



Does Passive Social Media Use Harm Well-Being?

An Adversarial Review

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Abstract: Research into the effects of social media on well-being often distinguishes “active” and “passive” use, with passive use supposedly more harmful to well-being (i.e., the passive use hypothesis). Recently, several studies and reviews have begun to question this hypothesis and its conceptual basis, the *active/passive dichotomy*. As this dichotomy has become a staple of social media research but evidence challenging its validity is mounting, a comprehensive debate on its pros, cons, and potential future is needed. This *adversarial review* brings together two voices – one more supportive, and the other more critical – toward the active/passive model. In constructive dialogue, we summarize and contrast our two opposing positions: The first position argues that the active/passive dichotomy is a useful framework because it adequately describes how and why passive use is (more) harmful for well-being. The second position challenges the validity of the dichotomy and the passive use hypothesis specifically. Arguments are presented alongside (a) the empirical basis, (b) conceptualization, and (c) operationalization of active and passive use, with particular focus on the passive use hypothesis. Rather than offering a conciliatory summary of the status quo, the goal of this review is to carve out key points of friction in the literature on the effects of social media through fruitful debate. We summarize our main agreements and unresolved disagreements on the merits and shortcomings of the active/passive dichotomy. In doing so, this review paves the way for researchers to decide whether and how they want to continue applying this lens in their future work.

Keywords: social media, active/passive dichotomy, well-being, adversarial review

There is much concern that social media (SM) affect the well-being and mental health of their users. A prominent approach to better understand these effects is to dichotomize social media use (SMU) into *active* and *passive*, here dubbed the “active/passive dichotomy” (e.g., Verduyn et al., 2020; Verduyn et al., 2017). *Active use* refers to all mediated actions that promote social exchanges with others, such as sending direct messages, commenting on others’ content, and broadcasting one’s own (Verduyn et al., 2017). *Passive use* describes the consumption of SM content without direct engagement in social interactions, such as browsing others’ profiles, textual or audiovisual posts, stories, reels, or comments (Verduyn et al., 2017).

Several studies and narrative reviews conclude that passive use is harmful because it causes upward social comparison and envy, while active use is beneficial for well-being because it yields social capital and connectedness (e.g., Dienlin & Johannes, 2020; Verduyn et al., 2017). The active/passive dichotomy and the accompanying “active = good” and “passive = bad” hypotheses (Valkenburg, van Driel, et al., 2022) have shaped the research and public discourse around SM effects on well-being considerably (Docherty, 2020). The active/passive dichotomy promised

a much-needed progression from the sprawling use of global SMU measures (e.g., screen time, frequency), which proved too broad and invalid to meaningfully explain SM effects on well-being (e.g., Meier & Reinecke, 2021).

However, despite its initial attractiveness for researchers, SM companies, and users alike, the active/passive dichotomy is increasingly being questioned. Major critiques point to inconsistent empirical evidence (e.g., Valkenburg, Beyens, et al., 2022; Valkenburg, van Driel, et al., 2022), severe conceptual issues (e.g., Ellison et al., 2020; Meier & Johnson, 2022), and problematic operationalizations (Kross et al., 2021; Trifiro & Gerson, 2019; Valkenburg, van Driel, et al., 2022). In response to some of these critiques, Verduyn et al. (2022) recently proposed an *extended active-passive model*. This model refines the two central hypotheses by limiting the active = good claim to warm and targeted communication and the passive = bad claim to browsing self-relevant success stories from others on SM. However, the model maintains the dichotomy between SMU as being either active or passive. This leaves SM research at a crossroads: Should researchers continue working with the active/passive dichotomy despite its problems; further amend or extend the active-passive model

to overcome its continuing limitations; or develop a new approach that captures users' experiences on SM more accurately?

This adversarial review (e.g., Crusius et al., 2020) summarizes the state of the debate on the active/passive dichotomy. We particularly focus on the original passive use hypothesis (i.e., passive use reduces well-being), as it has gained the most research attention. Our review mainly refers to the initial active-passive model (Verduyn et al., 2017) because (a) existing research has so far only worked on this basis, and (b) most of our discussion still applies to the recently formulated extended active-passive model, which still dichotomizes SMU into active and passive (Verduyn et al., 2022). The review distills the two prevailing positions: The *pro position* contends that the active/passive dichotomy is valid and useful, and evidence sufficient to conclude passive use, on average, harms well-being. The *contra position* highlights contradictions in the literature and argues we should reject both the active/passive dichotomy and the passive use hypothesis. Each position will be presented and contrasted along three central aspects: empirical evidence, conceptualization, and operationalization. We conclude with a synthesis that highlights common ground and remaining disagreements, and outline two opposing routes for future research. As a background for both positions, we first briefly summarize the theoretical basis of the passive use hypothesis: social comparison theory and envy.

Theoretical Background: Social Comparison and Envy

Research assuming that passive use harms well-being consistently draws on social comparison theory (Festinger, 1954). As one of the bedrocks of social psychology (for a recent review, see Crusius et al., 2022), social comparison theory proposes that humans are innately inclined to assess their opinions, abilities, or status in contrast to others. Social comparisons are an integral part of humans' daily lives, happen frequently, spontaneously, and often unintentionally (Gilbert et al., 1995), can be directed upward or downward (i.e., comparisons to superior vs. inferior others), and are important determinants of humans' self-views and well-being (e.g., Crusius et al., 2022). Just as in human offline social interactions, social comparisons are a common phenomenon on SM (Burke et al., 2020; Meier & Johnson, 2022). Since passive SMU encompasses consuming socially rich information from other users, it can initiate social comparisons with those users and the content they share.

In addition, the passive use hypothesis implicitly assumes that comparisons via SM are more common and more hazardous due to several affordances of these technologies

(Verduyn et al., 2020). There are at least six characteristics of SM that, in conjunction, could make social comparison "worse" when passively using SM: (1) SM provide users with an unprecedented amount of social information that serves as the basis for comparisons and (2) this information typically comes from comparison targets that are either part of one's personal network and therefore likely similar to the self, or public personae that one finds relatable (Verduyn et al., 2020). (3) This information is algorithmically ranked to be highly personally relevant (Krasnova et al., 2015). (4) Communication on SM is dominated by positively biased public self-presentations (Reinecke & Trepte, 2014), where users strive for idealized and flattering self-portrayals. Seeing these positively skewed excerpts of others' lives while browsing through SM, upward social comparisons with superior targets should be particularly likely (Verduyn et al., 2017). (5) As users have insufficient cues to gauge the authenticity of these positive self-presentations on SM, the effects of upward comparisons should be further amplified (e.g., Lup et al., 2015). (6) Much more so than in offline interactions, SM self-presentations are enriched by various popularity metrics such as likes, views, or comments, making it easier for other users to assess their relative standing in a social group (Blease, 2015).

Due to these characteristics, SM should increase the frequency at which social comparisons are drawn in daily life and make them especially harmful to well-being (Verduyn et al., 2017). Specifically, upward comparisons elicit envy, which can be particularly detrimental to well-being and has long been associated with SMU (Krasnova et al., 2013). Envy is understood as a feeling of inferiority coupled with a negative emotional appraisal of the good fortunes of others and usually follows an upward social comparison (Crusius et al., 2020).

However, in an intriguing parallel to the controversy around passive use and its effects, there is currently much debate on the nature of upward comparison and envy (Crusius et al., 2020; Meier & Johnson, 2022). In the following, we will engage in a critical discussion on the passive use hypothesis and the active/passive dichotomy. In doing so, we will also touch on the current debate on upward social comparison and envy due to their centrality for the passive use hypothesis.

Empirical Evidence

Pro: Passive Use Harms Well-Being

The notion that passive use harms well-being is not just grounded in a sound theoretical rationale (see above); numerous empirical studies also support (1) a direct negative link between passive use and well-being, (2) social comparison and envy as key processes transmitting this

effect, and (3) harmful effects beyond those on users' well-being.

First, the *direct negative link* between passive use is backed up by numerous studies. Burke et al. (2010, p. 1909) were the earliest to propose a differentiation between SMU as either “active communication between friends” or “passive observation through aggregated streams of social news.” They showed that, in contrast to active communication, passive observation was associated with higher loneliness and reduced bridging and bonding social capital (Burke et al., 2010). Following this initial investigation, several studies corroborated similar findings for other well-being indicators: Passive use was associated with lower life satisfaction (e.g., Krasnova et al., 2013; Lin et al., 2021; Wenninger et al., 2014), negative affect or depressive symptoms (e.g., Frison & Eggermont, 2015; Verduyn et al., 2015), anxiety symptoms (Shaw et al., 2015), lower self-esteem (e.g., Burnell et al., 2020; Chen et al., 2016; Vogel et al., 2014), and, most robustly, with body image issues (for reviews, see Faelens et al., 2021; Vandenbosch et al., 2022). Especially this last stream of research provides ample correlational and causal evidence that passive exposure to body-related SM content often leads to disturbed body perception and dissatisfaction with one's appearance (Faelens et al., 2021; Vandenbosch et al., 2022). Although male users received comparatively less attention in this line of research, initial findings suggest the effect applies equally to all genders (Faelens et al., 2021).

Second, in addition to providing evidence for a direct link between passive use and well-being, research has identified and tested *key processes* assumed to underly the detrimental effects of passive use: *upward social comparison and envy* (for competing reviews, see Meier & Johnson, 2022; Verduyn et al., 2020). Several studies support the notion that upward comparison mediates the negative effect of passive use on well-being (e.g., Liu et al., 2017; Wang et al., 2017), or that negative effects were particularly pronounced for users with a high trait tendency to socially compare (e.g., Vogel et al., 2015; Wang et al., 2017). A recent large-scale study combining survey and log data (i.e., recorded social media interactions) from Facebook users further demonstrated that social comparisons are not only common on SM, but – consistent with assumptions behind the passive use hypothesis – occur more often when users consume more social and positive content (Burke et al., 2020). Similar empirical support was found for envy as an emotional consequence of upward social comparison. Envy appears among the most frequent emotions during SMU (Krasnova et al., 2013) and may explain the link between passive use and decreased well-being (Krasnova et al., 2015; Tandoc & Goh, 2021; Verduyn et al., 2015; Wang et al., 2019).

Third, and rather overlooked to date, initial evidence suggests that the harmful consequences of passive use may go

far beyond individual users' well-being. Specifically, envy in reaction to passively scrolling SM has been suggested as a driver of additional negative outcomes such as risky financial spending behavior (Krause et al., 2019) and, importantly, outcomes that may change the larger dynamics of SM for the worse (for a review, see Wenninger et al., 2021). Initial studies support that envy during SMU may trigger antisocial behaviors (Krause & Baumann, 2021) or fuel additional self-enhancement (Wenninger et al., 2019). Creating a *self-enhancement envy spiral* (Krasnova et al., 2015, p. 599), experiencing envy in reaction to others' self-presentations may motivate users to engage in more self-enhancing behavior on SM (e.g., more positive self-presentations). In an ironic twist, feeling envious of others may lead users to emulate them, further contributing to positively biased self-presentations on SM, which in turn creates additional basis for others to feel envious (Krasnova et al., 2015; Krause et al., 2020; Wenninger et al., 2019). This vicious cycle could – in the long run – reinforce an excessively positive and inauthentic climate on SM, suggesting that passive use might become riskier for users' well-being over time.

Contra: Passive Use Does Not Harm Well-Being

Admittedly, the theoretical rationale behind the passive use hypothesis appears convincing at first sight, and prominent individual studies support the negative association between passive use and well-being. Yet, there are at least four points of evidence that raise serious doubts about whether passive versus active use truly shows the suggested differential effects: (1) meta-analyses contradict the passive use hypothesis, (2) passive use can have positive effects on well-being, (3) active and passive use are sometimes strongly correlated and their effects are therefore indistinct, and (4) the effects of passive use are highly heterogenous.

First, the conclusion that passive use is bad (and active use good) comes from nonsystematic narrative reviews of the literature (e.g., Dienlin & Johannes, 2020; Verduyn et al., 2017), which are inherently selective. Consulting the available systematic reviews and meta-analyses on active versus passive use and well-being paints a different picture. As summarized by Valkenburg, van Driel, et al. (2022), three recent meta-analyses find conflicting evidence for the associations between passive and active SMU and well-being (Hancock et al., 2022; Liu et al., 2019; Yin et al., 2019). Two meta-analyses found effects contradicting the passive use hypothesis, and the only meta-analysis supporting it (Liu et al., 2019) was recently flagged with an “expression of concern” due to potential methodological issues (Liu et al., 2022). While each meta-analysis included

only a few studies, the largest available review of 40 survey studies shows that passive use was often inconsequential for well-being (Valkenburg, van Driel, et al., 2022): Only 15% of studies found a negative association between passive use and positive indicators (e.g., life satisfaction), while 44% of studies found a positive association with negative indicators (e.g., depressive symptoms). Reviewing and pooling effect sizes from multiple studies, there is currently little support for a net negative association between passive use and well-being.

Second, multiple studies provide evidence opposite to the passive use hypothesis, that is, for positive effects of passive SMU on well-being. These studies, most of which have not been included in prior meta-analyses, often work from a more nuanced theoretical view: Upward social comparison can be either *assimilative* (i.e., focused on similarities) or *contrastive* (i.e., focused on differences), with assimilative upward comparisons yielding mainly positive and contrastive upward comparisons mainly negative effects for the self (Crusius et al., 2022). Contradicting the claim that SMU mainly elicits negative contrastive comparisons (Verduyn et al., 2020), surveys find assimilative comparisons to be more common than contrastive comparisons on SM (e.g., Park & Baek, 2018; Tosun & Kaşdarma, 2020). Several surveys and experiments further distinguish an assimilative, benign envy from a contrastive, malicious envy (Crusius et al., 2020). These studies consistently find that benign envy occurs more frequently than malicious envy on SM and is typically unrelated or even indirectly positively related to well-being (Lin & Utz, 2015; Meier et al., 2020; Meier & Schäfer, 2018; Noon & Meier, 2019). One central positive outcome of assimilative upward comparisons and benign envy on SM appears to be inspiration, a positive motivational state elicited by encountering novelty, which is generally beneficial to well-being (Luong et al., 2020; Meier et al., 2020; Valkenburg, Beyens, et al., 2022). Beyond social comparison and envy, studies also support alternative mechanisms that explain the positive outcomes of passive SMU: Users may simply enjoy the content they browse (Valkenburg, Beyens, et al., 2022) or experience the positively biased content on SM as emotionally contagious (Choi & Kim, 2021). Studies investigating how numerous adolescents feel better or worse after passively browsing Instagram or Snapchat, for instance, find that most adolescents experienced no effects at all, while negative and positive outcomes were equally common (Beyens et al., 2021; Valkenburg, Beyens, et al., 2022) or positive outcomes were even more common than negative ones (Beyens et al., 2020). Together, this evidence directly contradicts the hypothesis that passive use is inherently detrimental.

Third, a key assumption behind the supposedly opposite effects of active and passive use on well-being is that they

capture distinct styles of engagement with social media. While the conceptual issues with this assumption will be explicated further below, the empirical evidence on the correlation and overall effect pattern of active versus passive use already challenges its validity. A recent large-scale experience-sampling study found that the within-person effect of passive use was largely the same as for active use among Dutch adolescents (Beyens et al., 2021). In fact, “only one adolescent [note: out of 387] experienced the theoretically expected effect pattern of a positive effect of active private and passive private use and negative effect of passive public use” (Beyens et al., 2021, p. 1). The main reason for the lack of differential effects of active versus passive use seems to be that they are often highly correlated within individuals. That is, especially during private chats on SMU, users typically both actively send and passively receive messages, as is common in conversations (Valkenburg, van Driel, et al., 2022).

Finally, the most up-to-date reviews and meta-analyses (e.g., Kross et al., 2021; Meier & Reinecke, 2021; Valkenburg, 2022; Valkenburg, Meier, et al., 2022; Valkenburg, van Driel, et al., 2022; Verduyn et al., 2022) agree on one conclusion: The effects of (active vs. passive) SMU are highly heterogeneous and idiographic. As is the case with most media and technology effects (Valkenburg et al., 2016), the well-being outcomes of active versus passive SMU most likely depend on numerous person-, situation-, technology-, and communication-specific factors, such as personality traits, usage contexts, the SM applications and well-being outcomes under study, and central interaction and message characteristics (see conceptual issues below). Therefore, the evidence reviewed above and the importance of these additional boundary conditions strongly challenge the validity of the active = good, passive = bad claim.

Conceptualization

Pro: Conceptual Strengths of the Active/Passive Dichotomy

The active/passive dichotomy provides SM research with a sound framework for classifying and understanding well-being effects with several conceptual merits. (1) The active/passive dichotomy allows for more fine-grained SM analysis, (2) is robust and generalizable across multiple existing and future SM, and (3) provides substantial heuristic value for translational research practices.

First, the active/passive dichotomy represents a step toward more fine-grained SM analysis and accounts for some of the complexity of SMU (Griffioen et al., 2020; Parry et al., 2022). Approaches relying on “screen time”

measures still dominate the literature but fail to show consistent or meaningful effects on well-being (Valkenburg, 2022). These inconsistencies most likely stem from an oversimplification of SMU inherent to screen time approaches. These measures typically do not account for the diversity of different SM actions, the motives driving them, or the sociopsychological processes underlying them (Frison & Eggermont, 2016; Krause et al., 2021). Instead, screen time measures aggregate and thereby conflate the occurrence of various actions into a global measure of “time spent on SM” or “frequency of SMU.” By contrast, the active/passive dichotomy has shifted the research focus from asking “how much are SM used?” to “how are SM used?” This added nuance clearly provides new and deeper insights into SMU and well-being, for example, that passive use is much more common than active use (Valkenburg, van Driel, et al., 2022), that passive (but not active) SMU is linked to social comparison and envy (e.g., Krasnova et al., 2015), or that active (rather than passive) SMU can yield social capital and support (e.g., Ellison et al., 2014; Seo et al., 2016). The active/passive dichotomy has probably contributed to shifting the research and public focus away from overall SMU toward specific mediated activities on SM.

Second, the active/passive dichotomy allows researchers to generalize across different SM and social technologies in general without loss of nuance. The dichotomy’s core concepts (i.e., social interaction vs. content consumption) are so fundamental to media use that they can be applied to various existing and yet-to-be-developed social technologies. While the concept of passive use was first proposed for Facebook (Burke et al., 2010), it dates back to older forms of “lurking” in online communities (Preece et al., 2004), and can still be seamlessly applied to today’s Instagram or TikTok use. This is because the active/passive dichotomy resonates with the central elements, or features, of SM (Bayer et al., 2020): Passive use is inherently linked to seeing other people’s self-disclosed information in constant streams of content (i.e., the feed) or on profiles (Bayer et al., 2020). While their specific design might differ between platforms, the sociotechnical core of these SM elements and associated psychological processes (i.e., social comparison and envy) remain stable. This makes the active/passive dichotomy a resilient framework that will most likely be applicable to future technologies. While new SM features will continue to emerge, their uses can probably still be clustered as being either predominantly active or passive.

Finally, and presumably the most powerful argument in favor of the active/passive dichotomy, is its elegant simplicity and, thereby, its *heuristic value*. From the outset, the rise of SM was met with a widespread public demand for actionable insights into the effects of SMU, with the discourse

often appearing one-sidedly pessimistic (Orben, 2020), suggesting that SMU is generally damaging, especially for youth (e.g., Twenge, 2017). The active/passive dichotomy can be a powerful tool for translational work, accommodating this public interest and providing a more nuanced view of the impact of SMU, highlighting both risks and benefits (e.g., Dienlin & Johannes, 2020). Indeed, as argued above, the concepts of active and passive SMU are fundamental to social technology use. They have not only been picked up by various disciplines, such as Communication, Psychology, Social Informatics, or Marketing (Trifiro & Gerson, 2019) but also greatly resonate with users’ own experiences on SM. Active and passive SMU are such simple concepts that the dichotomy and the accompanying hypotheses fulfill the central task of good translational research practice (e.g., Kaslow, 2015). They translate into easy-to-follow practical recommendations for various stakeholders (e.g., users, parents, educators, policymakers) about how to use SM for good and avoid adverse effects (i.e., more active, less passive).

Contra: Conceptual Weaknesses of the Active/Passive Dichotomy

While the points in favor of the dichotomy are well taken, one could argue that they mainly represent unfulfilled promises rather than realized strengths. Four conceptual issues challenge the utility of the active/passive dichotomy: (1) is just screen time in disguise, (2) is too simplistic and conceptually fuzzy, (3) unnecessarily deprecates message reception and processing, and (4) runs the risk of misleading the public.

A first major weakness, particularly of the passive use concept, is that it is essentially screen time in disguise. Various studies, including those relying on log data, find that the overwhelming majority of time spent on SM applications consists of passively scrolling and browsing through content and profiles (Metzger et al., 2018; Valkenburg, van Driel, et al., 2022). Actively and publicly contributing to SM is rare, often done by only a few highly active accounts (e.g., van Driel et al., 2021), similar to or even more extreme than typical Pareto distributions (e.g., at least 80% of posts come from a maximum of 20% of accounts). But if passive use and the time spent on SMU are virtually synonymous for most users, then the passive use concept does not add substantial nuance to the screen time concept.

Second, from a communication perspective, the active/passive dichotomy is too simplistic and conceptually fuzzy. Passive use collapses too many distinct mediated experiences, whereas active use falsely dichotomizes strongly correlated interactive behaviors. Per definition, passive use encompasses *all* consumption of content and social

information on social media (Verduyn et al., 2017). Reading hateful comments, watching a funny cat video, looking at the profile of a good friend, and seeing an advertisement are treated as equally relevant to well-being, which is in stark contrast to key insights from decades of media effects research (Valkenburg et al., 2016). The topic, modality, or valence of content on SM is as irrelevant to the passive use concept as the amount or type of social information attached to this content (e.g., likes, comments, profiles). In short, passive use conflates numerous interaction and message characteristics (Meier & Reinecke, 2021). At the same time, active SMU is often better described as *interactive* use: it encompasses active (= sending) and passive (= receiving) elements of social interaction in quick succession (Ellison et al., 2020; Hall, 2018). Since most users do not engage in much active *public* SMU (e.g., van Driel et al., 2021), the conceptual merit of the active/passive dichotomy must come from distinguishing *private* forms of SMU engagement. Yet, private SMU is essentially mediated interpersonal communication (i.e., a constant back-and-forth of messages), making the active/passive dichotomy artificial and obsolete (Hall, 2018). Finally, some of the most frequent SM activities (likes, comments) defy conceptual and empirical dichotomization into active or passive use (Bayer et al., 2020; Valkenburg, van Driel, et al., 2022), further limiting their validity.

Third, the active/passive dichotomy and passive use hypothesis unnecessarily depreciate message reception and processing. The passive use hypothesis essentially assumes that “digital listening” is inherently worse for well-being than “digital speaking,” as it is more strongly linked to social comparison. Yet, receiving and processing the messages sent publicly or privately by others is fundamental to communication, and can clearly yield positive outcomes such as inspiration, entertainment, meaningful connection, or social support (e.g., Meier et al., 2020). The normative a priori bias toward passive use may stem from associating it with “zombie-like” staring at screens (Ellison et al., 2020), sedentary behavior, or an outdated stimulus-response model of media effects (Valkenburg et al., 2016). Yet, passive use can also be understood as “active listening” to a community (Crawford, 2009) or as viewing content of interest (Valkenburg, Beyens, et al., 2022). Rather than browsing being an entirely inattentive “lean back” behavior, such active listening requires users to “lean forward” and pay attention. Indeed, eye-tracking research supports this multifaceted nature of passive browsing (Ellison et al., 2020; Triêu et al., 2021), which often involves selective exposure and attention to messages (e.g., Johnson & Knobloch-Westerwick, 2017; Valkenburg et al., 2016). In short, passive use is not actually that passive.

Lastly, while acknowledging its popular appeal, using a simple but incorrect narrative such as active = good, passive

= bad to communicate scientific insights about SMU effects to the public is problematic, given the aforementioned contradictory evidence and severe conceptual issues. At worst, this narrative may actively mislead the public. While popularized by Verduyn et al. (2017), the origins of the active/passive terminology can be traced to initial studies by Facebook’s own researchers (Burke et al., 2010). This is unsurprising, as the narrative fits conveniently with SM companies’ business interests: To feel better, users should just post more. That is, users should provide more data, which can be used to generate higher advertising revenues (Alaimo & Kallinikos, 2017). The narrative has, therefore, been actively promoted by Facebook’s public relations campaigns (Docherty, 2020). Effectively, the active/passive dichotomy and its supposedly opposite effects on well-being work as a ruse. They distract researchers from focusing on the most central concepts of interest, namely, technological features, mediated interactions, and messages (Meier & Reinecke, 2021). The active/passive dichotomy, supposedly measurable through self-reports (see next section), further distracts from valid claims for research access to anonymized SM company data on users’ interactions and messages. Yet, these data – rather than a crude active/passive proxy – would be needed to establish the true effects of SMU on well-being through independent research in the public interest.

Operationalization

Pro: Methodological Strengths of the Active/Passive Dichotomy

As argued before, the active/passive dichotomy has done its part to shift the focus away from “how much are we using SM?” to “how are we shaping SM outcomes through different uses?” Beyond this shift in perspective, studies working from the active/passive framework (can) have clear methodological strengths, especially by converging on a consistent and robust SMU measure. The active/passive dichotomy offers (1) one authoritative framework, which is based on (2) a bottom-up and data-driven approach that is (3) flexible and generalizable across different platforms.

First, having one authoritative conceptual and operational approach is generally desirable in empirical, hypothesis-testing research. Research fields benefit from agreeing upon a central framework and standardized measurement, as findings can be generated more quickly, reliably, and are more comparable. Currently, there is considerable methodological plurality in SM and well-being research (Griffioen et al., 2020; Parry et al., 2022), which is likely responsible

for considerable effect heterogeneity (Meier & Reinecke, 2021). While certainly not fully realized yet (Trifiro & Gerson, 2019), the active/passive dichotomy promises a universal and standardized approach to measure SMU, which can be applied both via self-report and unobtrusive usage logging.

Second, studies utilizing active/passive SMU measures largely work from a pragmatic, bottom-up, and data-driven approach that accounts for idiosyncratic SM designs across different applications and their varying uses among different populations. That is, studies typically develop active/passive SMU measures via exploratory factor analyses that empirically cluster usage of various related SM features as either active or passive (e.g., Frison & Eggermont, 2020; Gerson et al., 2017). These factor analyses and a recent experimental paradigm that relies on a mockup SM task (Shaw et al., 2021) provide consistent evidence of passive use as a distinct construct underlying SMU. Empirical studies utilizing the active/passive dichotomy have clearly revealed actionable insights into the nature of SMU and well-being, such as that users overwhelmingly spend their time passively browsing SM rather than actively contributing to them (see Valkenburg, van Driel, et al., 2022, for a review). However, this finding in no way renders the active/passive dichotomy obsolete. It uncovers, firstly, that users spend the most of their SM use on potentially harmful actions (i.e., passive use) and, secondly, that beneficial actions (i.e., active use) should be encouraged, especially given that they are relatively less common. Thus, the active/passive dichotomy has proven empirically valid and – above all – useful.

Finally, beyond greater standardization and a solid empirical basis, the flexible and generalizable measurement approach of the active/passive dichotomy makes it applicable to various individual SM apps (Gerson et al., 2017; Nisar et al., 2019) or even multiple SM simultaneously (Escobar-Viera et al., 2018; Hanley et al., 2019). A wide range of current, and most likely also future, SM applications can be used actively or passively. As mentioned before, this is a clear strength of the dichotomy's conceptualization, allowing researchers to generalize assumed effects to existing and future SM. At the same time, this measurement approach also constitutes a considerable methodological strength, aiding future research on the effects of SM. The generalizability of the active and passive concepts can be translated into a robust, cross-application operationalization of SMU that allows for more nuanced measurements than current screen time approaches. In addition, it facilitates comparisons between individual SM technologies and can be extended or modulated as needed when the SM landscape changes. However, it should be noted that, currently, no such universal cross-application measure of active versus passive SMU exists (Trifiro & Gerson, 2019).

Contra: Methodological Weaknesses of the Active/Passive Dichotomy

While the methodological strengths of the active/passive dichotomy seem promising, the major critique here is that they have not been realized: There is (1) no standardized measure of active versus passive SMU across SM applications and (2) existing active/passive measures are quickly outdated.

Beyond its conceptual problems and general issues with self-report measurements of technology use (e.g., recall, social desirability, or common method bias; Parry et al., 2022), existing research has not operationalized the active/passive dichotomy in a valid, generalizable, or reliable way. The lack of a standardized measure of active versus passive SMU forfeits its potential strengths, such as increased generalizability or cross-application comparisons. Prior reviews (Trifiro & Gerson, 2019; Valkenburg, van Driel, et al., 2022) conclude that virtually no two studies use the same measure of active or passive use. Existing scales are incommensurable, developed anew by each individual study, and typically lack proper validation. Exploratory factor analyses that try to cluster SM feature use into active (e.g., feed posts, direct messages, comments) or passive (e.g., profile views, browsing the feed, swiping through stories) produce widely different solutions across studies. Authors then need to conceptually extend the dichotomy (Verduyn et al., 2022) or revert to more complex, most likely often *ex post* typologies for their SMU measures. For instance, authors have complemented the active/passive dichotomy with private versus public use (Frison & Eggermont, 2020), or split active use into social versus nonsocial (Gerson et al., 2017), or distinguished composed versus one-click versus broadcast communication (Burke & Kraut, 2016). This heterogenous operationalization makes comparing and synthesizing insights from studies impractical. It probably facilitates rampant *ex post* explanations for inconsistent findings and thus overall hinders research progress.

Relatedly, most existing active/passive measures capture usage of only one single SM, such as Facebook or Instagram (Valkenburg, van Driel, et al., 2022). Yet, SM constantly change in design and popularity, and therefore these measures are quickly outdated (Bayer et al., 2020). For instance, the only measure that was validated following established scale construction procedures, the Passive and Active Facebook Use Measure (PAUM) by Gerson et al. (2017), is limited to a single SM application, Facebook. Firstly, this means the scale does not qualify as a universal standardized measure of active and passive SMU across applications. More importantly, however, the measure is now already less useful for research on the well-being impacts of SM than just a few years ago: While Facebook

use is still popular in the general population around the globe, it is seeing considerable competition in the media diets of younger users (e.g., Pew Research Center, 2021), who turn to Instagram, TikTok, Snapchat, or YouTube rather than Facebook, and prefer audiovisual content (e.g., reels), ephemeral features (e.g., stories), or live streaming. Finally, even just capturing today's Facebook use accurately with PAUM is difficult, as the popularity and availability of features have changed rapidly. For instance, browsing profiles seems to have become less important for today's Facebook use (Bayer et al., 2020), while various newer features (e.g., stories, reels) are missing from the PAUM scale. Although the authors deserve much credit for taking on the challenge of creating a validated SMU measure (Gerson et al., 2017), after only a few years, the PAUM already cannot adequately capture the daily SM experiences of many (young) users today. Perhaps the search for a valid and generalizable scale that reliably measures active versus passive uses across multiple ever-changing SM apps is futile (cf. Trifiro & Gerson, 2019). Researchers may be better positioned by investing their resources into developing alternative conceptual and methodological approaches, such as analyses based on affordances, individual features, or messages (e.g., Ellison et al., 2022; Kreling et al., 2022; Meier & Reinecke, 2021).

Synthesis and Outlook

We close this adversarial review on the active/passive dichotomy and passive use hypothesis by synthesizing our main agreements and remaining disagreements. To some extent, we (i.e., AM and HVK) agree that (a) the active/passive dichotomy has fruitfully advanced research on SM and well-being by presenting a (slightly) more nuanced alternative to screen time measures of SMU (Verduyn et al., 2022). We also agree that it has (b) appealing heuristic value, particularly for evidence integration. At least until an improved approach is available, we further see potential in developing an (c) authoritative, integrated, and thoroughly validated active/passive SMU measure that can be applied across multiple SM (Trifiro & Gerson, 2019). Finally, we agree that (d) there is convincing experimental and longitudinal evidence that being repeatedly exposed to unrealistically biased appearance- and body-related imagery while browsing SM can harm well-being (Faelens et al., 2021; Vandebosch et al., 2022). For this particular but common case of SMU, the passive use hypothesis appears to be correct.

That said, three major disagreements remain. The most consequential is (a) how much conceptual nuance versus generalizable theory we need right now (Healy, 2017). The active/passive dichotomy is clearly a drastic simplifica-

tion of how SM are used in real life and conflates numerous more nuanced units of analysis (Meier & Reinecke, 2021). We disagree on whether maintaining an active-passive model, with or without minor extensions (cf. Verduyn et al., 2022), represents a problematic oversimplification and ignores contradictory evidence, arguments, and a looming paradigm shift (Kuhn, 2012) – or whether maintaining it is simply pragmatic. In contrast to idiographic research, which focuses on unique experiences and effects for each individual, the goal of nomothetic research is to propose and test hypotheses with some generality, that is, those that hold true *on average* for the population of interest (Johannes et al., 2021). Adding more nuance and considering additional boundary conditions is always possible, of course. However, research on how SMU impacts well-being may be at a point where it still requires broad – and therefore at times incorrect – umbrella concepts such as active versus passive use, and accordingly broad hypotheses.

We further disagree whether (b) in the context of science communication directed toward SM users, parents, or educators, a simplified but partially incorrect summary of the evidence on SMU and well-being such as active = good, passive = bad is preferable to a more correct but largely unsatisfying answer such as “it depends,” “it’s complex,” or “every user is different” (Beyens et al., 2020; Masur et al., 2022). Then again, the current lack of a more satisfying answer simply reflects that the research is not there yet. Creating a false and premature scientific consensus on supposedly opposite effects of active versus passive SMU would likely be a disservice to the public.

Finally, we disagree on (c) how much working on what is currently methodologically feasible (i.e., measuring active and passive SMU via self-reports) takes priority over working toward what might be methodologically desirable (i.e., measuring users' mediated interactions and messages). While focusing on interaction and message characteristics would most likely allow us to account for a large chunk of the heterogeneity in users' experiences on SM and their effects on well-being, it is simply not feasible for most researchers due to inadequate access to SM data. Until such access is widely available, researchers may need to be content with some version of active versus passive SMU self-reports. At a minimum, then, these self-reports should be standardized and rigorously tested for validity and reliability across SM applications, around the globe, and over time.

The insights from our debate highlight several unresolved challenges. We see two potential solutions, or routes for future research, that researchers can follow. On the first route, researchers accept the active/passive dichotomy as an incomplete and simplified but nevertheless useful working model to better understand the effects of SMU on well-being. Researchers following this path could further extend the model (e.g., Verduyn et al., 2022), refine the

psychological mechanisms involved in transmitting effects from passive versus active SMU to well-being (e.g., Krause et al., 2021; Meier & Johnson, 2022), and develop improved self-report measures (Trifiro & Gerson, 2019) or experimental paradigms of active versus passive SMU (e.g., Shaw et al., 2021).

On the second route, researchers give up on the active/passive dichotomy and instead invest their resources into developing conceptual and methodological alternatives. Rather than measuring active and passive use as broad-yet-problematic umbrella concepts, studies could zoom in on the most likely sources of effect heterogeneity: the messages that users selectively send, receive, and process on SM (e.g., content and modality; Meier & Reinecke, 2021); the types of social interactions they engage in (Hall, 2018); the personality, developmental, and socioeconomic characteristics of senders and receivers (e.g., Cingel et al., 2022; Valkenburg, 2022); the active listening involved in usage activities traditionally viewed as entirely “passive” (Crawford, 2009); or the technological design specifics and affordances of individual SM features (Kreling et al., 2022). To realize this shift in perspective, research efforts need to be accompanied by methodological advancements, such as increased reliance on users’ logged or donated SM data, and a political push toward data access for independent public-interest research (Parry et al., 2022).

While this review may not end with a simple and satisfying solution for how to best study SM effects on well-being, it carves out some of the field’s most pressing conceptual and methodological issues. The active/passive dichotomy is at a curious point in the literature, representing both a way forward and a potential hindrance to research progress. The two routes outlined here should therefore be seen as mere suggestions, leaving room for creative alternatives or hybrids between the two paradigmatic approaches. We hope that based on the critical insights from this adversarial review – conducted in a friendly, constructive, and collaborative spirit – readers can make an informed choice on how they want to apply, extend, or revise the active/passive dichotomy in their future work.

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Publication Ethics

The positions expressed do not necessarily represent the authors' own points of view. Instead, by taking these positions, we wish to carve out the main points of friction in the debate around passive social media use and well-being.

Authorship

This paper is based on a debate club panel held at the German Psychological Society (DGPs) Media Psychology conference at Aachen, Germany, in September 2021. In this debate, Hannes Krause took the first position (“pro”), arguing that the active/passive dichotomy is a useful framework and evidence sufficient to conclude that passive use harms well-being. Adrian Meier took the second position (“contra”), challenging the validity of the dichotomy and the “passive use = negative effects” claim. In this paper, the authors jointly summarized and elaborated on this debate. Both authors structured the article, submitted first drafts of their respective sub-sections (pro or contra arguments), and divided up writing the remaining sections (Introduction, Theoretical Background, Discussion). Adrian Meier and Hannes-Vincent Krause offered feedback on all parts of the paper, and all sections were revised together.

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