

# This is the Way the World “Friends”: Social Network Site Usage and Cultivation Effects

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Social network sites (SNSs) such as Facebook and Twitter have become a primary means of communication over the past decade. Prior research (e.g. Gerbner, Gross, Morgan, & Signorielli, 1980) has indicated that recurring themes in media can make those themes chronically available in consumers, altering interpersonal attitudes and overall worldview. Previous research demonstrated primarily negative impacts of chronic television consumption, with increased perceptions of the frequency of violent crime, infidelity in romantic relationships, and personal vulnerability to both, dubbed “Mean World Syndrome.” However, if SNS use continually primes users with social connection,

then more positive, trusting social attitudes may result instead. An initial study showed a positive correlation between intensity of SNS use and endorsement of trusting social attitudes; a follow-up study demonstrated a causal effect for SNS primes on the same broad attitudes. These findings suggest frequent, intense SNS use may create a “Friendly World Syndrome” that mirrors established cultivation effects for television. Implications for SNS use, potential mechanistic explanations, and future directions of inquiry are discussed.

*Keywords: social network sites; online interaction; social attitudes; cultivation*

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**T**he story of modern human interaction cannot be fully told without accounting for the role of media. Unsurprisingly, media consumption has become the leading use of free time in the United States and most other industrialized nations (Dill, 2009), as well as a major component of many occupations. In the modern world, the study of the human mind and the impacts of media consumption overlap considerably, and seem likely to remain so for the foreseeable future.

Researchers and lay individuals alike acknowledge the power of media to shape beliefs and expectations about the real world. The world as it is and the world as depicted in popular media are, of course, very different places. Research on the impacts of chronic exposure to these altered assessments of reality renders a consistent verdict: concepts and characteristics frequently displayed in media influence the consumer’s real-world

perceptions and behaviors over time, in areas as diverse as aggression (Anderson & Bushman, 2001), prosocial behavior (Sestir & Bartholow, 2010), persuasion (see van Laer, de Ruyter, Visconti, & Wetzels, 2014, for a review), and self-concept (Sestir & Green, 2010).

Among recent developments in popular media, the most prominent is the growth of social network sites (SNSs). SNSs have become wildly popular, moving from the fringes of the Internet to near-ubiquity in scarcely a decade—by 2018 an estimated 3.2 billion people held an active SNS account (Global Digital Statshot, 2018). Thus, a large and increasing proportion of social information is now being transmitted and received via a medium with little prior media analogue.

## **LITERATURE REVIEW**

The potential importance of SNS use has not gone unnoticed: research has found impacts as diverse as increases in social capital (Ellison, Steinfeld, & Lampe, 2007; Ellison, Vitak, Gray, & Lampe, 2014), the internalization of alcohol-related norms (Fournier, Hall, Rieke, & Storey, 2013), and increased jealousy and dissatisfaction in romantic relationships (Utz & Beukeboom, 2011). It is clear the use of SNSs is psychologically influential in a wide array of domains. But impacts on broader social and interpersonal attitudes have received less attention.

### **Cultivation Theory**

One framework that may help delineate the impacts of SNS use is that of cultivation theory. Cultivation theory originally argued that frequent television consumption led to development of attitudes and beliefs consistent with frequent characteristics of TV content. These common themes – collectively called “meta-messages” (Gerbner et al., 1980; Gerbner, 1998) – included high rates of violence, betrayal, and marital infidelity. Frequent television viewers showed a pronounced tendency to overestimate both the frequency of violent crime and their personal risk of victimization (Gerbner et al., 1980), and expressed more social mistrust (Shrum, 1999). These attitudes and perceptions generally converged on the idea of a far more dangerous and threatening world than reality. As such, these tendencies were collectively dubbed Mean World Syndrome (Gerbner, Gross, Morgan, Signorielli, & Shanahan, 2002).

Cultivation theorists typically distinguish between effects on “first-order judgments” of frequency and probability and “second-order” judgments such as attitudes and values. First-order judgments tend to be constructed when a judgment is requested, allowing for available examples from media content or easily simulated hypotheticals to influence estimates. Thus, the cultivation effect is mediated by the accessibility of related concepts (Shrum, Burroughs, & Rindfleisch, 2004; Shrum, 2007). The more complex second-order judgments are typically believed to be constructed at the time of consumption, rather than when prompted, making them less influenced by concept accessibility at the time of judgment (Shrum, 2007, 2009). While the mechanism for second-order effects is less established, researchers (Shrum, 2001; Shrum, Lee, Burroughs & Rindfleisch, 2011), have found evidence that attention to and transportation into media content moderates cultivation effects.

Cultivation theory and research originally focused on television viewing. But the underlying mechanisms are based on principles flexible enough to apply to other forms of media content. Cultivation effects may well generalize to more modern modalities, such as SNSs.

### **Application to Social Network Sites**

Although SNSs can serve a variety of non-social purposes and are heavily tailored to individual users, they are used primarily as social networks – virtual proxies for relationships accumulated over the course of a lifetime. As such, it is plausible that among the primary meta-messages of SNSs are social connection and support.

Though SNSs are not restricted to contact with social connections, they are primarily used for this purpose (e.g. Smock, Ellison, Lampe, & Wohn, 2011); thus a frequent and engaged SNS user is likely being continually exposed to reminders of a broad array of social ties they have with others. This is particularly true with many of the most popular SNSs, such as Facebook. Reactions to such constant access are not always positive, but availability and engagement with social network members have consistently been identified as primary benefits of SNS use by a diverse range of SNS users including students (Hamid, Waycott, Kurnia, & Chang, 2015; Belangee, Bluvshstein, & Haugen, 2015), health communicators (see Moorhead et al., 2013, for a review), and government employees (Khan, Swar, & Lee, 2014). Therefore, it seems plausible under the cultivation

perspective that chronic SNS use would continually prime users with social connections and concepts associated with them.

In addition, SNS use has been frequently linked to relationship-related outcomes. This includes benefits such as higher levels of social trust (Baek, Bae, & Jang, 2013; Valenzuela, Park, & Kee, 2009) and greater life satisfaction overall (Valenzuela et al., 2009). Conversely, negative associations have also been demonstrated, with some research indicating that SNS use can correlate with increased loneliness (Gentzler, Oberhauser, Westerman, & Nadorff, 2011), conflict with family (Zheng & Lee, 2016), and negative social comparison and jealousy within close relationships (Fox & Moreland, 2015). Despite mixed valences, a consistent theme is the relationship between SNS use, social connection and evaluative social judgments.

This idea has several implications, but among the most prominent is the possibility that chronic SNS use, particularly involving high engagement and attention, could cultivate positive social expectations and beliefs. This “Friendly World Syndrome” could emerge from a similar process as the established “Mean World Syndrome,” but instead of social mistrust and fear, SNS use could engender a stronger sense of social support and ability to rely on others.

### **Purpose and Hypothesis**

The primary aim of the current research was to apply the principles of cultivation theory to this distinctly modern modality of SNSs. If chronic SNS use does increase availability of social connection, then it should be associated, both correlationally and causally, with more positive, trusting social attitudes. Study 1 was designed to provide an initial test for this primary hypothesis by demonstrating a positive correlation between intensity of SNS use and endorsement of “Friendly World” social attitudes. The hypothesis was:

H1. Social network intensity scores will be positively correlated with scores on the Friendly World Syndrome measure.

Additionally, a series of prevalence estimates used in past cultivation research (Shrum, Wyer, & O’Guinn, 1998) were included in the paradigm. These prevalence estimates, in which participants estimate the frequency of violent criminal behavior,

occupations frequently depicted in television content, and behaviors enacted by those occupations, were included to determine if SNS effects could apply to commonly assessed first-order judgments; however, their use was exploratory, and no specific hypotheses were created for these items.

## STUDY 1 METHOD

### Ethical Review

The Institutional Review Board at the author's institution granted approval for all materials and procedures of both Study 1 and Study 2.

### Participants

Two hundred and twenty-six individuals, recruited online via the Mechanical Turk system, participated for a small monetary incentive (\$0.30). Two participants did not answer most items, and one provided identical responses to all items, including the reverse-scored; these participants were dropped from analyses, leaving a final sample of 223. The sample consisted of 57% men, and 43% women, with 58% of participants reporting an age of 29 or less.

### Materials

**Social Network Intensity Scale (SNI).** The Facebook Intensity Scale (Ellison et al., 2007) has been frequently used in past research as a measure of degree of engagement with the popular SNS platform (e.g. Ellison, Steinfeld, & Lampe, 2008; Kalpidou, Costin, & Morris, 2011; Lou, Yan, Nickerson, & McMorris, 2012). In this study, it was modified to refer to SNSs generically rather than only Facebook. Six items measured basic SNS activity such as sites used, number of friends, and time spent on SNS per day. All were rated on a Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Items regarding quantity of use and friends were scored on a 1-7 scale where higher scores reflected larger estimated numbers. ( $\alpha = .84$  in current sample). An added item asked participants to identify the SNSs they regularly visited; this item was used simply to assess popularity of specific SNSs among the sample.

**Friendly World Scale (FWS).** Three attitude items related to general worldview and trust were directly modified from the original Mean World Scale (Gerbner et al., 1980), with item valence reversed – for example, “Most people are just looking out for

themselves” was adjusted to “Most people are looking out for others.” That item, and the others: “You can be too cautious in trusting other people” and “Most people would go out of their way to help you out if they got the chance,” were rated on a Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) ( $\alpha = .79$  in current sample).

**Prevalence estimates.** Twenty items were drawn from an established scale of cultivation effects (Shrum et al., 1998). Eleven items assessed the perceived prevalence of criminal behavior overall; for example, “What percent of all crimes are violent crimes—like murder, rape, robbery, and aggravated assault?” Five items measured perceived vulnerability of self and close others to criminal behavior; for example, “What do you think the chances are that you, a member of your family, or one of your close friends might be the victim of an assault during the next year?” The remaining four items assessed the estimated frequency of occupations disproportionately seen in the media, such as, “What percentage of the U.S. workforce are lawyers?” All items were rated from 0% to 100%, with higher scores reflecting greater prevalence/percentages ( $\alpha = .92$  in current sample).

## Procedure

After providing consent, participants were asked to complete demographic questions identifying gender, age, and country of origin. Participants then completed the Friendly World Syndrome scale, the prevalence estimate items, and Social Network Intensity scale, then were debriefed.

## RESULTS

Facebook was by far the most frequently used SNS, with 94.6% of participants reporting they used an account at the site. All other SNSs had usage rates below 30%. The mean SNI score in the sample was 3.51,  $SD = 1.03$ , while the mean FWS score was 3.1,  $SD = .72$ .

H1 was supported, as aggregate SNI and FWS scores were significantly positively correlated,  $r(221) = .29$ ,  $p < .001$ . Prevalence estimates did not significantly correlate with either Social Network Intensity,  $r(223) = .10$ ,  $p = .13$ , or with Friendly World Scale scores,  $r(221) = -.09$ ,  $p = .18$ . Additionally, neither SNI nor FWS significantly correlated with any subscales, (all  $r$ s  $< +/- .11$ ,  $ps > .10$ ), with one exception: SNI was significantly positively

correlated with prevalence estimates of occupations frequently depicted in popular media,  $r(221) = .16, p = .019$ .

There were substantial gender differences, with women ( $M = 3.8, SD = .92$ ) scoring significantly higher on SNI than men ( $M = 3.29, SD = 1.05$ ),  $t(221) = 3.81, p < .001, D = .52$ . Women also scored substantially higher on the prevalence estimate measure, with higher scores on the Criminal Prevalence ( $M = 29.46, SD = 18.57$ ), Vulnerability to Crime ( $M = 25.95, SD = 20.1$ ), and Occupational Frequency ( $M = 23.49, SD = 15.6$ ) subscales than men (Respective Ms = 22.8, 12.76, 19.69, SDs = 14.97, 15.49, 11.51),  $t_s > 2.09, p_s < .04$ . However, men and women did not differ on FWS scores,  $t(221) = .029, p = .977, D = .00$ , and the SNI-FWS correlation was significant for both men,  $r(126) = .29, p = .001$ , and women,  $r(93) = .31, p = .002$ .

## DISCUSSION

Study 1 demonstrated that higher intensity of SNS use is associated with endorsement of positive, trusting social attitudes. This provides an initial indication of possible cultivation-type effects of more engaged SNS use, effects that, unlike Mean World Syndrome, would be expected to have broadly positive implications. If accurate, this would suggest a host of implications of frequent, engaged SNS use, both on the individual and population levels.

However, no relationship was found between SNS intensity and judgments of prevalence of violent crime and personal vulnerability to it. There was, however, a significant correlation with perceived prevalence of occupations disproportionately depicted in television content. This could suggest that intense SNS users also tend to be high viewers of television or television-like (streaming services, etc.) content, or that both television and popular SNSs tend to provide more content about the same occupations; regardless, it demonstrates that the first-order prevalence estimates associated with television use and Mean World Syndrome do not display the same inverse relationship with SNS use as the broader social attitude measure does. This suggests that the proposed “Friendly World Syndrome” is not simply a mirror image of Mean World Syndrome but instead is linked to the specific set of meta-messages received across typical SNS use.

Though women scored higher than men on SNI and all prevalence estimates subscales, their correlation between SNI and FWS was almost identical to that of men, and there were no significant relationships between SNI and prevalence estimates for either gender, suggesting that these are general differences and not directly relevant to the overall relationship.

Study 2 was developed to assess these same relationships in a controlled experimental setting. It did so by utilizing a simple task prime, asking participants to either complete a measure of SNS intensity, a parallel measure of television intensity, or nothing prior to completing the Friendly World Syndrome items. The main hypothesis was:

H1. Participants primed with their SNS intensity will score higher on the Friendly World Syndrome measure than those primed with television intensity or nothing.

Additionally, Study 2 included a measure of another plausible meta-message of SNS content: social support. Prior research (e.g., Nabi, Prestin, & So, 2013) has shown larger friend networks are associated with more perceived social support, and heavier SNS users report more friends, both online and off (Wang & Wellman, 2010). Assessing the effect of a simple SNS prime on perceptions of social support could demonstrate that simple exposure to SNS-linked stimuli is sufficient to produce an acute increase of perceived social support, particularly from friends, supporting a close association between the two and demonstrating another second-order cultivation effect. The secondary hypotheses were:

H2a. Participants primed with SNS intensity will report greater amounts of social support than those primed with television intensity or nothing.

H2b. Participants primed with SNS intensity will report greater amounts of social support from friends than those primed with television intensity or nothing.

Prevalence estimates were also included as a first-order judgment to mirror prior cultivation research and Study 1, but no specific hypotheses were proposed.

## STUDY 2 METHOD

### Participants

One hundred eighty-seven individuals, enrolled in psychology courses in a medium-sized university in the southern United States, participated for a small amount of course credit. The sample was composed of 30 men (16%), 154 women (82.4%) and 3 participants of non-binary or unidentified gender (1.6%). Most participants were of typical college age, with 97% reporting an age of 29 or less. The sample was 77% White, 13.4% Black, 5.3% Latino, and 4.3% Asian.

### Materials

The Social Network Intensity and Prevalence Estimate scales were identical to Study 1.

**Television Use Questionnaire.** In addition to the Social Network Intensity Scale, participants completed a Television Use Questionnaire, created by modifying the items on the Social Network Intensity Scale to reflect television use (e.g. “In the past week, on average, approximately how many minutes per day have you spent...” with “watching television shows?” replacing “using social network sites?”). Minor adjustments were made to the two items regarding which SNSs they used (replaced with which television channels they watched), and number of friends/contacts/followers (replaced with how many television shows they watched). Both scales were simply labeled as “Television/Social Network Site Questionnaire” to avoid biasing responses.

**Social Support Scale.** The Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988) was used to assess perceptions of available social resources. The 15-item scale includes 5 items for each of the 3 subscales, regarding perceived support from friends, significant others, and family. Example items include “My family really tries to help me” and “I can count on my friends when things go wrong”. All items were scored on a Likert-type scale of 1 (Very Strongly Disagree) to 7 (Very Strongly Agree).

### Procedure

After completing informed consent, participants completed either the TV or SNS Intensity Scale prior to completing the FWS, Social Support and Prevalence Estimates measures (in randomized order), then completed the other intensity measure. A third,

control condition completed the FWS, Social Support and Prevalence Estimates measures first, then the two Intensity Scales in randomized order.

## RESULTS

### Primary Analyses

H1 was supported: The type of media prime had a significant effect on Friendly World Syndrome scores,  $F(2, 184) = 6.359$ ,  $p = .002$ ,  $\eta^2 = .065$ . Tukey post-hoc tests found the SNS prime condition ( $M = 3.21$ ,  $SD = 0.80$ ) scored significantly higher than both the TV prime ( $M = 2.78$ ,  $SD = 0.71$ ,  $p = .005$ ) and no prime ( $M = 2.82$ ,  $SD = 0.80$ ,  $p = .015$ ) conditions; the latter two did not differ from one another ( $p = .973$ ).

H2a was not supported: The type of media prime did not significantly affect overall Social Support scores,  $F(2,184) = 2.43$ ,  $p = .091$ ,  $\eta^2 = .026$ , though the result was marginally significant. The SNS prime condition ( $M = 5.81$ ,  $SD = .83$ ) also scored marginally significantly higher than the no prime condition ( $M = 5.46$ ,  $SD = 0.98$ ),  $p = .083$ , but did not differ from the TV prime condition ( $M = 5.59$ ,  $SD = 0.86$ ),  $p = .346$ . However, H2b was supported: the Friends subscale of the social support measure did significantly differ by condition,  $F(2,184) = 3.978$ ,  $p = .02$ ,  $\eta^2 = .041$ , such that the SNS prime condition reported significantly or marginally significantly higher support from friends ( $M = 5.87$ ,  $SD = .84$ ) than the no prime condition ( $M = 5.39$ ,  $SD = 1.07$ ,  $p = .036$ ) and the TV prime condition ( $M = 5.45$ ,  $SD = 1.00$ ,  $p = .062$ ). The Significant Other ( $F(2,184) = 1.159$ ,  $p = .32$ ,  $\eta^2 = .012$ ) and Family ( $F(2,184) = .455$ ,  $p = .65$ ,  $\eta^2 = .005$ ) subscales were unaffected by Media Prime. See Table 1 for all means and standard deviations.

The type of media prime did not affect scores on the Prevalence Estimates measure overall or any of its subscales,  $F_s < 1.4$ ,  $p_s > .25$ ,  $\eta^2_s < .02$ . SNI scores also did not correlate with the Prevalence Estimates measure, overall or for any subscales,  $r_s < .09$ ,  $p_s > .27$ . As such, the measure was not analyzed further. Conditions did not differ on reported Social Network Intensity,  $F(2,184) = 0.046$ ,  $p = .955$ ,  $\eta^2 < .001$ , or TV Intensity,  $F(2,184) = 1.448$ ,  $p = .238$ ,  $\eta^2 = .015$ .

## Gender Differences

Gender differences on both SNI,  $t(182) = -1.906$ ,  $p = .058$ ,  $d = 0.38$  and TV Intensity,  $t(182) = -1.961$ ,  $p = .051$ ,  $d = 0.40$  approached significance, with women reporting higher scores for both SNS ( $M = 4.10$ ,  $SD = 0.89$ ) and TV ( $M = 2.98$ ,  $SD = 0.80$ ) Intensity than men ( $M_s = 3.76, 2.66$ ,  $SD_s = 0.87, 0.85$ , respectively). There was no significant gender difference on any social support subscale or the overall measure,  $t_s > 1.43$ ,  $p_s > .15$ ,  $d_s < .3$ .

Table 1  
*Social Support Means by Media Prime Condition*

| Prime | Friends    | Family     | Significant<br>Other | Overall   |
|-------|------------|------------|----------------------|-----------|
| SNS   | 5.87(.84)  | 5.56(1.29) | 5.93(1.26)           | 5.81(.82) |
| TV    | 5.45(.99)  | 5.50(1.42) | 5.93(1.26)           | 5.59(.86) |
| None  | 5.39(1.35) | 5.38(1.50) | 5.61(.99)            | 5.46(.98) |

*Note.* Standard deviations in parentheses.

## DISCUSSION

A social network prime, in the form of a brief questionnaire about usage and attitudes, produced significant increases in the Friendly World Syndrome measure, relative to a similar television prime or none. This is consistent with the correlational findings of Study 1, but now demonstrates that acute activation of SNS-related concepts can increase endorsement of positive, trusting social attitudes. This parallel to the well-established Mean World Syndrome provides an initial demonstration of the applicability of cultivation principles to the effects of SNS use.

The SNS prime created a marginally significant increase in perceived social support; this appears to be primarily driven by social support from friends, which was significantly affected. This suggests that activation of SNS concepts can elicit perceptions of increased social support overall, but particularly social support from friends.

Consistent with Study 1, there was no indication of SNS priming altering prevalence estimates, suggesting that the effect is not present for these judgments. The occupational prevalence subscale was unaffected by the media prime, and did not correlate with SNS intensity, suggesting that the significant correlation observed in Study 1 for a single subscale may have been artifactual.

## GENERAL DISCUSSION

Both correlational and experimental evidence indicate a relationship between social network site exposure and the endorsement of more positive broad social attitudes and expectations. Study 2 additionally found SNS primes caused increases in perceived social support from friends, as well as a marginally significant increase in perceived social support overall. This suggests that SNS use, particularly intense use, may produce a parallel effect to the well-established Mean World Syndrome. A Friendly World Syndrome of this sort could have highly positive implications for the impact of SNS usage on its multi-billion person userbase.

The overall picture painted by the findings is indeed a rosy one – a nearly ubiquitous, frequently used media platform producing a more psychologically secure, socially trusting userbase. Increased social support in particular is associated with reduced depression (Jensen et al., 2014) and higher perceived quality of life (Khalil & Abed, 2014). The Friendly World Syndrome measure suggests increases in social trust and more positive expectations of other as a result of SNS use, which has the potential to influence everything from mood to coping to risk-taking to political and economic behavior. The easy implication of this effect, taken in isolation, is simple: use SNSs frequently and intensely, to the greatest extent possible.

However, the overall body of research does not support such unilaterally positive takeaways, either broadly or specific to effects on worldview. Various forms of SNS usage have been linked to reduced self-esteem (Acar, 2008; Valkenburg, Peter, & Schouten, 2006), increased depression and loneliness (Hunt, Marx, Lipson, & Young, 2018), and detrimental impacts on romantic (Utz & Beukeboom, 2011) and educational (Mazer, Murphy, & Simonds, 2007) relationships. Importantly, SNS use can be associated with reductions of perceived relative happiness and the belief that life is fair (Chou & Edge,

2012), suggesting effects may be bounded to non-comparative dimensions and will not generalize to judgments of relative status.

These studies are primarily correlational, and the experimental design of Study 2 may have provided a clearer look at the effects of SNS concept activation in isolation, but they still urge caution in overgeneralization or –application of the current findings. But while the presence of a Friendly World Syndrome is just one piece in a puzzle of diverse SNS impacts and influences, it is a promising one, both practically and theoretically.

### **Implications for Cultivation Theory**

The presence of Friendly World Syndrome in relation to SNS use provides further support for the principles of cultivation theory, demonstrating a fresh relevance to the modern media landscape. Though SNS content, like that of most modern modalities, is far more variable and customizable than television content, particularly in the era of earliest cultivation research, it still appears to contain consistent, cross-content themes, among which is the continual presence and accessibility of social resources and support. Additionally, Study 2 provides causal evidence of cultivation effects, a rarity in an area of research dominated by correlational findings (Shrum et al., 2011).

Across both studies, no cultivation effect was consistently found for first-order estimates of the prevalence of violent crime, personal vulnerability to it, or the proportions of occupations frequently depicted in television. It may be that SNS consumption only cultivates second-order judgments and usage is ineffectual at influencing estimates of set size and probability; however, it seems more likely that typical SNS meta-messages may not be related to violent crime or to the prevalence of common occupations. However, the younger age of the samples may have influenced this – in Study 1 over half the sample was 29 or below; in Study 2, nearly every participant was. If older SNS users are more frequent consumers of SNS-delivered news content, which tends to prominently feature violent crime, they may show different patterns of effects.

Findings were mixed for the effects of SNSs on perceptions of social support. Though mean patterns were consistent with predictions for overall social support, the media prime effect only approached significance. There was, however, a significant effect of media prime on perceptions of social support from friends. This suggests that although SNS use may or may not be associated with perceptions of overall social resources, it

disproportionately increases the perception of resources from friends. Thus, although the observed effect of the media prime is likely temporary, chronic usage or even reminders of popular SNSs may cultivate increased perceptions of social support as another facet of Friendly World Syndrome effects.

### **Future Directions**

With the initial effect established, the next step will be to investigate its mechanism. In cultivation theory, accessibility is believed to mediate first-order judgments (Shrum et al., 2004). Here, the prevalence estimates used as first-order judgments were not consistently related to the SNS material; however, this measure was tailored toward the meta-messages of television and may not have been as relevant to SNS content. First-order judgments in other domains, such as how many friends a typical person has or the frequency of social gatherings or vacations (common focuses of SNS posts), may produce a clearer cultivation effect. As such, measures of accessibility should be included in future investigations.

For the consistently obtained second-order judgment effects, cultivation is believed to be moderated by mindset at the time of consumption, with increased attention and transportation into content creating larger cultivation effects (Shrum, 2001; Shrum et al., 2011). SNS use, which involves high levels of user control and content that is typically more interactive than that of TV, should elicit attentiveness; this should be especially true of users with more intense attitudes toward it. Future research should measure, or manipulate, attention and transportation in addition to the intensity measures used here. Additionally, the generalizability of the effect to other broad social judgments should be assessed, particularly with regard to comparative social assessments.

Perception of social support presents another potential mechanism underlying the relationship between SNS use and positive social judgments. SNSs are frequently associated with access to social connections and resources (Barker, 2009; Ellison, Steinfeld, & Lampe, 2007; Allen, Ryan, Gray, McInerney & Waters, 2014) and exposure to SNS-related concepts could create perceptions of a safer, more welcoming world by means of activating social support, at least from friends. Because social support was assessed as a dependent variable in Study 2, after the manipulation, its potential mediating effect could

not be appropriately assessed in the present research. The potential mediating or moderating role of social support should be investigated in future research.

Another possible mechanism could be the level of perceived power or control over social interaction created by SNS use. A major reason for the popularity of SNSs is the control the user has over how and when content is delivered to other users (McKenna & Bargh, 2000; Madell & Muncer, 2007). Given the link between feelings of control and perceptions of higher power (e.g. Keltner, Gruenfeld, & Anderson, 2003; Lammers, Stoker, Rink, & Galinsky, 2016), use of SNSs may provide a feeling of power to the user, leading to perceptions of greater security in social contexts. Increases in perceived power predict greater feelings of personal security (Keltner et al., 2003); however, perceived power, particularly of an acute, situational nature, has also been found to increase perceived distance between self and other (Magee & Smith, 2013), increase objectification of others (Gruenfeld, Inesi, Magee, & Galinsky, 2008), and reduce empathy and perspective-taking (van Kleef et al., 2008). If SNS usage elevates perceived power, it could even reduce motivation to pursue new social connections. This would run counter to the commonly held belief that SNS environments promote prolific social associations and interactions, albeit shallow ones (e.g. Drexler, 2013; Perry, 2017), making generalizability to individual-level social judgments an important avenue for future exploration.

Additionally, the role of intensity of use should be assessed further, especially as a potential causal agent. A direct effect on social support would be consistent with prior findings that more active, engaged users of a Facebook page gain the most social support from usage (Ballentine & Stephenson, 2011), whereas more passive, uninvolved Facebook users show reduced well-being over time (Verduyn et al., 2015). If more active use increases received support and heavier SNS users develop larger online and offline friend networks (Wang & Wellman, 2010), it is plausible that more intense users may gain not only perceived but actual social support. This, as well as disentangling the impacts of intensity versus frequency of usage, presents another promising line of inquiry.

### **Limitations**

A major hurdle to studying modern media is its “moving target” nature, as modalities shift and evolve with ever-changing markets and technology. Thus, these findings may not equally apply to future SNS users. Facebook, in particular, has seen

news content steadily increase in recent years, leading to changes to their algorithm intended to re-emphasize personal connections (Isaac, 2016). If the source of the observed effects is the activation of social connection, then the effects demonstrated here may reduce in magnitude over time.

This possibility underscores the importance of replication in modern media research. The current findings may also be influenced by the role of Facebook as the most commonly used SNS in both studies. In particular, the platform labels connections as “friends,” which may suggest a stronger influence on social support from friends than other SNSs would provide. These findings should be assessed for generalizability to other SNS platforms, and future research will need to stay abreast of developments in SNSs and the reliability of findings over time.

### **Conclusion**

In sum, the observed pattern in the present research provides a glimpse at the shifts in society-level attitudes that an SNS-dominated media environment may cultivate. Chronic exposure to established social relationships and connections is not new; simply living in close proximity to one’s social networks produces a similar environment in a non-media context. But the at-will accessibility and vast breadth of social connections displayed by SNSs produces the potential for a near-continual priming of social relationships and interaction.

These findings have several substantive theoretical and practical implications, the largest of which is that the advent of near-universal SNS use could be producing more positive social attitudes, on a society-wide level. These findings alone are not sufficient for such sweeping conclusions and SNS influences are likely more mixed; however, the ubiquity of SNS use makes understanding its real-world social impacts crucial to mapping the psychological terrain of modern societies. An initial indication of these relationships can further the unpacking of the thus-far poorly understood impacts of such a broadly used medium.

More narrowly, SNS use appears to also be providing users with some of the benefits of perceived social support from friends, suggesting that SNSs are most closely associated with social resources from friends. Usage may be elevating perceived social support overall, although current findings do not fully support that. Overall, findings

paint an optimistic picture of the impacts of chronic SNS engagement on social attitudes and perceived social resources.

The results obtained provide valuable information. By demonstrating that the principles of cultivation theory can produce sharply different outcomes in a more recent media modality, the applicability of this theory gains breadth and flexibility. Additionally, though the exact nature of social media may be a moving target, the near-universality of use is unlikely to change for the foreseeable future. If SNS use is, in fact, suffusing users with meta-messages emphasizing affinity and affiliation, it is vital to evaluate precisely how and when these effects emerge, and the downstream impacts on other domains of cognition, affect and behavior. Though more investigation is needed to fully unpack its implications, the present research shows the broad potential impacts of the explosion of social network site use. Despite the many concerns about frequent SNS use, it may be causing users to see the world as a safer, more trustworthy place.

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