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Social Media Usage Patterns: Research Note Regarding the Lack of Universal Validated Measures for Active and Passive Use

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Abstract

The existing literature regarding social media use provides extant evidence supporting the claim that usage patterns ultimately have the capability of impacting users. However, the vast majority of the literature is based upon experimental laboratory settings where participants are observed by researchers. The current article asserts that there is a significant deficiency within the discipline regarding the validated measurement of usage patterns of social networking sites (SNSs) and offers guidance for those who may want to develop a general measure.

Keywords

social media, usage patterns, passive and active use, psychometrics

Introduction

Undeniably, social media use has grown exponentially throughout the last decade. This increase in usage has attracted a great deal of academic interest, as researchers seek to better understand the impacts that adolescents and young adults may experience as a result of social networking site (SNS) usage. Throughout both the communication and psychology disciplines, there is extant literature detailing the impacts of social media use on its users (Verduyn, Ybarra, Résibois, Jonides, & Kross, 2017). However, a comprehensive review of the existing research reveals that there appears to be some substantial gaps within the literature—specifically regarding the measures that are used within the discipline to differentiate between active and passive usage.

As defined by Verduyn et al. (2017, p. 281), active social media usage refers to online behaviors that facilitate "direct exchanges" among users. Such behaviors include liking, commenting, sending messages, and otherwise engaging with other users. In contrast, the literature defines passive use as the monitoring of others without direct engagement. These patterns of usage have also been identified by researchers in the field by other names. Burke and Kraut (2016) identify active use as "composed communication," while Osatuyi (2015) refers to passive use as "lurking." These patterns have also been identified by researchers outside the fields of psychology and communication. For example, Muntinga, Moorman, and Smit (2011) investigate these patterns of behavior from a marketing and branding perspective, and identify passive use in regard to brand-related content as "consuming," and active use in regard to brand-related content as "contributing" or "creating." While there is substantial research analyzing the effects of these usage behaviors on user outcomes, the discipline lacks a clear and universal quantitative unit of measurement to collect this data.

Background

To the best of our knowledge, the previous research on passive and active use has measured social media engagement in one of three ways: experimental manipulation within a laboratory setting (Orben et al., 2018; Sagioglou & Greitemeyer, 2014; Verduyn et al., 2015), the tracking of participants' behavior online through social media logs that require special access and permission from the social media site (Burke,

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Marlow, & Lento, 2010), or through the use of questions or subscales taken from other measures (Alloway & Alloway, 2012; Escobar-Viera et al., 2018; Krasnova, Wenninger, Widjaja, & Buxmann, 2013; Shaw, Timpano, Tran, & Joormann, 2015). Most researchers do not have access to the server logs from social media sites, and therefore, academics tend to experimentally manipulate engagement style or use questions/subscales from other research.

Neither, as evidenced, are perfect solutions. Experimental manipulation may yield inaccurate results, as it is difficult to determine whether changes in variables such as mood through experimental manipulation are a result of using social media passively, or are a result of the participants deliberately trying to remember to use the social media site in a specific way for the purpose of the study. This form of data collection may also differ from how participants use social media in the "real world" or in natural settings. While the use of subscales or questions from existing research allows the participant to identify how to interact with social media in the real world, this method is not ideal either, as many of the scales used in social media research have not been validated yet (Appel, Gerlach, & Crusius, 2016).

The only validated measure we are currently aware of, which can be used to gather data regarding users' active and passive usage behaviors, is the Passive Active Use Measure (PAUM; Gerson, Plagnol, & Corr, 2017). The PAUM is a Facebook use questionnaire that includes 13 items designed to identify activities that Facebook users engage in when they are online. Respondents are asked to self-report how frequently they engage in each activity on a scale of 1 to 5, where 1 represents "never—zero percent of the time" and 5 represents "very frequently—close to 100% of the time." Certain activities are categorized as active usage patterns (i.e., commenting on other posts), whereas some were selected to represent passive use (i.e., viewing photos without liking or commenting).

Gerson et al. (2017) found that on Facebook, models of passive and active use best fit the data when broken down into three subscales: active social use, active non-social use, and passive use. Active social use represents direct written communication between the user and their friends, such as comments and writing wall posts. Active non-social use represents direct communication where no written content is included, such as likes and RSVPing to events. Finally, passive use represents Facebook use where users consume content but do not interact with others on the site. As reported in the Gerson et al.'s (2017) study, these three multi-item scales demonstrate sufficient internal reliability, discriminant validity, and test–retest reliability.

Unfortunately, this method is not without flaws. The PAUM was developed for Facebook, and as each social media site has different features and audiences, the PAUM may not retain its validity if adapted for other social media sites. In addition, social media sites evolve rapidly, which means scales developed for specific platforms (even scales developed relatively recently) can quickly become obsolete. For example, during the development of the PAUM scales, Facebook introduced reactions (i.e., like, love, wow, laughter, sad, angry). As the questions for the PAUM scale were already created at this point, the PAUM deals only with the traditional Facebook "like" instead of the various "reactions." This rapid evolution makes it difficult to create and validate social media use scales for specific platforms, as they quickly become outdated. This highlights the need for universal social media engagement scale, capable of measuring engagement style across platforms and updates.

One additional challenge to the creation of such a scale is the way the fields of psychology and communication currently define social media engagement. In a perfect world, the idea of measuring active and passive Internet users as exclusive groups or on a bipolar scale is an attractive prospect. While some studies do designate participants in this way, this type of categorization may not be realistic. How individuals interact with social media (and therefore their usage patterns) likely changes depending on a variety of circumstances such as access device (i.e., laptop or smartphone), context (i.e., on a bus, at home), or mood (i.e., are users who are already in a negative mood more likely to be passive users?). Individuals, at least on Facebook, often switch back and forth between active social, active non-social, and passive use, and heavy users may engage in all three during the same session.

Need for a Universal Measure

Based on our collective research (Gerson et al., 2017; Trifiro, 2019), we propose that the discipline needs to develop—and validate—one universal measure that can be implemented to gauge different social media usage behaviors. The creation of such a measure would allow for social media researchers to evaluate the impact of social media engagement on their users across platforms, updates, and time. This sort of measure would help researchers compare the impacts of different social networking platforms in one universal approach. Currently, researchers are unable to connect different usage patterns across platforms. The ability to compare and understand how different types of social media platforms (and different levels of engagement with those platforms) impact users can help identify which aspects of social media use are beneficial, and which have a negative impact on its users across platforms. This information could then be used to inform policy on screen time, help users manage their social media engagement style, and help parents guide their children to use social media in a way that is beneficial to their well-being. Ultimately, there is great potential for developing a scale of this nature, as it would provide greater insight regarding the impacts of this ubiquitous type of communication platform. Finally, by developing one universal scale, this could ultimately reduce the conflicting literature pertaining to the effects of usage patterns on social media users, as the

conflicting literature may—at least partially—stem from differences in measures (often developed for specific platforms) being used by researchers to investigate these effects.

A single universal measure which is able to identify active and passive users would also be beneficial for qualitative and mixed-method researchers. Qualitative researchers could use this tool to identify study participants and create focus groups comprised of specific types of users. These focus groups could be used to identify similar behavior platforms, which could contribute to our understanding of how different usage behaviors have the ability to impact users. It could also be used before one-to-one interviews to help researchers better understand the behavioral patterns of their participants before meeting to discuss their experiences on social media sites.

As evidenced throughout the literature, there has already been a considerable effort made to create and use a system for separating passive and active users. As outlined by Ellison and Boyd (2013), there is great potential in future research geared toward understanding activity-centric analyses of social media use. While there has been a considerable amount of research designed to better understand the impacts of usage patterns on user outcomes within the last 6 years (Gerson et al., 2017; Trifiro, 2019; Verduyn et al., 2017), one universal quantitative measure could ultimately foster more research on this topic.

Recommendations for the Development of a Universal Measure

A universal measure for active and passive social media use would need to meet the following requirements. First, this measure would need to be able to identify similar behaviors across social media platforms regardless of whether the platform is text-based (such as Twitter), image-based (such as Instagram), or both (such as Facebook). Second, as the social media landscape is constantly changing, it is essential that this measure is general enough to weather day-to-day and year-to-year changes across these platforms (i.e., the introduction of reactions instead of likes, the introduction of "Instagram stories" instead of just posting images). Third, the language used to develop this scale must be general enough to be understandable and applicable across disciplines to reconcile the literature from various fields (i.e., active and passive use are known by multiple terms across the fields of psychology, communication, marketing). Finally, this scale would need to be validated using multiple social media sites to prove its reliability across platforms.

The first and second requirements could be explored by conducting focus groups with social media users who frequently spend time on multiple platforms. Individuals who are intimately familiar with more than one social media site may have a unique perspective on how to identify/define active and passive behaviors so they apply to more than one platform. Once these behaviors have been defined and identified, the third requirement could be achieved by conducting a focus group or panel discussion with social media researchers from various disciplines to help identify how to word questions for the scale so they would be applicable to multiple disciplines. A scale could then be created by collecting data with these questions in an online questionnaire of social media users for multiple platforms, and analyzed using exploratory and confirmatory factor analysis, followed by test–retest reliability. After a measure has been designed and validated, pilot testing could incorporate a mouse-click tracking software program to verify whether there are differences between reported active/passive behavior and actual active/passive behavior. It may also be useful to include questions asking participants to estimate how much time they spend engaging in active versus passive use on social media platforms, as these measurements could potentially be used to identify users in a binary sense (i.e., if a user spends 1 hr on social media, and 50 min of that time is passive use, they are a passive user).

In conclusion, social media use has become an ever-present part of modern life. With so many people interacting with social media on a daily basis, it is important for researchers to understand the impact this new form of communication has on daily life, relationships, and subjective well-being of its users. To explore and understand this topic, the field requires a validated standardized universal measure for social media engagement. This measure needs to be specific enough to measure multiple forms of engagement for each individual, general enough to be used across social media platforms, and flexible enough to remain valid across platform updates, thereby allowing the comparison of effects across platforms and over time for social media engagement.

Authors' Note

Briana M. Trifiro is now affiliated with Boston University, USA.

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