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**New Media Use and the Belief in a Just World:
Awareness of Life Events and the Perception of Fairness for Self and Injustice for Others**

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Abstract

The disclosure of life events is among the most common behaviors on social media and is part of the everyday activities revealed through the use of many other new media. This paper explores the awareness of major life events through these media as they relate to a person's belief in a just world for themselves and others. Using survey data, we find that text messaging, commenting on Facebook, and having more Facebook friends are associated with the awareness of desirable events. Passive modes of communication, e.g., the use of the "like" interaction on Facebook, are related to an awareness of both desirable and undesirable life events across a greater range of social ties. Awareness of undesirable events in the lives of strong ties fosters a lower perception of equity and justice for others, whereas an awareness of desirable experiences in the lives of strong ties is related to greater, perceived, personal justice. We discuss the implications of the awareness of major life events through new media in terms of the psychological benefits that can come from the vicarious joy and comfort one receives from other's experiences; what we call *mudita and comfort from others* (MACO). We argue that the long-term, cumulative effects of greater awareness of undesirable life events may lend support to social movements that seek to reduce injustices experienced by disadvantaged groups.

Keywords: social networks, mobile phone, email, collective action, life events, FOMO

New Media Use and the Belief in a Just World:

Awareness of Life Events and the Perception of Fairness for Self and Injustice for Others

People want to believe that the world is a fair and just place where “good things happen to good people and bad things happen to bad people” (Lerner & Miller, 1978, p. 1030). This belief in a just world allows people to rationalize away social injustices and bolster subjective well-being (Lipkusa et al., 1996). Individuals construct just world beliefs based on their own, and awareness of others’ experiences (Lerner, 1980). As originally articulated through cultivation theory, the dominant messaging within a medium can alter perceptions of other people’s experiences (Gerbner & Gross, 1976). Unlike television and other mass media, the experiences shared through new media consist of desirable and undesirable life events disclosed through personal connections, not news reports and fictional accounts. Awareness of these disclosures may affect perceptions of other people’s experiences, and thus people’s belief in a just world; their perception of equity and justice for themselves and others.

There is a difference between a person’s belief that they generally get what they deserve and the belief that others may or may not get what is fair and just. Belief in a just world for others is indicative of an expectation that social-political system functions equitably, such that shortcomings or failures in people’s character are responsible for misfortune. Being close to people who disclose undesirable life events contributes to acceptance that external forces explain unfavorable experiences (Winkel & Denkers, 1995). Awareness of these experiences may run counter to the belief that other people get what they deserve and in turn foster support for marginalized groups who experience hardship and inequality (Begue & Bastounis, 2003).

Likewise, when close ties experience desirable life events, people believe that the world is a benevolent and fair place for those like themselves – a world where one’s efforts tend to pay off. Dalbert (1999) and others have found that such positive self-evaluation has a positive impact on mental health.

We find that new media use is related to a pervasive awareness of desirable and undesirable life experiences in other people’s lives (Hampton, 2016; Hampton et al., 2016), and this awareness is associated with a lower belief in a just world for others and a higher belief in a just world for oneself. We discuss how the affordance of new media for awareness of other people’s major life events may contribute to both individual subjective well-being, through what we call *mudita and comfort from others* (MACO), and shape attitudes and actions that recognize the role of situational forces in the injustices experienced by others. These findings suggest that new media may provide benefits to mental health, while at the same time lending support to collective actions aimed at improving the situations of disadvantaged groups (Moore, 2008).

Literature Review

Cultivation

Gerbner and Gross (1976) argued that most people have little contact across socioeconomic and racial backgrounds. Therefore, the dominant messages (cultural indicators) to which people are exposed through television skew perceptions of the everyday “realities” of others (p.176).

Gerbner and his colleagues argued that the dominant messaging of television is one of crime and violence, and, as a result, heavy television viewers overestimate crime rates and describe the world as a mean and unjust place to live: they experience *mean world syndrome*. A broad body of research has found support for this theory, including the finding that those who view more

local news (Romer et al., 2003) or fictional, crime drama (Parrott & Parrott, 2015) have a skewed perception of the dangers of the world around them. Although statistically significant, the relationship between viewing violence on television and the perception of crime has generally been found to be small (Morgan & Shanahan, 2010). Gerbner and colleagues recognized that research on cultivation theory tended to find limited effects, but they theorized that long-term effects were likely to be cumulative and significant. However, the limited number of longitudinal studies of cultivation theory have yet to support this claim (Potter, 2014).

Most research on cultivation theory has focused on television violence. However, Gerber's (1969) original conceptualization was broader and pertained to the effects of mass-produced messages on "shared and public notions about facts, values, and contingencies of human existence" (p. 123). The emphasis on violence and television was an artifact of the dominant medium and the dominant messaging of the time. In the more than half century since this theory was proposed, new media have emerged, and the dominant message has changed. The fundamental argument, that the dominant messaging in media influences audience perceptions of themselves and the world around them, may be valid for other media. New media, especially social media, provide messages that are not mass-produced, but are personalized. The dominant message is not news and stories of crime and violence, but messages focused on life events. We expect that exposure to messages about the major life events of friends and family through new media also influences people's perceptions about themselves and the world.

Awareness of Network Life Events

Major life events include "normative transitions in life (e.g., first job, marriage), meaningful changes (e.g., birth of a child, moving in with a partner), and major individual experiences (e.g.,

death of a family member, unemployment)” (Specht et al., 2011, p. 863). The disclosure of such experiences is one of the dominant activities on social media (e.g., Facebook, Twitter, and Instagram) (Choi & Toma, 2014). This is not unlike how older media, such as cards, letters, home movies, travel diaries, and photo albums have been used (Humphreys, 2019). Like earlier media used to share personal experiences, some of the people with whom people share are strangers, but the majority are existing strong and weak ties, including friends, family, neighbors, work colleagues, and other acquaintances.

Unlike more traditional channels of communication, such as face-to-face contacts and phone calls, social media are more likely to share content across social circles. Instead of communication taking place within the boundaries of a cluster of ties defined by a foci of activity, such as the home, workplace, school, etc., social media collapse contexts so that information is shared with ties across social settings (Marwick & boyd, 2010). For example, experiences that would formerly have been shared only with family are now shared with people from multiple social milieus. Similarly, experiences that previously would have been shared only with those with whom one had a close relationship, are now more widely visible.

Hampton (2016) describes the affordance of new media to increase awareness of experiences and beliefs from one’s network as *pervasive awareness*. In contrast to the distorted portrayal of crime on television, the disclosure of life events may provide a more accurate picture of the occurrence of major events in other people lives. Prior work has found that users of many new media are more cognizant of diversity (Hampton et al., 2011), social support (Lu & Hampton, 2017), and psychological distress (Hampton, 2019) within their network. They are also

more aware the protest activities of their friends and families (Clarke & Kocak, 2018), their political opinions (Hampton, 2016), and their experience with disasters (Grace et al., 2019).

It is not clear that new media afford disclosure of all types of personal experiences. People are generally more willing to share good news about themselves than bad (Maynard, 2003). People tend to delay sharing bad news, but are also especially eager to share good news (Dibble & Levine, 2010). Utz (2015) finds that the experiences shared through social media tend to focus on positive self-disclosure. However, research that has extended the “negativity effect” (Kellermann, 1984) to social media suggests that the disclosure of negative experiences may be more memorable, especially to ties that are not especially close (Rains & Brunner, 2018). Because of the relative rarity of negative self-disclosure on social media (McLaughlin & Vitak, 2012), and, in general, with ties who, if not for context collapse, might not have direct access to such information, such disclosures may be perceived as a norm violation and thus more memorable.

Prior research suggests that pervasive awareness is related to the use of a range of new media, including email, text messaging, and the use of social media (Hampton et al., 2016). Each of these media has its own affordance for awareness. Email is well suited to support awareness of life events, because it is used in the maintenance of a large number of strong and weak ties from a variety of social milieus (home, work, etc.) (Rainie & Wellman, 2012). Text messaging facilitates a constant flow of messages, a “connected presence” (Licoppe, 2004), that provides for connectivity that is unconstrained by time and place. Social media provide access to a wide breadth of ties and are more likely to afford awareness through context collapse. Thus, we expect that:

H1. Frequent use of email, text messaging, and social media are associated with higher awareness of desirable and undesirable events in the lives of strong and weak social ties.

Social media offer a variety of online activities including browsing newsfeeds, updating statuses, reactions (e.g., the “like” button), commenting, and exchanging private messages. Prior research on relational outcomes suggest that Facebook activities that focus on composing messages have a greater effect than “one-click” actions such as “likes” (Burke & Kraut, 2014). We do not expect this to be true for the awareness of life events. Whether commenting or “liking” content, the reviewing of content shared by others contributes to awareness. Similarly, the number of relationships or “friends” maintained through social media should increase the opportunity to observe major life events.

H2. Having a larger number of friends on social media and active engagement with other people’s content, such as frequency of commenting and private messaging as well as more passive forms of interaction, such as “liking” content, are associated with a greater awareness of desirable and undesirable events in the lives of strong and weak ties.

In contrast, sharing or broadcasting content on social media may be inconsistent with the activity of observing information. The goal of status updates may hinge more closely on validating self-images and concepts than on observing life events (Bazarova & Choi, 2014). People who focus on frequent status updates may do so at the expense of awareness.

H3. Frequency of status updates is negatively related to awareness of desirable and undesirable events in the lives of strong and weak ties.

Belief in a Just World

The dominate messaging of crime and violence on television accounts for why cultivation theory tends to focus on mean world beliefs. New media, especially social media are dominated by messages pertaining to major life events and suggesting a focus on a related construct - belief in a just world (BJW).

In a just world, one gets what one earns or deserves and pays the consequences for failures, dishonesty, and personal shortcomings. Belief in a just world varies over the course of a person's life, depending on direct and indirect experiences (Lerner, 1980). Recent work has focused on just world beliefs as a bidimensional construct. There is a distinction between the belief that oneself is treated justly (BJW-S) and the belief that the external, social-political system functions equitably, so that other people get what they deserve (BJW-O) (Dalbert, 1999; Lipkusa et al., 1996). BJW-S and BJW-O indicate differential and somewhat contrasting outcomes. BJW-S is associated with mental health outcomes such as subjective well-being, life satisfaction, coping with negative life events, and a positive future orientation, whereas BJW-O is associated with socially oriented attitudes and behaviors (Bartholomaeus & Strelan, 2019), such as discrimination, stigmatization of poverty, harsher penal punishments, participation in collective action, and negative attitudes toward the poor and aging (Begue & Bastounis, 2003; Moore, 2008). Those with strong BJW-S tend to have better mental health (Jiang et al., 2016). Those with strong BJW-O tend to consider that social inequalities, such as racial and gender disparities, derive from personal shortcomings rather than from external factors, such as bias or inequality (Ross, 1977).

Experiencing a major life event can reshape just world beliefs. The death of a parent, a serious illness, or an accident might decrease acceptance of the benevolence of the world (Janoff-Bulman, 1989). Exposure to large-scale, negative events through mass media can also reduce belief in a just world (Ju & You, 2020). In contrast, a fortunate or positive event, such as a promotion at work or a raise can increase the assessment that good, hard working people get what they deserve. Observing the misfortune of someone with whom one has a close relationship has been found to increase the acceptance that external forces are responsible for undesirable events (Winkel & Denkers, 1995). Awareness of strangers or distant ties does not similarly impact just world beliefs. As such, we expect that:

H4. Higher awareness of undesirable life events in the lives of strong ties is associated with lower BJW-O.

Some have argued that an awareness of desirable life events through social media may contribute to a fear of missing out (FOMO), which results in lower subjective well-being, as assessed through perceived social support, loneliness, anxiety, etc. (Hunt et al., 2018; Przybylski et al., 2013). This argument seems problematic in light of research on belief in a just world, which suggests that an awareness of similar others, i.e., strong ties, who experience desirable life events, contributes to a belief in the world as a just place for oneself and others (Lerner, 1980). Thus, when assessed as BJW-S, indirectly, through awareness of such desirable events in the lives of strong ties, new media is associated with higher subjective well-being; not FOMO, but positive affect in the form of sympathetic or vicarious joy, *mudita* and comfort from others (MACO). As such, we hypothesize that:

H5. Awareness of desirable life events in the lives of strong ties is related to higher (a) BJW-S, and (b) BJW-O.

Cultivation theory is also based on the argument that exposure to other people's experiences through media (however distorted by news and drama) alters the perception of the socio-political environment. Proponents acknowledge that personal experience and awareness of violence happening to family, friends, and neighbors are more likely to affect mean world beliefs than is exposure to strangers and fictional characters on television (Gross & Aday, 2006). In contrast to mass media, new media tend to be personalized and involve contact within a person's personal network. This suggests the possibility of larger indirect effects between media use and just world beliefs through awareness of life events, than is typically found in research on cultivation.

Method

Sample

We administered an online survey in April 2015. Participants were recruited using Amazon MTurk. Our goal was to observe variation in awareness of major life events and related outcomes within a sample of Internet users; it was not to generalize the extent of awareness in the population. As such, our sample was not representative of the general, United States population. MTurk users are younger and more educated than the adult population in general, but they are considerably more diverse across a range of demographic and psychological measures than student samples (Coppock, 2018). More diverse samples can be obtained by sampling from MTurk in batches (Stewart et al., 2015). There is also some indication that the demographic and psychological makeup of MTurk users varies systematically by time of day and day of the week,

e.g., older users may be present early in the day and on weekends and younger participants in the morning (Arechar et al., 2017). As such, we recruited participants in batches of 250 on four different days of the week at four different times of the day for a total of 1,000 completed surveys. Consistent with recommended best practices (Peer et al., 2014), only users who met three criteria were allowed to participate: those older than eighteen, those who were residents of the United States, and those with at least a 90% MTurk approval rating. The survey took an average of fifteen minutes. Participants were provided an incentive of \$2.00. To improve data quality, we excluded surveys completed by participants who failed attention checks (Kung et al., 2018). Of the 1,000 completed surveys, 26.8% failed at least one attention check, (consisting of instruction-response items) or showed a pattern of answers that suggested impropriety (e.g., providing the same response to all questions or alternating answers in a perfect pattern).

From 732 valid, survey responses, our analysis is based on 712 participants who identified themselves as users of text messaging (92.9%), email (98.2%), or social media (92.4%). Slightly more than half of the participants were female (52.3%). The average age of the sample was 35.1 years ($SD=10.95$). Of the participants, 88.1% were white, and 4.3% identified as Black or African American; 53.9% were married or living with a partner. The average participant had completed 14.7 years of formal education ($SD=1.94$). More than one-half of the sample (59.7%) reported a yearly household income of less than \$50,000, and 18% reported more than \$75,000. Participants resided in all fifty states in the United States.

Measures

Using the multidimensional just-world belief scale (Furnham & Procter, 1992), we measured two distinctive components: BJW-S and BJW-O. Participants responded to two sets of ten items

on a seven-point scale (0–6). Examples for BJW-S included: “I think that I deserve the reputation I have among the people who know me,” and “I have found people who work hardest at their jobs, are not always the ones to get promoted” (reverse coded). Examples for BJW-O included “Although evil men may hold political power for a while, in the general course of history, good wins out,” and “The forces of law and order discriminate against Black people in this country” (reverse coded). BJW-O was computed by averaging responses to ten items ($M=3.49$, $SD=.93$, Cronbach’s $\alpha=.769$). Higher scores indicated a belief that the social-political system functions equitably with fairness and justice for others. Consistent with previous research (Furnham & Procter, 1992), BJW-S items had low internal consistency ($\alpha=.523$; scales with a Cronbach's alpha between .45-.55 are often considered unacceptable) (Taber, 2018). To improve the reliability of the scale, we deleted the item with the lowest correlation (Tavakol & Dennick, 2011) and averaged responses to the remaining nine items. While internal consistency remained low, the alpha improved to an acceptable level ($M=4.66$, $SD=.68$; $\alpha=.570$).

Email use was based on the self-reported number of emails sent and received per week ($M=161.8$, $SD=618.9$). Text messaging use was the average number of texts sent and received and the number of photos sent and received via mobile phone per week ($M=120.5$, $SD=266.7$). Emailing and texting were skewed and log-transformed for the analysis.

Participants were asked about the frequency of their use of the most popular social media: Facebook, Twitter, and Instagram. Responses were recoded into a scale of frequency of monthly visits (0-90); Facebook ($M=49.47$, $SD=38.77$), Twitter ($M=16.59$, $SD=30.55$), and Instagram ($M=11.58$, $SD=26.07$). Prior research suggests that active Facebook activities, such as commenting, have an effect on relational outcomes, whereas more passive activities do not

(Burke & Kraut, 2014). As such, participants differentiate their Facebook activities by how often they updated their status ($M=7.03$, $SD=14.69$), clicked the “like” button ($M=31.76$, $SD=36.66$), left comments ($M=19.94$, $SD=29.10$), sent and received private messages ($M=14.76$, $SD=26.40$), and number of friends. Number of Facebook friends was skewed (range: 0–2,000, $M=215.8$, $SD=250.6$, skewness=2.464) and log-transformed for analysis. Although activities on Twitter and Instagram can also be differentiated, participants did not report on these separate actions. Because we expect both active and passive actions on Facebook to contribute to awareness, we did not feel that additional differentiation was necessary and believed it might contribute to model over specification. The reliability of self-reported Facebook use, as measured here, was supported in previous work that compared the data from a self-reported measure with transactional activity provided by Facebook (Hampton et al., 2012).

There is no established measure of awareness of major life events. We developed a new measure by modifying the checklist approach used extensively in the social stress literature to measure major life events (Holmes & Rahe, 1967). In this approach, researchers provide a list of events, and respondents check those that they experienced. Ideally, such checklists include a wide range of events to sample the population of possible life events. Based on Tausig (1986) review of the population of life events, our list included 48 items (22 desirable and 26 undesirable events; see Supplemental Materials, Table S1). Participants indicated whether they had experienced each event or if they knew of someone close to them (strong ties) or someone else (weak ties) who had experienced the event in the past twelve months. For the analysis, each response was coded dichotomously and summed as six indexes:

- 1) *Desirable* events occurring to *strong ties* (AoNLE-DS) (M=6.71, SD=4.57, Range=0-22),
- 2) *Undesirable* events occurring to *strong ties* (AoNLE-US) (M=5.57, SD=5.11, Range=0-24),
- 3) *Desirable* events occurring to *weak ties* (AoNLE-DW) (M=4.61, SD=3.96, Range=0-22),
- 4) *Undesirable* events occurring to *weak ties* (AoNLE-UW) (M=3.67, SD=4.30, Range=0-19),
- 5) *Personal desirable* life events (M=4.41, SD=2.74, Range=0-19).
- 6) *Personal undesirable* life events (M=3.16, SD=2.74, Range= 0-15).

Analysis

A series of OLS regression analyses was performed to specify a path model incorporating the direct and indirect relationships among social media, awareness of events, and just world beliefs. Demographic variables were included as controls. They included sex (52.3 % female), age (M=35.05, SD=10.95), race (88.1% White), marital status (53.9% married or living with a partner), household income (mean=4.68, SD=1.69; 0=\$ less than \$10,000, 8=more than \$150,000), and years of education (M=14.71, SD=1.94). Personal experiences of desirable and undesirable events were controlled. To test the significance of indirect relationships in the model, we used the 5,000 bootstrapped, biased-corrected, re-samples approach (Hayes, 2017).

Findings

Although we find general support for H1 that a range of new media is associated with awareness of network life events, it is not true of all media that we studied. Whereas texting is associated

with awareness, email is not. Active and passive activities on Facebook are related to awareness of life events (H2), but use of Twitter and Instagram are not. In addition, as shown in Table 1 and Figure 1, the relationship between new media and awareness of life events can vary by tie strength. Although some media support awareness of ties of various strength, such as the use of Facebook “likes,” most media are more specialized.

[Table 1]

[Figure 1]

Frequent texting is associated with higher AoNLE-DS ($b=.227, p<.05$), but is unrelated to AoNLE-DW, AoNLE-US, and AoNLE-UW. Compared to an average level of mobile texting, a person who messages one standard deviation (SD) above the mean is expected to be aware of .26 more desirable events from strong ties.

Different activities on Facebook afford different types of awareness. The number of Facebook friends is positively related to AoNLE-DS ($b=.248, p<.01$) and AoNLE-DW ($b=.264, p<.05$). Compared to an average number of friends, a person with one SD more Facebook friends is expected to be aware of .19 more desirable events from strong ties and .20 from weak ties. The number of friends is not related to awareness of undesirable events in the lives of either strong or weak ties. Facebook commenting is similarly related to awareness of desirable events but is limited to strong ties ($b=.019, p<.05$). A Facebook user who commented one SD above the mean would be aware of about .57 more desirable events from strong ties than someone with the mean level of comments.

Facebook “liking” is related to a wide range of awareness of both strong and weak ties. Those who frequently “liked” others’ Facebook content reported higher AoNLE-DW ($b=.021,$

$p < .01$), AoNLE-US ($b = .018$, $p < .01$), and AoNLE-UW ($b = .021$, $p < .01$), but had no relationship to AoNLE-DS. Compared to an average level, someone who “liked” the posts of others one SD above the mean would be aware of .66 more undesirable events in the lives of strong ties and .78 more desirable and .78 more undesirable events in the lives of weak ties. Facebook private messaging is unrelated to awareness.

As anticipated (H3), Facebook status updating is associated with lower levels of both, desirable and undesirable awareness of network life events with ties of all strengths: AoNLE-DS ($b = -.042$, $p < .01$), AoNLE-DW ($b = -.033$, $p < .05$), AoNLE-US ($b = -.027$, $p < .05$), and AoNLE-UW ($b = -.033$, $p < .01$). A Facebook user who updates their status one SD more per month than the average Facebook user would be aware of .62 fewer desirable and .40 undesirable events in the lives of strong ties and .48 fewer desirable and .48 fewer undesirable events in the lives of weak ties.

We find support for the hypothesis (H4) that awareness of undesirable events as experienced by strong ties (AoNLE-US) is negatively related to BJW-O ($b = -.044$, $p < .01$). We also find (H5a), that awareness of desirable experiences of strong ties (AoNLE-DS) is related to higher BJW-S ($b = .022$, $p < .05$) but, we do not find the hypothesized relationship (H5b) to BJW-O. Someone who is aware of one SD more undesirable life events from strong ties would score .22 lower on BJW-O. Awareness of one SD more desirable experiences from strong ties would account for .10 higher BJW-S.

Prior research suggests that *personal experiences* with major life events are impactful, situational variables of just world beliefs (Lerner, 1980). In support of this, we found that someone who experienced more undesirable events (one SD) was .12 lower on BJW-O and .18

lower on BJW-S, whereas having experienced more desirable life events was related to .15 higher BJW-O but was unrelated to BJW-S. An *awareness* of the undesirable network life events of strong ties has a much larger relationship to BJW-O (.22 lower at one SD) than personally experiencing undesirable events (nearly twice the magnitude). Whereas personally experiencing desirable life events was found to be unrelated to BJW-S, awareness of such events in the lives' of strong ties was (.10 higher at one SD).

We did not anticipate a direct relationship between the use of any media and BJW. Unexpectedly, we found that frequent texting has a direct, positive relationship to BJW-S ($b=.037, p<.05$). Although it is statistically significant, the relationship is small. Someone who is one SD above the mean in the number of mobile texts exchanged per week would typically have .04 higher BJW-S.

Using the bootstrapping method, we verified that frequent "liking" of Facebook content is indirectly associated with lower BJW-O through higher AoNLE-US ($b=-.0008, se=.0004, 95\%$ lower CI= $-.0018, 95\%$ upper CI= $-.0001$). In contrast, frequent status updates on Facebook are indirectly related to higher BJW-O through lower levels of AoNLE-US ($b=.0012, se=.0006, 95\%$ lower CI= $.0002, 95\%$ upper CI= $.0027$). The magnitude of both indirect relationships is modest. Someone with more extreme Facebook behaviors, e.g., frequently liking content at two SD above the mean, would tend to report .06 lower BJW-O. The magnitude of such activity is comparable to the direct influence of one year of education ($-.05/\text{year}$). Similarly, someone who updated their status on Facebook at an exceptional rate, e.g., a little more than once per day (two SD above the mean), would tend to report .04 higher BJW-O.

AoNLE-DS mediates the relationship between the use of social media and BJW-S. There are several statistically significant relationships between AoNLE-DS and the use of new media, including texting, number of Facebook friends, liking Facebook content, commenting, and status updates. Nevertheless, based on the bootstrapping method, we could verify only a significant, indirect relationship from number of Facebook friends ($b=.0055$, $se=.0033$, 95% lower CI=.0001, 95% upper CI=.0127) and Facebook status updates ($b=-.0009$, $se=.0005$, 95% lower CI=-.0021, 95% upper CI=-.0001). Again, although statistically significant, the overall magnitude of the relationship is modest. Facebook users who are two SD above the average number of friends would tend to report .01 higher BJW-S, whereas someone who updates their Facebook status a little more than once per day typically reports .03 lower BJW-S. This compares to the direct influence of age on BJW-S, of about .006/year.

Discussion

We found that the use of new media contributes to awareness of network life events (H1). Both active and passive activities on social media contribute to awareness (H2), while status updates distract from awareness (H3). We find support for our hypotheses (H4) that awareness of undesirable events in the lives of strong ties is related to a lower BJW-O, and that awareness of desirable events in the lives of strong ties is related to a higher BJW-S (H5a). We did not find the expected relationship between awareness of desirable life events and higher BJW-O (H5b).

While we find substantive links between new media use and awareness of network life events, and between awareness of strongly tied network members' disclosures and belief in a just world, statistical tests, using the bootstrapping method, suggest a limited number of significant indirect connections between new media and belief in a just world. Facebook "liking" is indirectly

related (through higher awareness of undesirable life events in the lives of strong ties) to lower belief in equity and justice for others. Number of Facebook friends (through a higher awareness of desirable life events in the lives of strong ties) is indirectly related to higher just world beliefs for oneself. And status updates are indirectly (as a result of lower awareness) related to perceptions of higher belief in a just world for others and lower belief for oneself.

Given the differential outcomes associated with BJW-O and BJW-S, the implications of these findings extend to two contrasting areas, individual, subjective well-being, and attitudes and behaviors pertaining to the equity of the external social-political system.

Debate about the mental health effects of social media use generally ignore the role of social influence (Hampton, 2019; Hampton & Chen, 2021). Some research has focused on the mental distress that is presumably associated with missing out on social experiences shared through social media, so called FOMO (Hunt et al., 2018; Przybylski et al., 2013), although our study suggests that self-disclosure through social media also has indirect psychological benefits. Awareness of the desirable or fortunate life experiences of strong ties is associated with belief in a just world for oneself. Strong ties represent bonds to socially similar people who have similar experiences (McPherson et al., 2001). Consistent with Lerner & Miller's conceptualization of just world beliefs, "good things happen to good people" (1978, p. 1030), and strong ties are good people just like me. Unlike FOMO, the vicarious joy, and comfort one receives from other's experiences, or MACO, is related to subjective well-being and life satisfaction (Begue & Bastounis, 2003).

Belief in a just world for others requires one to reject external, or situational reasons for other people's undesirable experiences (Lerner, 1980). Such beliefs are inherently related to

attitudes toward the beneficiaries of contemporary social and political systems and social injustice (Rubin & Peplau, 1975). By believing in a just world for others, one accepts the faulty assumption that personal attributes and behaviors better explain undesirable experiences than contextual or situational factors that might be related to bias or inequality (Ross, 1977). Public opinion concerning social justice issues has changed dramatically in recent years, including attitudes about same-sex marriage and the violence experienced by the Black community in the United States and abroad. One explanation for the relatively sudden shift in public attitudes may relate to changes in just world beliefs (da Costa Silva et al., 2018; Hettinger & Vandello, 2014). In a way that television cannot, social media provide a window into the everyday experiences of people with whom we closely relate, as well as diverse people once assumed to be outside our social circles but who may always have been present but less visible (Hampton, 2016). The long-term, cumulative effects of such awareness may be felt increasingly as a gradual decline in the belief of a just world for others. As belief in other people's experiences of a just world decline, there should be a corresponding increase in willingness to engage in collective action (Moore, 2008) to rectify what Lerner (1980) sees as the need for people to believe that a person's actions and hard work bring about fair consequences. The long-term, cumulative effects of pervasive awareness of the experiences of others might provide momentum to social movements that aim to reduce injustice.

Finally, our study adds to the literature on cultivation theory by switching the analytic focus from news and stories of crime and violence on television, the experiences of strangers and fictional characters outside of people's everyday experiences, to a focus on social media, and events that take place within people's personal networks. We expected that the personalized,

network-based nature of new media would make the cultivation effects of messages larger and more immediate. However, the magnitude of the indirect effects that we observed were relatively small. Yet, we did find that the relationship between awareness of network life events and just world beliefs was of a larger magnitude than actual personal experience of major life events, possibly due to the rarity of major life events in one's own life and their relative ubiquity across one's network.

The finding of limited effects is consistent with the results of research on television and the cultivation of mean world beliefs. Like this work, most research on cultivation has been cross-sectional (Potter, 2014). Although, it is suggested that cultivation occurs over a long period of time, it is the cumulative exposure to television over a lifetime and not the result of a specific genre or program. A future longitudinal design of this study might focus on long-term exposure to major life events through new media. It is also possible that limited plasticity of just world beliefs is limiting the magnitude of effects. Although Lerner (1980) expected that belief in a just world was (re)shaped over a lifetime, there is limited, longitudinal work to establish the magnitude of change that might be expected over time. An alternative approach would be to model indirect outcomes through awareness of network life events related to life satisfaction and support for the goals of organizations such as Black Lives Matter. The focus on a larger number and more differentiated media use may also provide additional variability in awareness from the life events shared by different types of ties. Traditional media, such as telephone voice calls and letters/cards clearly continue to play a role in the sharing of life events (Humphreys, 2019). A limitation of this work may be that we did not measure different activities on Instagram and Twitter. Self-report data are biased in well-established ways (Ernala et al., 2020) and an

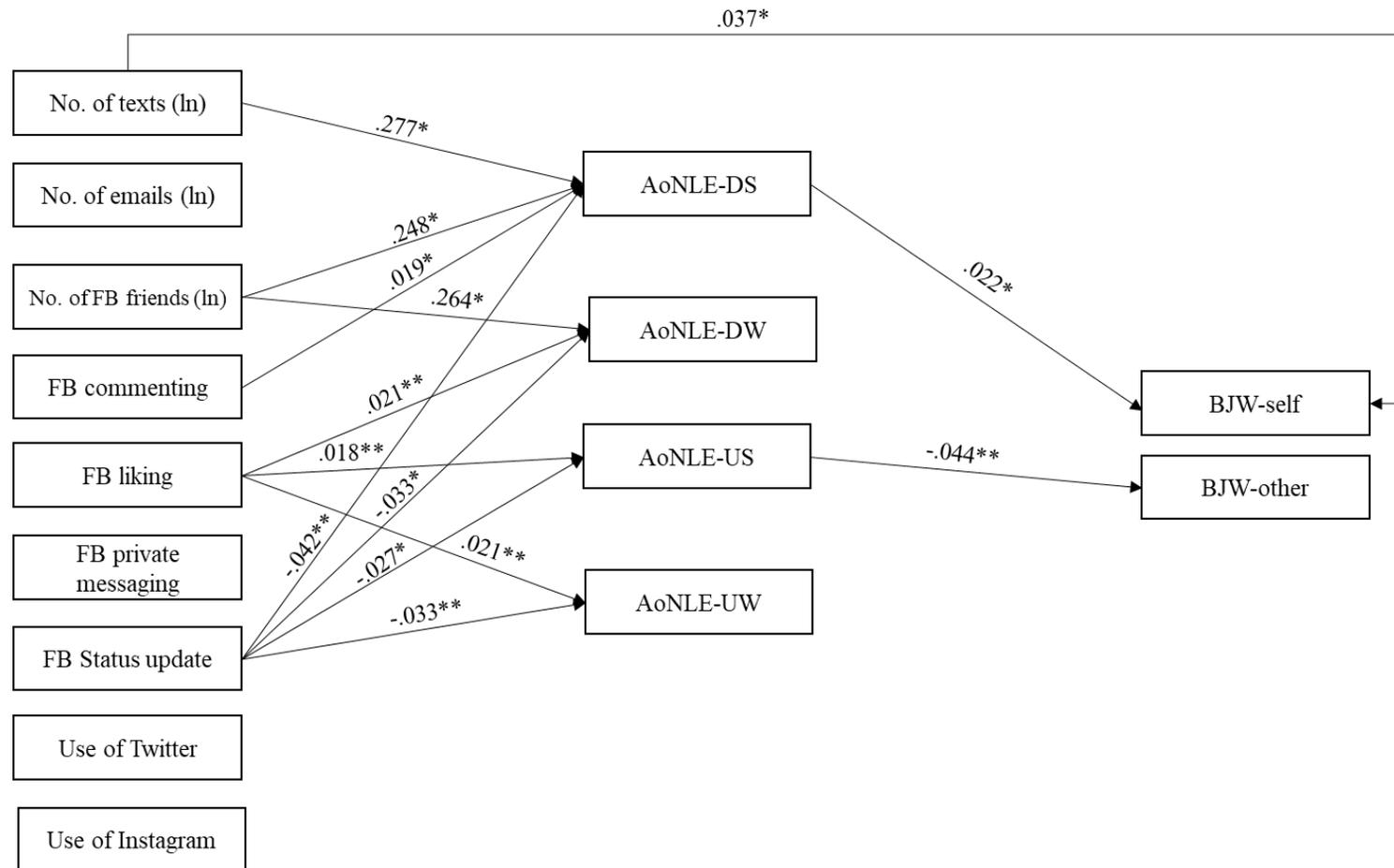
approach that utilizes transactional log data on user activity would be beneficial. However, while the accuracy of log data might strengthen the magnitude of observed effects, limits to the availability of such data could also undesirably narrow the scope of research to a single platform (Hampton, 2017).

Table 1. Path analysis predicting awareness of major life events and belief in a just world (N=712)

	AoNLE-DS		AoNLE-DW		AoNLE-US		AoNLE-UW		BJW-S		BJW-O	
	b	se	b	se	b	se	b	se	b	se	b	se
Constant	4.768	1.591**	.720	1.778	3.498	1.413 *	1.453	1.526	3.742	.235***	3.634	.325***
<i>Demographic characteristics</i>												
Female	-.879	.347*	-1.259	.388**	.058	.308	-.599	.333	-.127	.051*	-.183	.071*
Age	-.030	.017	-.031	.019	-.016	.015	-.006	.017	.006	.003*	.004	.004
White	-1.054	.518*	-.919	.579	-.146	.460	-.270	.497	.153	.076*	.180	.105
Married	.010	.367	-.437	.410	.400	.326	-.076	.352	-.015	.055	.135	.076
Education	.069	.091	.280	.102**	.002	.081	.081	.087	.018	.013	-.052	.019**
Income	.271	.094**	.274	.105**	.092	.084	.117	.090	.038	.014**	.062	.019**
<i>Media use</i>												
Texting (ln)	.227	.113*	.071	.126	.166	.10	.007	.108	.037	.017*	.045	.023
Emails (ln)	-.053	.120	.049	.134	.022	.107	.058	.115	-.001	.018	-.039	.024
FB friends (ln)	.248	.103*	.264	.115*	.007	.091	.109	.099	.017	.015	.027	.021
FB comments	.019	.009*	.010	.010	.002	.008	.006	.009	.000	.001	-.001	.002
FB likes	.009	.007	.021	.008**	.018	.006**	.021	.007**	.000	.001	.000	.001
FB private messages	.004	.007	.005	.008	.006	.006	.012	.007	-.001	.001	-.003	.001
FB status update	-.042	.013**	-.033	.015*	-.027	.012*	-.033	.012**	.000	.002	.002	.003
Twitter	-.002	.006	-.003	.006	-.006	.005	-.007	.006	.001	.001	.000	.001
Instagram	-.005	.007	-.002	.008	-.006	.006	-.007	.007	.000	.001	.001	.001
<i>Personal experience</i>												
Desirable	-	-	-	-	-	-	-	-	.021	.011	.055	.015***
Undesirable	-	-	-	-	-	-	-	-	-.065	.012***	-.044	.016**
<i>AoNLE</i>												
AoNLE-DS	-	-	-	-	-	-	-	-	.022	.010*	.013	.014
AoNLE-DW	-	-	-	-	-	-	-	-	.003	.010	-.015	.014
AoNLE-US	-	-	-	-	-	-	-	-	-.020	.010	-.044	.014**
AoNLE-UW	-	-	-	-	-	-	-	-	.007	.011	.013	.015
R-squared	.098		.101		.055		.065		.145		.126	

Note. ***<.001, **<.01, *<.05; b=unstandardized coefficient

Figure 1. Path model



***<.001, **<.01, *<.05; N=712; Only significant paths shown; demographics and personal experiences controlled.

Table S1. Percentage of respondents who reported life events (N=712)

	% by whom event was experienced		
	Self	Strong ties	Weak ties
<i>Desirable Life Events</i>			
Birth of Child	8.6	41.7	49.6
Child married with parental approval	3.9	19.1	19.5
Married	6.2	25.7	30.9
Improvement in health of family member	32.6	42.3	31.5
Wanted pregnancy	6.9	33.0	35.0
Moved to same or a better type of neighborhood	15.9	21.6	16.6
Built a new house	0.8	5.5	6.9
Remodeled house	12.9	19.2	13.9
Began serious relationship	11.7	34.4	31.3
Engaged	6.3	26.0	24.9
Improved relations with spouse	22.1	24.4	18.0
Improved relations with neighbor, friend, relative	41.9	30.3	22.1
Started to work first time	7.0	21.3	14.6
Started a new job other than first time	25.4	41.9	31.0
Vacation	53.2	67.3	56.9
Retirement	1.4	15.0	12.6
Outstanding personal achievement	29.6	35.7	25.3
Home study to improve work or skill	26.3	19.1	11.8
Significant success at work	42.1	52.7	35.3
Major purchase or mortgage	14.5	23.5	19.5
Major improvement in finance	24.7	26.3	25.0
Major decision regarding the future	47.2	45.1	32.0
Mean (SD)	4.41 (2.74)	6.71 (4.57)	4.61 (3.96)

Table S1. Cont.

	% by whom event was experienced		
	Self	Strong ties	Weak ties
<i>Undesirable Life events</i>			
Death of child	.7	4.9	8.0
Death of brother or sister	1.7	7.0	6.7
Death of other close family member	14.7	28.1	27.8
Death of parent(s)	6.6	25.3	25.6
Death of pet	19.5	27.2	24.2
Death of spouse	.0	7.2	8.0
Frequent minor illness	27.1	43.5	27.9
Mental illness	15.0	24.0	14.6
Miscarriage	2.2	10.8	10.0
Serious injury or accident	4.4	11.5	12.5
Sexual difficulties	13.8	11.8	3.5
Increased arguments with spouse	9.7	18.5	13.2
Broken engagement	.7	3.5	4.8
Serious arguments with neighbor, friend, relative	14.0	17.8	12.4
Loss of driver's license	3.1	8.6	5.1
Loss, robbery, or damage of property	9.6	14.6	13.9
Arrested	1.7	10.4	10.5
Community crisis (fire, crime, etc.)	4.5	5.9	10.5
Trouble with boss	15.3	26.1	17.1
Trouble with in-laws	13.5	24.6	17.3
Trouble with other co-workers	17.1	30.9	21.1
Trouble with persons under supervision	9.1	14.0	8.4
Other work troubles	20.1	27.9	19.9
Laid off	4.2	13.9	15.9
Financial status a lot worse than usual	25.0	22.9	15.0
Credit rating difficulties	20.6	20.2	12.9
Mean (SD)	3.16 (2.74)	5.57 (5.11)	3.67 (4.30)

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