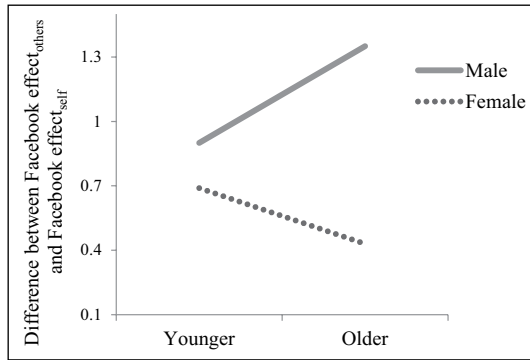


Figure 2. Gender \times Age interaction on difference between Facebook effect_{others} and Facebook effect_{self}

effect_{self} and (c) Facebook effect_{others}. A median split was performed to dichotomize nature of perceived Facebook effect into positive (<3.16) and negative ($3.16+$) perceptions of Facebook influence. For the difference in estimated Facebook effect_{others} and Facebook effect_{self} the analysis yielded a significant Gender \times Age interaction, showing that the difference in Facebook effect_{others} and Facebook effect_{self} between males and females is significant among older Facebook users, $F(1, 365)=5.29, p<.05$, partial $\eta^2=.01$ (see Figure 2). For mean scores on the difference between Facebook effect_{others} and Facebook effect_{self} see Table 1. In addition, there was a main effect of gender such that there was a greater difference between Facebook effect_{others} and Facebook effect_{self} for males ($M=1.12, SE=.13$) than for females ($M=.56, SE=.08$), $F(1, 365)=13.49, p<.001$, partial $\eta^2=.04$. For Facebook effect_{self} the analysis revealed a gender effect such that females reported greater Facebook effect_{self} ($M=4.88, SE=.09$) than did males ($M=4.40, SE=.16$), $F(1, 367)=6.83, p<.01$, partial $\eta^2=.02$. Moreover, younger users reported greater Facebook effect_{self} ($M=4.92, SE=.10$) than did older users ($M=4.36, SE=.15$), $F(1, 367)=9.59, p<.01$, partial $\eta^2=.03$. Finally, for Facebook effect_{others}, although no gender effect emerged, an age effect indicated that younger users reported greater Facebook effect_{others} ($M=5.74, SE=.07$) than did older users ($M=5.25, SE=.11$), $F(1, 365)=14.68, p<.001$, partial $\eta^2=.04$.

Discussion

The goals of this research were to examine the difference in estimated Facebook effects on self versus others, the relationship between perceptions of Facebook use and estimated Facebook effects on self versus others, and the association between perceived desirability of Facebook as a social medium and estimated Facebook effects on self versus others. The data provide significant support for TPE in the context of social media. Consistent with Davison's (1983) TPE hypothesis which was applied to users of Facebook, the patterns of results indicate that Facebook users have a greater tendency to report this SNS as exerting a stronger effect on others than on themselves. Analogous to

Table 1. Difference between Facebook Effect_{others} and Facebook Effect_{self}: Gender × Age interaction.

	Facebook users	
	Younger	Older
Male		
M	.90 _{Aa}	1.35 _{Ba}
SE	.16	.22
Female		
M	.69 _{Aa}	.43 _{Aa}
SE	.07	.13

SE: standard error.

Using Holm's sequential Bonferroni post hoc comparisons, within rows, means with no lower case subscript in common differ at $p < .05$; within columns, means with no upper case subscript in common differ at $p < .05$.

the estimated impact of Facebook, individuals also reported less usage of the site in both duration and intensity compared to their perceived Facebook usage by others. Additionally, consumption of Facebook was positively associated with the magnitude of its estimated effects for assessments of self and others.

The current investigation further supports the theoretical link between media use and effects consistent with Eveland et al. (1999) and McLeod et al. (1999). Specifically, the findings buttress the insightful relationship between one's "perceived use" and "estimated effect" of media (i.e. social media). This positive association suggests that Facebook users who are reporting higher use of the SNS are also consciously estimating greater effects of it on themselves (e.g. the impact of Facebook content, use, engagement, and involvement). The same is true when assessing the use of Facebook by others and the effect of Facebook on others. Therefore, while most media studies apply a theoretical framework of assuming audiences are either passive or active, it is critical to not isolate these perspectives and hold them as mutually exclusive. Rather, scholars should marry these theoretical viewpoints due to both individuals' conscious awareness of their use of media and their estimated reports of the magnitude of media's effect on people (both on themselves and on others). In addition, while TPE has been examined predominantly in the form of traditional media, this research sheds light on the discrepancy that lies in the estimated use and effects of Facebook between self and others. It remains that people will report stronger effects of Facebook on other users and less on themselves. Therefore, Davison's (1983) original propositions of the more demanding and pronounced effect of media on "them" (the third persons) as compared to "me" (the first person) holds true, even when applying the hypothesis to newer media environments.

This study also demonstrates the important role of medium desirability in impacting the magnitude of TPE. Specifically, this research assessed perceptions of Facebook effects (e.g. impact of Facebook on users and society and as a social medium and communication outlet). While scholars have found that prosocial messages decrease TPE and in fact produce FPE such that people report being more influenced by these messages than others (Cohen and Davis, 1991; Duck and Mullin, 1995; Gunther and Mundy, 1993;

Hoorens and Ruiter, 1996; Price et al., 1998), antisocial messages show even more pronounced TPE (Duck and Mullin, 1995; Gunther and Mundy, 1993; Hoorens and Ruiter, 1996; Innes and Zeitz, 1988). Taking into consideration perceptions of Facebook and its estimated effects, this study revealed that the more Facebook members perceived its influence to be negative, the more noticeable the difference in estimated Facebook effect between self and others. Specific patterns also emerged indicating that the more users deemed the impact of Facebook as unfavorable, the more their estimates of its effects on themselves and on others diminished. However, the decrease in the perceived effect of Facebook was slightly more magnified on the self than on others as unfavorable perceptions of Facebook increased. These results support the notion that desirability of the medium has a bearing on the strength of TPE and that TPE is situation-specific. In particular, self-serving bias and self-enhancement motivations may have led to a greater decrease in reporting Facebook's influence on users themselves than when the context was in reference to "others." However, users did not report greater Facebook impact on themselves as compared to others when they perceived the medium as desirable. Thus, FPE was not supported in this research.

The findings noted above may also be explained by the social distance corollary which suggests that the nature of TPE depends on the identity of the comparison others (Davison, 1983). Specifically, scholars have found that TPE diminishes when the social distance between self and others decreases, and TPE amplifies when others increase in generality (Cohen et al., 1988; David and Johnson, 1998; Duck and Mullin, 1995; Gunther, 1991; McLeod et al., 1997). Applying the social distance corollary to Facebook, it is possible that when asked to evaluate "other" users of Facebook, individuals may perceive others as those in their respective social networks (e.g. close friends). Therefore, the psychological distance between self and others is perhaps conceived as highly intimate and not distant. If users are assessing the impact of Facebook on their own friends, the motivation to preserve one's self-esteem and positive self-concept may be particularly high, and thus, users would be less likely to report their own friends as being susceptible to social media influence. Furthermore, evaluation of oneself may be congruent to that of close friends due to the process of projection. In addition, if individuals conceive of other Facebook users as their friends, these comparison others are no longer considered anonymous, but rather possess personal identifiers and familiarized attributes. As a result, it is critical to point out the conceptual and methodological challenges when evaluating "hypothetical others." While the association between self and others is theoretically significant, the social media environment further complicates the examination of comparison others, primarily due to the virtual boundaries and private networks afforded by SNSs. Therefore, future studies that examine TPE in the context of social media should consider refining the term "others" by capturing users' assessments of those who are linked versus not linked to their respective networks or preconceptions about other Facebook users based on gender, age, and so on. This suggestion is important in that the psychological relationship between a user and his or her friends and that between a user and strangers may significantly impact the magnitude of TPE.

Moreover, a host of gender and age differences emerged in this study. Results point to greater self-reported Facebook effects for females and younger users, with the latter group reporting stronger estimated impact of Facebook on others than older users. These

gender and age differences could be partly explained by the overall trend that female and younger users consume Facebook more than males and older users, respectively. Such patterns also apply to the estimated consumption of Facebook by others. Since our data confirmed that the level of Facebook use and perceived effects of Facebook were positively associated, this may account for why female and younger users estimated the greatest influence of the SNS on themselves. In addition, the gender and age interaction on the difference between estimated Facebook effects on self and others surprisingly shows a larger discrepancy in the perceived impact of Facebook between self and others for older adults. Specifically, TPE was more pronounced for older male users than older female users. As previously noted, frequent users of Facebook might evaluate comparison others differently based on their level of involvement with the SNS. It is possible that heavier users view "others" as friends in their social networks rather than attribute them to the universe of Facebook users. Therefore, drawing from the social distance corollary, older users perhaps conceive of "others" as more generalized others than specialized others (e.g. close friends) due to less exposure to Facebook than younger users. This may theoretically explain why the difference between estimated Facebook effects on others versus the self was greater among older users, whereas there was no difference among younger users.

It is critical to acknowledge methodological limitations in this research. First, the unequal gender distribution skewing toward females perhaps impacted the results. Therefore, future studies should certainly consider equal gender subsamples to more accurately investigate the effects of gender on TPE. Second, scholars may consider employing more effective measures of Facebook use that consider time availability as a dimension because perceived intensity of usage could be based on the amount of free disposable time one has to actively engage in social networking. Third, there are methodological shortcomings when measuring TPE. For the purposes of this study, the items assessing self-reported use of Facebook, estimated use of Facebook by others, and estimated perceptions of Facebook effects on self and others were counterbalanced to eliminate order effects. However, the measures for perceived impact of Facebook could be threatened by the wording of the statements. It is possible that users may be more willing to report effects of Facebook on themselves if statements were phrased, "I let myself be influenced by Facebook" (in the active voice), rather than "Facebook influences me" (in the passive voice). Therefore, future research should consider the phrasing of such statements which may imply varying degrees of passiveness and assertiveness (Brosius and Engel, 1996), consequently producing different evaluations of the effects of media.

In conclusion, this research shows considerable support that Davison's (1983) TPE hypothesis is a reliable and persistent phenomenon that extends beyond traditional media. In particular, findings show that TPE evidently exists among users of social media and these effects are moderated by gender and age. Yielding discrepancies in Facebook users' perceptions of consumption and impact between themselves and others, this study invaluablely contributes to both TPE and social media literature. Future scholarship should indeed consider whether and to what degree TPE influences the adoption, use, and perception of newer and more enhanced social media tools as well as policymaking in terms of censorship and privacy. These potential avenues for exploration will provide a deeper

theoretical understanding of the importance of studying perceptions of media effects considering the perpetually changing nature of new media technologies.

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Author biography

Mina Tsay-Vogel is an Assistant Professor in the Department of Mass Communication, Advertising & Public Relations and the Associate Director of the Communication Research Center at Boston University. She specializes in the psychological and social effects of mass media with an emphasis on entertainment and social media. Her work has been published in journals such as *Human Communication Research*, *Journal of Media Psychology*, *Communication Monographs*, *Mass Communication and Society*, and *The Psychology of Popular Media Culture*, among others.