



THE UNIVERSITY *of* EDINBURGH

## Edinburgh Research Explorer

### Hashtags

**Citation for published version:**

Erz, A, Marder, B & Osadchaya, E 2018, 'Hashtags: Motivational drivers, their use, and differences between influencers and followers', *Computers in Human Behavior*, vol. 89, pp. 48-60.  
<https://doi.org/10.1016/j.chb.2018.07.030>

**Digital Object Identifier (DOI):**

[10.1016/j.chb.2018.07.030](https://doi.org/10.1016/j.chb.2018.07.030)

**Link:**

[Link to publication record in Edinburgh Research Explorer](#)

**Document Version:**

Peer reviewed version

**Published In:**

Computers in Human Behavior

**General rights**

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

**Take down policy**

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact [openaccess@ed.ac.uk](mailto:openaccess@ed.ac.uk) providing details, and we will remove access to the work immediately and investigate your claim.



## **Hashtags: Motivational Drivers, their Use, and Differences between Influencers and Followers**

Antonia Erz<sup>a</sup>

Copenhagen Business School

Ben Marder<sup>b</sup>

University of Edinburgh

Elena Osadchaya<sup>c</sup>

University of Edinburgh

<sup>a</sup>Copenhagen Business School, Department of Marketing, Solbjerg Plads 3C, 2000 Frederiksberg, Denmark, ae.marktg@cbs.dk.

<sup>b</sup>University of Edinburgh, Business School, 29 Buccleuch Place, Edinburgh, EH8 9JS, UK, ben.marder@ed.ac.uk

<sup>c</sup>University of Edinburgh, Business School, 29 Buccleuch Place, Edinburgh, EH8 9JS, UK, s1786248@ed.ac.uk

The authors confirm that there are no known conflicts of interest associated with this publication. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Correspondence concerning this article should be addressed to Antonia Erz, Department of Marketing, Copenhagen Business School, Solbjerg Plads 3C, 2000 Frederiksberg, Denmark.

E-Mail: ae.marktg@cbs.dk

**Abstract**

Hashtags have become a ubiquitous and seminal feature of social media; however, a comprehensive understanding of what motivates and predicts their use is yet to be addressed. To fill this gap, this research investigates motives of hashtag use and their effect on behavioral outcomes based on the Uses and Gratifications (U&G) approach. Through a two-phase mixed method data collection, we distill six motives of hashtag use in the context of Instagram: Self-presentation, Chronicling, Inventiveness, Information Seeking, Venting, and Etiquette. We find drivers for platform use to affect these motives, which, in turn, influence the frequency of clicking and adding hashtags, and the number of hashtags a user may employ in a post. Furthermore, we find potential influencers to be heavy users of hashtags, primarily driven by motives of self-presentation, and to score higher on narcissism, extraversion and self-monitoring than followers. We further assert the need for U&G studies to explicitly acknowledge the nature of social media that allows users to both consume and produce content. The findings hold important implications for social media managers and designers.

*Keywords:* Social Media; Hashtags; Uses and gratifications; Instagram; Influencers

## 1. Introduction

As eloquently put by Aynsley (2016), Instagram “is a medieval battlefield, you, the social media pro, are the gallant knight and the hashtag is your trusted sword.” Content on social media is nearly always accompanied by hashtags, and approximately 125 million hashtags are shared each day on Twitter alone (McGoogan, 2017). On Instagram, adding at least one hashtag to a post increases reach by 12.6% on average (Osman, 2018), which is a means of fueling virality (Lipsman, Mudd, Rich, & Bruich, 2012). Hashtags are no longer simply “trending” but a ubiquitous and seemingly permanent and powerful feature. Extant research has found hashtags to be a crucial currency for all users, primarily fulfilling a broadcasting function to increase visibility of content (Page, 2012). However, scholarly work has been mostly mute about the possibility that other motivations, and as such usages, of hashtags may exist. Moreover, while the broadcasting function of hashtags may be particularly appealing to social media influencers, different motives may drive other user groups to employ hashtags. In sum, extant research has largely neglected the questions: Why do social media users employ hashtags, and are there differences in motives and usage for different types of users?

The motivation of this study is, therefore, to address this research gap and investigate the motives and behavior of hashtagging. To this end, we employ the Uses and Gratifications (U&G) approach (Blumler, 1979; Katz, Blumler, & Gurevitch, 1973; McQuail, 1983, 1984; Ruggiero, 2000), which is well-established as a lens for understanding behaviors relating to information systems technologies, in particular social media (e.g., Krause, North, & Heritage, 2014; Phua, Jin, & Kim, 2017; Sheldon & Bryant, 2016). One of the main premises of U&G is that users actively choose different media to satisfy their individual needs, making this approach particularly suitable for investigating interactive media, where “users likely are particular aware of the needs they are attempting to gratify” (Eisenbeiss, Blechschmidt,

Backhaus, & Freund, 2012, p. 7). Specifically, our research first explores motives of hashtag use on Instagram, a photo- and video-sharing networking site with currently over one billion monthly active users worldwide (Statista - The Statistics Portal, 2018b). Secondly, we specify a model to examine 1) the role of Instagram use motives in predicting motives for hashtag use, and 2) the impact of hashtag motives on hashtagging behavior, considering both modes of consumption, that is, clicking hashtags, and production, that is, adding hashtags to posts. Thirdly, we examine individual differences in motives, personality, and behavior by distinguishing between potential social media opinion-leaders, that is, influencers, and general users, that is, followers. This distinction is important as influencers are known to prefer Instagram to other sites to engage audiences, due to its focus on images, simplicity, and a combination of large but tight audiences (Shane-Simpson, Manago, Gaggi, & Gillespie-Lynch, 2018). Furthermore, influencers are key for commercial entities leveraging social media (Lahuerta-Otero & Cordero-Gutiérrez, 2016) and thus understanding their use of social media is pivotal (Erz & Heeris Christensen, 2018).

The contribution of this research is fourfold. Firstly, our research provides the first investigation of U&G of hashtags. This is important as hashtag use is widely passed up as being motivated to increase the visibility, or reach, of content, which of course often it is, particularly for influencers (Erz & Heeris Christensen, 2018; Khamis, Ang, & Welling, 2017; Marwick, 2015). However, many other important motivations may exist. For example, the most popular hashtag on Instagram in 2017 was #love. Although this may have been motivated by a need for visibility for certain individuals, others may have used this hashtag as means of simply providing meaning to photos addressing their loved ones. By uncovering these distinct motives, we add to research that focuses on understanding drivers of social media use. Importantly, we consider both usage modes of consumption and production: Users can click on hashtags to consume merely content of others, but they can also engage in

producing, that is, creating and adding, hashtags to their posts. By conceptualizing hashtags as communication devices that inherently present modes of consumption and production, we add to current discussions in information systems research that emphasize the dual nature of behaviors on technological platforms (Khan, 2017; Mäntymäki & Islam, 2016; Wästlund, Reinikka, Norlander, & Archer, 2005). Thereby, we contribute to U&G research that has largely not explicitly addressed this significant change in media use by uncovering motives that distinguish between modes of consumption and production.

Secondly, we contribute to extant yet scarce literature concerned with social media feature use (Dhir, Chen, & Chen, 2017; Lai & Yang, 2016) by shedding light on the antecedents of hashtag motives and behaviors, and by specifically establishing drivers of platform use as predictors of drivers of feature use. Thirdly, investigating individual differences by explicitly exploring differences between potential influencers and followers, we contribute to research on online opinion leadership and microcelebrities (Erz & Heeris Christensen, 2018; Khamis et al., 2017; Marwick, 2015) and distill specific motives, behaviors, and personality traits of these influencers. These findings further underscore the self-presentation function (Colliander et al., 2017; Johnson & Ranzini, 2018; Marder, Joinson, Shankar, & Thirlaway, 2016) that social media increasingly fulfill, since they, as elaborated, do not only allow for consumption but also for production – and diffusion – of content. Lastly, we provide critical knowledge to practitioners of how to best leverage social media through influencers and general users. Specifically, by understanding what motivates hashtag use (and its interplay with platform drivers), which motives have the strongest link to behavior, and the characteristics of potential influencers vs. “ordinary” users, practitioners can best optimize their hashtags for sharing by general users on the one hand and maximize reach and engagement with influencers on the other. Furthermore, we provide suggestions to site designers to encourage optimal use of hashtags.

## 2. Conceptual Background

### 2.1 Uses and Gratifications Approach

A number of researchers have applied the U&G framework to investigate users' motives and uses of different social media platforms, such as Facebook (Lai & Yang, 2016), Pinterest (Mull & Lee, 2014), YouTube (Khan, 2017), and Instagram (Sheldon & Bryant, 2016). While motives for social media use may differ between platforms (e.g., Gao & Feng, 2016; Phua et al., 2017) and between individual users, based on their personality characteristics (e.g., Sheldon & Bryant, 2016), they can be broadly categorized into five dimensions or factors (cf. McQuail, 1983):

1. *Information*. Traditionally related to information seeking needs, we also subsume surveillance or knowledge about others (e.g., Courtois, Mechant, De Marez, & Verleye, 2009; Sheldon & Bryant, 2016) under this factor. Additionally, the nature of social media has led authors to consider information providing, giving, sharing, or exchange (e.g., Alhabash & McAlister, 2015; Büchi, Just, & Latzer, 2016; Fullwood, Nicholls, & Makichi, 2015).
2. *Entertainment* includes sub-categories such as procrastination, escapism, recreation, and experimentation (e.g., Alhabash & McAlister, 2015; Courtois et al., 2009; Orchard, Fullwood, Galbraith, & Morris, 2014) but also using platforms as emotional outlets or for venting feelings (e.g., Dhir et al., 2017; Fullwood et al., 2015). Investigating specific Facebook features and the picture-sharing site Pinterest, authors also found related factors, such as pursuit of creativity or fashion (Lai & Yang, 2016; Mull & Lee, 2014).
3. *Social Interaction* has received much attention in social media research (e.g., Alhabash & McAlister, 2015; Gao & Feng, 2016; Khan, 2017), including needs for socializing and

relationship building (Joinson, 2008; Orchard et al., 2014; Urista, Dong, & Day, 2009), and keeping in touch with friends and family (Raacke & Bonds-Raacke, 2008).

4. Experiencing increasing scholarly attention, *Personal Identity* includes investigated factors such as the need for popularity (Dhir et al., 2017; Urista et al., 2009), self-expression, impression management, or status signaling (Alhabash & McAlister, 2015; Gao & Feng, 2016) but also motives of personal development (e.g., van Deursen & van Dijk, 2014). Additionally, and particularly for platforms such as Instagram, this dimension can be extended by motives of documentation and a need for demonstrating coolness (Sheldon & Bryant, 2016).
5. Researched less often than the first four dimensions, the fifth dimension can be summarized as *Convenience*, pertaining to the need of using social media for reasons of its appeal and its convenience for communication and transactions (Büchi et al., 2016; Dhir et al., 2017; Urista et al., 2009).

## 2.2 Instagram and Hashtags

Instagram is a fast-growing social image- and video-sharing application with currently one billion monthly active users worldwide (Statista - The Statistics Portal, 2018b), with its core user base between 18 and 34 years of age (Statista - The Statistics Portal, 2018a). Users can be consumers, celebrities, or organizations. A user can generally choose between a private and a public account. In contrast to social-networking sites like Facebook or LinkedIn, where the relationships are usually reciprocal by default, they are asymmetrical on Instagram (as they are on Twitter, see Page, 2012). That is, user A can follow user B, without B automatically following A. This leads to a followers/followings ratio; generally, users can control for a “favorable” ratio, ensuring that they follow fewer users than they are followed by.

Instagram and its use and users have recently attracted increasing scholarly attention. Researchers have, amongst others, investigated the impact of photo-sharing on Instagram on users' self-presentation, health, and body image (e.g., Lup, Trub, & Rosenthal, 2015; Pittman & Reich, 2016; L. R. Smith & Sanderson, 2015), the relationship between users' personality traits, particularly narcissism and Instagram use (e.g., Dumas, Maxwell-Smith, Davis, & Giulietti, 2017; Jackson & Luchner, 2016; Moon, Lee, Lee, Choi, & Sung, 2016), and picture-sharing on Instagram in the context of specific societal discourses (Alper, 2014; Gibbs, Meese, Arnold, Nansen, & Carter, 2015). Importantly, based on U&G, Sheldon and Bryant (2016) distilled four factors that affect Instagram use. Study participants were driven by motives of surveillance/knowledge about others (i.e., reviewing information about others), documentation (i.e., documenting one's life or remembering events), coolness (i.e., self-promotion), and creativity (i.e., creating art and showing off photography skills).

Similarly to Twitter, hashtags are a central feature of Instagram, and can be broadly defined as user-generated content (cf. Courtois et al., 2009). A hashtag is a keyword or a string of words, denoted by a hash (#) to make it a hyperlink. First developed as a user-innovation on Twitter, hashtags primarily serve a search, grouping, or tracking function (Scott, 2015): Users can click on any published hashtag to see and scroll through any pictures that have been posted in connection with this hashtag. Importantly, hashtags serve another purpose beyond their search function: Users can add hashtags to the pictures they post to broadcast their content (Page, 2012). Thereby, one can choose between using a hashtag that is completely new and self-generated or a generic hashtag, a somewhat established hashtag used by many (e.g., #tbt, i.e., "Throwback Thursday", or #metoo).

Generally, adding hashtags serves connecting, coordinating and promoting content, making hashtags "a crucial currency which enables visibility" to its users (Page, 2012, p 184). While Page (2012) conceives hashtags more as a broadcasting (one-to-many) than a

conversational linguistic device, Zappavigna (2015) points to its interpersonal dimension: Hashtags can serve a relationship-enacting function, for example, by directly addressing others in a hashtag or enact evaluative meanings, such as communicating negative feelings that are assumed to be shared by others. Furthermore, on a textual level, a hashtag organizes the text in that the hash (#) serves as some sort of punctuation that delineates the hashtag from the rest of the text. Lastly, on an experiential level, a hashtag indicates a topic of a post, that is, what the post is “about”. Extending these descriptive functions, Scott (2015, 2017) argues that hashtags do not only indicate a topic. Hashtags can also highlight a topic (without categorizing it, lacking “aboutness”) and contribute to the relevance of a post by allowing the poster to make implicit or explicit meanings, or contextual assumptions, accessible to her audience. In this way, a poster can use “the tag space to guide the reader towards the intended interpretation” (Scott, 2017, p. 3).

### **2.3 Influencers**

Instagram has not only experienced rapid growth of its user base in recent years, but it has also significantly contributed to the rise of so-called “influencers” or “micro-influencers”, sometimes termed microcelebrities (Marwick, 2015; Senft, 2008, 2013), who have reached “Instafame”. Described as opinion leaders (Song, Cho, & Kim, 2017) and a “new type of third-party endorsers” (Freberg, Graham, McGaughey, & Freberg, 2011, p. 90), typical social media influencers usually start out as “ordinary” consumers who are able to grab the “megaphone” (McQuarrie, Miller, & Phillips, 2013) to build their “fame from the Internet up” (O’Connor, 2017). Further, influencers have been found to engage in self-branding strategies (Erz & Heeris Christensen, 2018) by reaching out to followers, often disclosing personal information, which in turn, improves their online status (Marwick, 2015). They promote brands on Instagram in exchange for monetary or non-monetary compensations, and social media users conceive them as more credible and relatable than conventional celebrities

(Djafarova & Rushworth, 2017). These influencers are therefore an important user group on Instagram and can influence both pre- and post-purchase decisions of consumers (e.g., in the travel industry, cf. Song et al., 2017). These types of influencers are active in different areas, such as fashion, travel, food, technology, or parenting, and their reach and professionalization may vary. Some of the most famous influencers who made it from “ordinary” person to “famous” influencer include Italian fashion blogger and Instagrammer Chiara Ferragni, travel blogger Kate McCulley, or tech-blogger Marques Brownlee (O’Connor, 2017).

Although research has been slow in identifying the links between traits, motives, and behaviors, a growing body of research aids our understanding of these new online influencers. More generally, research on electronic word-of-mouth (eWOM) has identified several factors that increase the likelihood of consumers engaging in eWOM, including self-enhancement, opinion leadership, neuroticism, and individuation (for a review, cf. King, Racherla, & Bush, 2014). Hennig-Thurau et al. (2004) found “self-interested helpers” to be the largest online user segment that contributes to eWOM. Buffardi and Campbell (2008) demonstrated that narcissists, that is, users who have an exaggerated self-concept and high level of self-importance (Buffardi & Campbell, 2008; Sheldon & Bryant, 2016), were more socially active and generated more self-promoting content on Facebook than users low in narcissism. Similarly, Moon et al. (2016) showed that Instagram users high in narcissism posted more selfies or self-presenting pictures and updated their profile picture more often than their counterparts. In turn, users high in narcissism were found to use Instagram particularly for reasons of self-promotion (“Coolness”) and to obtain knowledge about others (Sheldon & Bryant, 2016). Furthermore, Leung (2013) demonstrated that exhibitionists, as one dimension of narcissism, engaged specifically in content creation for reasons of showing affection, venting negative feelings, and gaining recognition. Researchers have also shown that self-monitoring, that is, the regulation of self-presentation for the sake of desired public

appearances (Gangestad & Snyder, 2000), affects opinion leadership positively (Rose & Kim, 2011), and that Instagram specifically plays a role in increasing people's self-monitoring behavior (Kim, Seely, & Jung, 2017). Lastly, Song et al. (2017) demonstrated that openness, exhibitionism and competence in interpersonal relationships increased online opinion leadership.

## **2.4 This Investigation**

Not only have social media changed the media landscape and business practices in general, but also the social media landscape in itself has undergone rapid transitions due to the market-driven rise and fall of certain technologies, which in turn have perpetuated, replaced or promoted certain user behaviors. Firstly, a potential shortcoming of U&G research is that it has not explicitly conceptualized the nature of social media in that they do not solely provide content to be consumed for entertainment or needs of information-seeking. Newly emerging sub-categories of U&G underscore the increasingly production-related gratifications that users seek, such as categories that include using social media as a creative outlet (e.g., Sheldon & Bryant, 2016). However, and despite its central premise of the active user, extant U&G research has been, with only few exceptions (Khan, 2017; Leung, 2013), largely mute about the notion that social media is different from conventional mass media in that users cannot only more actively participate but have become pivotal producers of media content. At the same time, motives might differ for these two activities.

Secondly, some researchers have voiced their concerns about an overly exaggerated focus on the community and social interaction aspect of social media, suggesting that consumers use platforms like Instagram primarily to self-present rather than to join a common purpose (e.g., Arvidsson & Caliendo, 2016). This suggests that the identity dimension of social media usage has increased in importance, given that social media have given rise to also economically successful self-branding tactics (Erz & Heeris Christensen,

2018), where identity production instead of consumption plays a central role. Such identity production by users, or in other words self-promotion, is it at the crux of how commercial entities leverage sites such as Instagram. Content in all its various forms is considered “king”, as it aids users shaping their identities, validated by metrics of reach (i.e., views) and engagement (e.g., shares, likes).

Despite this relevance of hashtags as a central communication device that reflects both modes of consumption and production and their pivotal role in identity creation and the achievement of commercial aims through chasing reach and engagement, to the best of our knowledge there exists no research on motives that may drive their use. Therefore, our first aim is to address the following research question:

RQ1: What are the motives for hashtag use on Instagram, both when consuming (“clicking”) and producing (“adding”) hashtags?

The value of knowing the drivers of hashtag use is increased when light is shed on their antecedents and the prominence of these factors on hashtag behaviors. For both influencers and general users, we anticipated user motives for adding or clicking hashtags be affected by their motives for using Instagram generally. Therefore, our second aim is to answer:

RQ2: How do motives of Instagram use affect motives of hashtag use, and how do these in turn drive hashtag usage?

Lastly, U&G generally assumes that individual differences, such as in personality or socio-demographics, affect media use (Blumler & Katz, 1974; Ruggiero, 2000). Examined factors include age (e.g., Büchi et al., 2016) and contextual age (e.g., Sheldon & Bryant, 2016), gender (e.g., Fullwood et al., 2015), narcissism (e.g., Sheldon & Bryant, 2016), the Big Five (e.g., Orchard et al., 2014) and cultural differences (e.g., Sheldon, Rauschnabel, Antony, & Car, 2017). Social media have undoubtedly contributed to the emergence of

micro-influencers (Erz & Heeris Christensen, 2018; McQuarrie et al., 2013), and particularly Instagram has opened up opportunities to this new type of opinion-leaders (eMarketer, 2018). Therefore, in exploring individual differences in motives for platform and hashtag use, actual hashtag behavior and personality traits, we explicitly distinguished between potential influencers (i.e., microcelebrities or online opinion leaders) and “ordinary” users (i.e., followers). Thus, our third aim is to answer:

RQ3: Who are potential influencers and followers on Instagram, and are there differences in personality, motives for Instagram and hashtag use, and actual hashtag use?

### **3. Method**

In order to answer these research questions, we followed the convention of U&G research and employed a two-phase mixed method approach (cf. Churchill Jr, 1979), entailing a qualitative pre-study with semi-structured interviews with 17 informants and a survey with 748 participants. Ethical approval was granted by the institutional ethics committee for both the qualitative interviews and the survey before data collection started.

#### **3.1 Qualitative Pre-Study**

##### **3.1.1 Informants and procedure**

We designed a semi-structured interview guide with the purpose to explore users’ motives to use hashtags. Informants ( $N = 17$ ,  $M_{age} = 24.06$ ,  $SD = 3.67$ ; 14 females) were Instagram users with a public ( $n = 12$ ) or private ( $n = 5$ ) Instagram account, purposefully sampled from two European universities and the researchers’ networks, with different cultural backgrounds. Participation was voluntary, and interviews lasted between approximately 20 and 45 minutes. An elicitation technique similar to the auto-driving or visual elicitation technique (Heisley & Levy, 1991) was employed. More particularly,

informants were asked before the interview to review two instances on their personal Instagram account where they had used hashtags, relating to either a personal context or a brand-related context (e.g., hashtagging a brand, including locations or restaurants) and bring those examples to the interviews. Before the interview started, the researchers informed the interviewees about the broad purpose of the interview, namely understanding the informants' personal Instagram use. Informants then reported on their age, nationality, occupation and whether they had a private or public account on Instagram. The interviews started with a question about informants' general Instagram usage and their motives. Then they were asked to show the first instance of hashtag use they had selected to the interviewer and to elaborate on the context in which the picture was taken and the role of the hashtags in relation to this context. This led to a general discussion of the informants' motives for their hashtag use, and the interviewer prompted them to elaborate on the second instance they had selected. Informants were further asked whether and why they enjoyed creating hashtags, how often and how many hashtags per post they used, and what a hashtag should entail to be "optimal". At the end of the interview, informants were debriefed and thanked for their participation.

### **3.1.2 Analysis and findings**

For purposes of item development for the subsequent survey, we extracted uses and gratifications from the interview data, guided by principles of thematic analysis (Braun & Clarke, 2006). In order to distill relevant motives, we analyzed the interview data for instances in which informants spoke about their or other people's use of hashtags, including motives which occurred both frequently (e.g., documenting an event) and less frequently (e.g., to be ironic) during the interviews. Uses and gratifications were then summarized in an initial list of hashtag usage motives and actual usage. In a second iteration, we matched the generated list with the five common U&G dimensions distilled from the literature review (Information, Entertainment, Personal Identity, Social Interaction, and Convenience). To

account for hashtag uses of consumption and production, we reviewed the generated items in a third iteration. More particularly, for each U&G dimension we formulated items which would capture either hashtag consumption (“clicking”, e.g., “I click on #s to find information about people”) or production (“adding”, e.g., “I add #s to associate myself with a brand.”). In total, we constructed 45 items for clicking and adding hashtags for the five selected U&G dimensions.

While the goal of this qualitative research phase was relatively narrow and predominantly driven by a top-down approach (Clarke & Braun, 2014), namely distilling a list of relevant motives and possible uses based on the U&G approach and extant literature, we allowed new themes to emerge from the data. This openness aided our understanding of other, more implicit, dynamics of Instagram and in further specifying outcomes of hashtag use. When informants elaborated on their “optimal” hashtags, a distinction between original and creative versus more generic and used-by-many hashtags quickly emerged. Informants reported to use creative and highly original hashtags in instances that were more private (e.g., “inventing” hashtags that only a group of friends would share) or for purposes of appearing creative and funny. Furthermore, the number of hashtags used in a post was an important topic. Many participants reported that they did not want to look like they would “fish” for likes by using many hashtags. In order to be influential, connect to brands and receive promotion jobs, however, informants explained that users who pursued influencer status would have to use many hashtags to promote the product and make themselves “searchable”. Yet, as using many hashtags in a post is to be avoided, users who pursue influencer status would disguise this by inserting three full stops between the main caption and their list of hashtags. Moreover, participants generally agreed that if a user pursued influencer status, most hashtags would have to be generic rather than original.

### 3.2 Survey

Survey data were collected through Amazon Mechanical Turk from adults residing in the U.S. who were also members of Instagram. Amazon Mechanical Turk data is commonly used within research (e.g., Lamberton & Rose, 2012), with its validity supported in comparisons with other online data samples (Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, & Ipeirotis, 2010). Potential participants were initially screened through three questions about their Instagram use (“Do you have Instagram account?”; “Have you logged in to Instagram at least once in the last 30 days?”; “Have you posted on Instagram in the last 30 days?”; all measured on Yes/No). Out of the 800 participants who passed this screening, 52 participants were excluded from further analysis because they expressed they did not use hashtags at all, leaving 748 participants ( $M_{age} = 32.46$ ,  $SD = 8.41$ ; 461 females) in the final sample.

The survey contained all 45 items on hashtag motives that had been extracted from the qualitative interviews and literature review. Particularly, survey participants were asked how frequently they used hashtags for the presented reasons, measured on 5-point Likert-scales (from 1 = never to 5 = always). Items were divided by consumption (i.e., seven “clicking”-items) and production items (38 “adding”-items) but were presented randomly within their category. We extended the survey by additional measures of interest to answer our second research question on the relationship between motives of hashtag use, Instagram use motives, and hashtagging behavior. Firstly, we anticipated that users who were driven by specific motives to use the platform Instagram would seek certain U&G of its central feature, hashtags. We therefore included Sheldon and Bryant’s (2016) four-factor, 20-item-battery of Instagram use motives (IG-Surveillance/knowledge about other; IG-Documentation; IG-Coolness; IG-Creativity). In addition, to capture the emergent theme from our qualitative phase that users were motivated to use Instagram for becoming an influencer, we added three

more items (“To become famous”; “To become a social media celebrity”; “To become a micro-influencer (i.e., someone with a lot of followers who is influential to their network)”). Secondly, we measured behavioral outcomes through several self-report measures. General clicking frequency and general adding frequency were assessed by asking participants how often they engaged in specific activities (“Click on hashtags used by others (people/brands)”; “Search for hashtags in the search option”; “Follow up on hashtags that are trending”,  $\alpha = .92$ ; and “Add hashtags to your posts”; “Use hashtags when posting a photo”; “Use hashtags in commenting on content posted by others”,  $\alpha = .90$ ; both measured on 1 = never to 5 = always). To assess the number of hashtags used in one post, participants were provided with a closed-ended scale asking how many hashtags they used per post (“1”; “2-4”; “5-7”; “8-11”; “11+”; “I never use hashtags”).

Thirdly, we accounted for the genericness of hashtags users add to a post. Specifically, we asked them to assess how they perceived the hashtags they added to their own posts on a 5-point semantic differential scale (highly original vs. generic; creative vs. standard; your own vs. used by lots of people,  $\alpha = .90$ ). Fourthly, informants in the qualitative interviews reported a certain self-consciousness in hashtag use, aiming at balancing the number of hashtags per post. Thus, we included self-consciousness in hashtag use as a measure (“Using too many hashtags is unattractive to others”; “I am cautious not to use too many hashtags”; “It is not cool to have lots of hashtags on your post”, measured on 1 = strongly disagree to 5 = strongly agree;  $\alpha = .83$ ). Fifthly, we included a range of personal traits and demographic measures, particularly serving the third research question on exploring traits of influencers. Self-monitoring ( $\alpha = .82$ ) was measured on a validated ten-item version (Goldberg et al., 2006) of Snyder’s (1974) original scale as was Narcissism (Hendin & Cheek, 1997) ( $\alpha = .78$ ). We additionally provided a short, 15-items, scale of The Big Five, for whose five sub-scales with each three items Cronbach’s alphas ranged from .57 to .83,

deemed acceptable and supported by Lang et al. (2011). Lastly, we asked participants to provide their age and gender.

## 4. Results

### 4.1 Motives of Hashtag Use

The first research question addressed the investigation of motives for hashtag use on Instagram. To this end, the 45 items on consuming (“clicking”) and producing (“adding”) hashtags were subjected to exploratory factor analysis. Bartlett's test of Sphericity ( $< .05$ ) and Kaiser-Meyer-Olkin (KMO) sampling adequacy score ( $> .60$ ) were assessed and were satisfactory (Williams, Onsman, & Brown, 2010). The initial factor analysis using promax rotation (as guided by the correlation matrix) yielded six components with eigenvalues greater than one, explaining 70.6% of the variance. Of the 45 items, 12 did not load on any factor, including items related to collating memories, fostering a sense of belonging and showing status to others. Of the remaining 33 items, six items were removed from the factors due to having loadings below the conservative threshold of 0.6 (Matsunaga, 2010). Akin to Joinson (2008), a preliminary check of score distributions for each item was carried out to ensure the use of the full range of response options, which was satisfied for all items. The six factors identified through the factor analysis were:

1. *Self-Presentation*, referring primarily to motives of self-branding and self-promotion;
2. *Inventiveness*, pertaining to the humorous or entertaining aspect of adding hashtags;
3. *Chronicling*, including documenting and contextualizing experiences through adding hashtags;
4. *Information Seeking*, finding information and inspiration through clicking hashtags;
5. *Venting*, expressing negative emotions through adding hashtags; and
6. *Etiquette*, adding hashtags because it is what people do on Instagram.

Table 1 provides an overview of the U&G factors, including item loadings, means and standard deviations.

**Table 1. Motives of hashtag use**

	<i>Load</i>	<i>M</i>	<i>SD</i>
<b>Factor 1: Self-presentation</b>			
I add #s to self-brand myself by reaching out to members of the public (who I do not know offline)	1.01	2.20	1.23
I add #s to increase my network acquiring more followers	0.91	2.13	1.26
I add #s to self-brand myself by reaching out to peers you know	0.90	2.38	1.36
I add #s to self-brand myself by reaching out to brands or highly followed people	0.84	2.29	1.36
I add #s to associate myself with a brand	0.72	2.35	1.38
I add #s to show my skillfulness	0.61	2.40	1.32
<b>Factor 2: Inventiveness</b>			
I add #s to show my humorous side	0.954	3.05	1.27
I add #s to be funny, playful or ironic	0.856	3.13	1.33
I add #s to entertain other people (e.g., make people smile)	0.788	2.97	1.27
<b>Factor 3: Information seeking</b>			
I click #s to see posts from others	0.841	3.03	1.23
I click on #s to find like-minded people	0.826	2.76	1.29
I click on #s to find information about people	0.764	2.68	1.24
I click on #s to find information about brands and places	0.739	2.82	1.26
I click #s to follow trending posts	0.723	2.78	1.25
I click #s to see a collection of posts to help me relive memories	0.638	2.53	1.23
I click #s to find inspiration for my personal development	0.618	2.52	1.28
<b>Factor 4: Chronicling</b>			
I add #s to document special events that I have attended	0.963	2.88	1.25
I add #s to indicate the name of an event	0.959	2.97	1.26
I add #s to indicate the location of an event	0.833	2.80	1.28
I add #s to document experiences with others	0.734	2.78	1.25
I add #s to document my life	0.641	2.74	1.30
I add #s to share experiences or recommendations	0.634	2.80	1.27
<b>Factor 5: Etiquette</b>			
I add #s to a post because that's what people do on Instagram	0.820	2.92	1.36
I add #s because it is the trend to do so	0.731	2.68	1.36
I add #s as this is the etiquette on Instagram	0.614	2.71	1.33
<b>Factor 6: Venting</b>			
I add #s to express anger, dissatisfaction, or disappointment with a person	0.669	2.13	1.26
I add #s to express anger, dissatisfaction, or disappointment with a brand	0.666	2.11	1.25

## **4.2 Relationship between Motives of Instagram Use, Motives of Hashtag Use, and Actual Hashtag Usage**

The second research question addressed the relationship between motives of Instagram use, motives of hashtag use (Self-presentation; Inventiveness; Chronicling; Information seeking; Venting; Etiquette), and hashtag usage (general adding frequency; general clicking frequency; number of hashtags per post). We were additionally interested in the role of hashtag genericness (vs. originality) and users' self-consciousness in hashtag use.

Since we added three items to the survey to account for Instagram users' status seeking needs, we subjected Sheldon and Bryant's (2016) Instagram-dimensions, including the additional items, to a principal component factor analysis. It revealed that the three added items for status seeking loaded together with all loadings greater than .57, deemed adequate by Comrey and Lee (2013). However, all items of Sheldon and Bryant's (2016) Coolness dimension loaded strongly with those for Documentation (all >.60) and two items with reasonable extent with items from status seeking (.46; .48). Thus, given the theoretical distinction between Documentation and Coolness, and the arguable overlap between Coolness and Status seeking, to maintain discriminant validity in the model, the original four items for Coolness were omitted from the analysis. Consequently, Instagram motives were IG-Surveillance/Knowledge about others, IG-Documentation, IG-Creativity, and IG-Status seeking.

Based on both factor analyses, the literature review, and the qualitative interviews, we developed 33 hypotheses to be tested in a structural equation model (SEM). Firstly, for the hashtag dimension of Self-presentation, we expected three Instagram dimensions to influence it positively, namely IG-Documentation, IG-Status seeking, and IG-Creativity, as all three dimensions relate conceptually to the self and its presentation (Sheldon & Bryant, 2016). Therefore, if these motives drive people to use Instagram in the first place, users should be

motivated to use one of its central features, hashtags, for similar reasons of self-presentation (H1a-c). Since hashtags are a means for visibility (Page, 2012) and can guide audiences towards interpretations intended by the sender (Scott, 2015, 2017), we expected users who are driven by Self-presentation to generally use more hashtags, both in terms of clicking on hashtags as search term to monitor trends to catch up on (H1d) and by generally adding hashtags (H1e). Moreover, users driven by self-presentation should use more hashtags per post, as this enables them to increase their visibility (cf. Page, 2012) on Instagram (H1f).

Secondly, we expected Inventiveness to be driven by IG-Status seeking and IG-Creativity (H2a-b), since users who use Instagram for purposes of popularity and showing off their art skills (Sheldon & Bryant, 2016) should be driven to use hashtags for purposes of showing their humorous side. Importantly, Inventiveness was hypothesized to drive general adding frequency (H2c) due to both the relationship-enabling and topic-indicating functions of hashtags (Zappavigna, 2015). However, we anticipated a negative effect of Inventiveness on both the average number of hashtags used per post and genericness of hashtags.

Specifically, some interviewees expressed that the number of hashtags and their degree of genericness may be a message in itself (cf. Scott, 2015), indicating the poster to be solely looking for attention when using many and more generic hashtags. Therefore, we anticipated users who employ hashtags to show their inventiveness to be more likely to reduce the number of hashtags per post (H2d) and use less generic (i.e., more original) hashtags (H2e).

Thirdly, we anticipated all four Instagram dimensions to drive Chronicling. Specifically, users who use Instagram for reasons of IG-Surveillance/Knowledge about others were expected to be driven by the need of Chronicling through hashtags since hashtags help organize posts (Zappavigna, 2015), and it is through hashtags that users can find information about each other (H3a). Furthermore, Chronicling should be positively influenced by IG-Documentation, as hashtags help to contextualize and group knowledge (H3b) (Scott, 2015;

Zappavigna, 2015). IG-Status seeking was also hypothesized to be driving Chronicling, as users who seek status on a social media platform like Instagram need to continuously chronicle their experiences to keep an audience entertained (H3c) (Erz & Heeris Christensen, 2018; McQuarrie et al., 2013). Lastly, users who are on Instagram for motives of IG-Creativity should be motivated to use hashtags for reasons of Chronicling, as chronicling through hashtags helps in both showing one's art skills and finding other people (H3d) (cf. Scott, 2015; Sheldon & Bryant, 2016; Zappavigna, 2015). Furthermore, the need for chronicling through hashtags should increase general adding frequency (H3e), as in order to chronicle an event or memory (Zappavigna, 2015), one needs to add hashtags. Whether it would drive the number of hashtags used per post, was, however, not as straightforward (H3f). On the one hand, many hashtags can help in contextualizing an event as detailed as possible, for example, by indicating many related topics. On the other hand, as some interviewees elaborated, in some instances users might refrain from using many hashtags and instead use only a few, quite distinct hashtags to document events and direct their communication towards a limited group of receivers.

Fourthly, we hypothesized IG-Surveillance/Knowledge about others and IG-Creativity to positively impact on Information seeking through hashtags, as hashtags, through their organizing and topic-indicating function (Zappavigna, 2015), help find information about others (H4a) and users with similar interests and hobbies (H4b). As Information seeking is primarily a consumption activity, we expected this dimension to increase general hashtag clicking frequency (H4c). Fifthly, regarding the dimension of Venting, interview informants reported to conceive Instagram as a primarily positively-loaded platform where users would generally show themselves from their "nice side". We could only uncover mild forms of venting in the interviews. For example, one informant spoke about how he had posted sarcastically loaded hashtags about ads he had been exposed to online. In order to

vent, even in milder forms, one must be motivated to seek out information about others, including people or brands about which one can vent. Therefore, we expected Venting to be driven by IG-Surveillance/Knowledge about others (H5a). Similarly, we hypothesized Venting to increase clicking frequency in order to obtain the information needed for venting (H5b). Furthermore, hashtags fulfill a relationship-enacting function, for example, to communicate negative feelings to others, at least on Twitter (Zappavigna, 2015). However, considering the reception of Instagram as a positively-valenced platform as uncovered in the interviews of this research, we formulated a two-directional hypothesis about the impact of Venting on general adding frequency (H5c). Yet, venting negative feelings does not require many hashtags, as it is an endeavor directed towards specific others (cf. Zappavigna, 2015), and therefore Venting was expected to negatively affect number of hashtags used per post (H5d).

Sixthly, both IG-Documentation and IG-Status seeking were expected to impact positively on Etiquette (H6a-b); specifically, interviewees explained that hashtags are simply practical and indispensable so that they would use them out of etiquette considerations when using Instagram for reasons of documentation and status seeking. Furthermore, since hashtags have become the central feature of Instagram, Etiquette should increase general adding frequency (H6c). However, some interview informants reported that it is etiquette to use only few hashtags, while others did not conceive this restriction as critical or used many hashtags to accomplish influencer status. Therefore, we did not anticipate a direction a-priori for number of hashtags per post (H6d). Seventhly, we were interested in the relationship between the genericness of hashtags and number of hashtags used per post: Some informants reported to use more generic hashtags, some only one original hashtag per post, and others employed a mix in terms of quantity and quality, dependent on the context. We therefore did not expect a direction a-priori (H7). Lastly, we were interested in self-consciousness as an

alternative predictor of hashtag use. In particular, the more self-conscious users were about their hashtag use, the lower we anticipated general adding frequency and number of hashtags used per post to be (H8a-b). Figure 1 illustrates the model, and Table 3 lists the formal hypotheses.

### **Figure 1. Conceptual framework**

---INSERT FIGURE 1 HERE (1,5 columns wide, black-white)---

We employed SmartPLS (v3.2) to evaluate the specified model. This method provides advantages over prior established covariance-based SEM, allowing greater flexibility on assumptions, sample size, and in assessing the impact of both formative and reflective constructs (Hair Jr, Hult, Ringle, & Sarstedt, 2016). Harmann's common factor test deemed the data satisfactory with regard to a potential common method bias, that is, a single factor explained < 50% of the variance. Discriminant validity was assumed through the Heterotrait-Monotrait (HTMT) criterion at the threshold of < 0.9 (Henseler, Ringle, & Sarstedt, 2015). This was supported by the Fornell-and-Larcker-criterion (1981) with all the square roots of the AVE values exceeding the correlations amongst latent variables. Composite reliability scores and Cronbach's alphas all exceeded the threshold of 0.7. VIFs for the inner and outer models were acceptable at the recommended threshold of < 5.0 (Hair Jr et al., 2016). Table 2 summarizes these results.

Before proceeding with the path analysis, the plausibility of the specified model was assessed. The standardized root mean square residual (SRMR) of 0.06 indicated that the model had an acceptable fit (Byrne, 2013). This was further supported by the adjusted R-squared of the dependent variables (DV), general clicking frequency (.65), general adding frequency (.57), and number of hashtags used per post (.23). To support the inclusion of

hashtag use motives as second order independent variable (IV), specific indirect effects of these were assessed between the first order independent variables (motives of Instagram usage) and the three DVs stated above. Without exception, each of the six hashtag motive factors provided a significant indirect effect between at least one first order IV and DV, thus their included place within the model was supported ( $p < .05$ ). Pathways were assessed within the model to test the 33 hypotheses, out of which 27 could be supported. Table 3 summarizes the results for each hypothesis.

**Table 2. Discriminant validity and reliability of constructs in the specified model**

Variable	CR	CA	AVE	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
Chronicling	0.94	0.92	0.73	0.85														
Etiquette	0.92	0.87	0.79	0.66	0.89													
Info seeking	0.94	0.92	0.68	0.71	0.57	0.82												
Inventiveness	0.93	0.88	0.81	0.69	0.57	0.53	0.90											
Self-presentation	0.95	0.93	0.74	0.71	0.62	0.68	0.50	0.86										
Venting	0.93	0.86	0.88	0.55	0.49	0.52	0.46	0.63	0.94									
IG-Creativity	0.88	0.80	0.72	0.52	0.40	0.58	0.33	0.65	0.40	0.85								
IG-Documentation	0.91	0.88	0.62	0.55	0.36	0.45	0.41	0.38	0.29	0.45	0.79							
IG-Status seeking	0.94	0.90	0.83	0.42	0.41	0.52	0.29	0.69	0.52	0.60	0.28	0.91						
IG-Surveillance	0.87	0.82	0.49	0.44	0.33	0.40	0.40	0.28	0.25	0.29	0.59	0.16	0.70					
Genericness	0.90	0.83	0.75	-0.24	-0.20	-0.13	-0.37	-0.12	-0.06	-0.06	-0.13	0.08	-0.19	0.87				
Self-consciousness	0.90	0.84	0.76	-0.16	-0.15	-0.17	-0.12	-0.26	-0.14	-0.20	-0.06	-0.24	-0.01	0.15	0.87			
Gen. adding frequency	0.90	0.83	0.75	0.69	0.65	0.60	0.57	0.64	0.45	0.43	0.35	0.39	0.28	-0.18	-0.22	0.87		
Gen. clicking frequency	0.92	0.86	0.78	0.63	0.51	0.79	0.47	0.65	0.51	0.51	0.35	0.50	0.34	-0.09	-0.17	0.61	0.89	
No. hashtags per post	1.00	1.00	1.00	0.27	0.27	0.26	0.16	0.44	0.18	0.31	0.13	0.32	0.01	-0.01	-0.27	0.42	0.29	1.00

**Table 3. Hypotheses and results of analyses run through PLS structural equation****modelling**

	<b>Hypotheses</b>	<i>b</i> *	<i>SD</i>	<i>t</i>	<i>p</i>	
<b>Factor 1: Self-presentation</b>						
1a	<i>IG-Documentation</i> > <i>Self-presentation</i> : The Instagram need for documentation drives users' need for self-presentation through hashtags.	0.11	0.03	4.07	.00***	<i>Supported</i>
1b	<i>IG-Status seeking</i> > <i>Self-presentation</i> : The Instagram need for status seeking drives users' need for self-presentation through hashtags.	0.46	0.03	14.99	.00***	<i>Supported</i>
1c	<i>IG-Creativity</i> > <i>Self-presentation</i> : The Instagram need for creativity drives users' need for self-presentation through hashtags.	0.32	0.03	9.84	.00***	<i>Supported</i>
1d	<i>Self-presentation</i> > <i>Clicking frequency</i> : The need for self-presentation through hashtags increases the general frequency of clicking hashtags.	0.17	0.04	4.30	.00***	<i>Supported</i>
1e	<i>Self-presentation</i> > <i>Adding frequency</i> : The need for self-presentation through hashtags increases the general frequency of adding hashtags.	0.24	0.04	5.91	.00***	<i>Supported</i>
1f	<i>Self-presentation</i> > <i>No. of hashtags</i> : The need for self-presentation through hashtags increases the number of hashtags used per post.	0.49	0.05	10.31	.00***	<i>Supported</i>
<b>Factor 2: Inventiveness</b>						
2a	<i>IG-Status seeking</i> > <i>Inventiveness</i> : The Instagram need for status seeking drives users' need for inventiveness through hashtags.	0.14	0.04	3.67	.00***	<i>Supported</i>
2b	<i>IG-Creativity</i> > <i>Inventiveness</i> : The Instagram need for creativity drives users' need for inventiveness through hashtags.	0.25	0.04	5.60	.00***	<i>Supported</i>
2c	<i>Inventiveness</i> > <i>Adding frequency</i> : The need for inventiveness through hashtags increases the general frequency of adding hashtags.	0.13	0.03	3.93	.00***	<i>Supported</i>
2d	<i>Inventiveness</i> < <i>No. of hashtags</i> : The need for inventiveness through hashtags decreases the number of hashtags used per post.	-0.02	0.05	0.46	.32	<i>Rejected</i>
2e	<i>Inventiveness</i> < <i>Genericness</i> :	-0.37	0.04	10.69	.00***	<i>Supported</i>

The need for inventiveness through hashtags decreases the use of generic hashtags.

**Factor 3: Chronicling**

3a	<i>IG-Surveillance &gt; Chronicling:</i> The Instagram need for surveillance/knowledge about others drives users' need for chronicling through hashtags.	0.17	0.04	4.60	.00***	<i>Supported</i>
3b	<i>IG-Documentation &gt; Chronicling:</i> The Instagram need for documentation drives users' need for chronicling through hashtags.	0.30	0.04	7.16	.00***	<i>Supported</i>
3c	<i>IG-Status seeking &gt; Chronicling:</i> The Instagram need for status seeking drives users' need for chronicling through hashtags.	0.16	0.03	5.12	.00***	<i>Supported</i>
3d	<i>IG-Creativity &gt; Chronicling:</i> The Instagram need for creativity drives users' need for chronicling through hashtags.	0.24	0.04	5.99	.00***	<i>Supported</i>
3e	<i>Chronicling &gt; Adding frequency:</i> The need for chronicling through hashtags increases the general frequency of adding hashtags.	0.28	0.05	6.16	.00***	<i>Supported</i>
3f	<i>Chronicling – No. of hashtags:</i> The need for chronicling through hashtags affects the number of hashtags used per post.	-0.02	0.05	.43	.66 <sup>a</sup>	<i>Rejected</i>

**Factor 4: Information seeking**

4a	<i>IG-Surveillance &gt; Information seeking:</i> The Instagram need for surveillance/knowledge about others drives users' need for information seeking through hashtags.	0.26	0.03	9.08	.00***	<i>Supported</i>
4b	<i>IG-Creativity &gt; Information seeking:</i> The Instagram need for creativity drives users' need for information seeking through hashtags.	0.51	0.03	18.73	.00***	<i>Supported</i>
4c	<i>Information seeking &gt; Clicking frequency:</i> The need for information seeking through hashtags increases the general frequency of clicking hashtags.	0.63	0.04	18.20	.00***	<i>Supported</i>

**Factor 5: Venting**

5a	<i>IG-Surveillance &gt; Venting:</i> The Instagram need for surveillance/knowledge about others	0.25	0.03	8.06	.00***	<i>Supported</i>
----	--	------	------	------	--------	------------------

	drives users' need for venting through hashtags.					
5b	<i>Venting &gt; Clicking frequency:</i> The need for venting through hashtags increases the general frequency of clicking hashtags.	0.08	0.03	2.65	.00**	<i>Supported</i>
5c	<i>Venting – Adding frequency:</i> The need for venting through hashtags affects the general frequency of adding hashtags.	-0.05	0.03	1.57	.12 <sup>a</sup>	<i>Rejected</i>
5d	<i>Venting &lt; No. of hashtags:</i> The need for venting through hashtags decreases the number of hashtags used per post.	-0.15	0.05	3.24	.00**	<i>Supported</i>
<b>Factor 6: Etiquette</b>						
6a	<i>IG-Documentation &gt; Etiquette:</i> The Instagram need for documentation drives users' need for hashtag etiquette.	0.27	0.04	7.55	.00***	<i>Supported</i>
6b	<i>IG-Status seeking &gt; Etiquette:</i> The Instagram need for status seeking drives users' need for hashtag etiquette.	0.33	0.03	11.01	.00***	<i>Supported</i>
6c	<i>Etiquette &gt; Adding frequency:</i> The need for hashtag etiquette increases the general frequency of adding hashtags.	0.26	0.04	6.48	.00***	<i>Supported</i>
6d	<i>Etiquette – No. of hashtags:</i> The need for hashtag etiquette affects the number of hashtags used per post.	0.06	0.05	1.19	0.24 <sup>a</sup>	<i>Rejected</i>
<b>Genericness</b>						
7	<i>Genericness – No. of hashtags:</i> The tendency to use generic hashtags affects the number of hashtags used per post.	0.06	0.04	1.51	.13 <sup>a</sup>	<i>Rejected</i>
<b>Self-consciousness in hashtag use</b>						
8a	<i>Self-consciousness &lt; Adding frequency:</i> The more self-conscious users are about their hashtag use, the lower is the general frequency of adding hashtags.	-0.07	0.03	2.80	.00**	<i>Supported</i>
8b	<i>Self-consciousness &lt; No. of hashtags:</i> The more self-conscious users are about their hashtag use, the less hashtags per post they use.	-0.17	0.04	4.72	.00***	<i>Supported</i>

---

Note. \*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ . All p-values are reported as one-tailed p-values, apart from values indicated with <sup>a</sup>, which are reported as two-tailed values. In the hypotheses, > indicates a hypothesized positive relationship, < a negative relationship, and – a non-directional relationship.

In general, Instagram usage motives predicted hashtag usage motives (all  $p$ s < .05), supporting all hypotheses relating to relationships between Instagram motives and hashtag motives. Importantly, IG-Status seeking had the greatest explanatory power for using hashtags to self-present ( $b^* = 0.46, p < .001$ ), followed by IG-Creativity ( $b^* = 0.32, p < .001$ ). IG-Creativity also strongly predicted Inventiveness ( $b^* = 0.25, p < .001$ ) and Chronicling through hashtags ( $b^* = 0.24, p < .001$ ), while IG-Documentation was the strongest predictor for Chronicling ( $b^* = 0.30, p < .001$ ). Interestingly, Information seeking was primarily driven by IG-Creativity ( $b^* = 0.51, p < .001$ ) and less so by IG-Surveillance/Knowledge about others ( $b^* = 0.26, p < .001$ ). We could also support our expectation that IG-Surveillance/Knowledge about others should drive Venting ( $b^* = 0.25, p < .001$ ). Lastly, Etiquette was both driven by IG-Status seeking ( $b^* = 0.33, p < .001$ ) and IG-Documentation ( $b^* = 0.27, p < .001$ ).

Furthermore, hashtag usage motives largely predicted hashtagging behavior, with Venting generally being the least influential factor; moreover, hashtag genericness did not play a role, while users' self-consciousness about their hashtags use did. More particularly, in predicting general adding frequency, Chronicling was found to be the most important factor ( $b^* = 0.28, p < .001$ ), closely followed by Etiquette ( $b^* = 0.26, p < .001$ ) and Self-presentation ( $b^* = 0.24, p < .001$ ). However, albeit only of small influence, the more self-conscious users were, the less they engaged in adding hashtags to their posts ( $b^* = -0.07, p < .01$ ). Self-presentation was found to be most influential in predicting the number of hashtags used per post ( $b^* = 0.49, p < .001$ ), while self-consciousness ( $b^* = -0.17, p < .001$ ) and Venting ( $b^* = -0.15, p < .01$ ) negatively impacted on the number of hashtags used in a post. Lastly, Information Seeking had the greatest explanatory power for general clicking frequency ( $b^* = 0.63, p < .001$ ).

### 4.3 Exploration of Individual Differences between Influencers and Followers

The third research question aimed at exploring the distinction between potential influencers and “ordinary” Instagram and hashtag users, which we refer to as followers. We selected two indicators to identify potential influencers. Firstly, we identified potential influencers as having a more favorable followers/followings ratio, that is, they follow fewer accounts than they are followed by. Our choice of this indicator was informed by our qualitative findings and by insights into Instagram etiquette through further desk research. Instagram currently allows users to follow 7,500 accounts; however, users, and specifically influencers, can have more than 7,500 followers. This leads to strategies such as the “follow/unfollow method”, through which potential influencers seek to grow their accounts by starting to follow other accounts and deleting them again, once these accounts have started to “follow back” (Koivu, 2018). Moreover, our informants in the qualitative phase added an affective component to this strategy; they generally asserted that it is seen as etiquette to have more followers than follow other accounts, particularly when someone is pursuing influencer status. In sum, while the absolute number of followers may also be indicative of influencer status, we considered the relative number to be more informative about users who might be currently seeking influencer status and therefore control for a favorable ratio.

The second indicator was the number of hashtags used per post. This choice was informed by theoretical considerations, the qualitative interviews, and practical insights. Firstly, hashtags allow users to broadcast their content, make it traceable and detectable, and guide meaning-making by audiences (Page, 2012; Zappavigna, 2015). Therefore, multiple hashtags allow users to associate their posts with different meanings and topic streams, thereby directing their communication towards multiple readers. Secondly, from a practical perspective, the maximum number of hashtags in a post is 30, and a recent study has found that nine hashtags appear to be optimal in increasing reach (TrackMaven, 2016). Some

Instagram users even recommended including more rather than fewer hashtags in a post to make sure the post reaches many different readers (e.g., Loren, 2018; Myers, 2018). Thirdly, our qualitative findings support these considerations. Specifically, our informants have largely addressed the phenomenon of influencers or users who want to reach influencer status to, albeit disguising it, employ more hashtags in a single post than the average user in order to increase number of followers.

Based on the understanding that potential influencers might work towards a favorable followings/followers ratio and employ more hashtags than the average user, we expected a correlation between these two variables. Prior to the correlation analysis, the ratio (i.e., followers divided by followings) was natural-logged to reduce positive skew from 22.65 to 1.57. A Pearson's correlation found a correlation between the logged ratio-variable and number of hashtags used per post ( $r = .110, p = .003$ ). This shows that a more favorable followers/followings ratio, that is, having more followers than following other accounts, is positively related to the number of hashtags used in posts, largely corroborating our theorization.

We therefore assumed that two groups of users exist, namely potential influencers (i.e., followers > followings) and followers (i.e., followers < followings). It should be emphasized that we regard users that we identified through the two indicators of the followings/followers ratio and number of hashtags as "potential" influencers; limitations hereof are addressed in the discussion section. In order to explore the difference between these groups as important boundary condition, we coded the followers/followings ratio into a binary variable. Those whose ratio was 1 were excluded from further analysis ( $n = 22$ ), because they could not be identified as either influencers or followers. We then ran a multi-group analysis in SEM-PLS. The results largely demonstrated no differences in hypothesized relationships between potential influencers and followers, with only a few exceptions. For the

pathways IG-Status seeking to Etiquette ( $b^*_{diff} = 0.12, p = 0.03$ ) and Self-Presentation to general adding frequency ( $b^*_{diff} = 0.16, p = 0.04$ ) we found significantly greater coefficients for influencers compared to followers. Furthermore, the pathway Chronicling to general adding frequency was only significant for followers ( $p < .001$ ), whereas Etiquette to number of hashtags used per post was only significant for influencers ( $p = .03$ ).

To explore individual differences between influencers and followers, we ran a MANOVA with the dichotomous IV (influencers vs. followers) on all constructs within our specified model and additionally on the personality trait measures (Big Five; Narcissism; Self-monitoring). The sample included 223 influencers (133 females;  $M_{age} = 33.19$ ) and 503 followers (314 females,  $M_{age} = 30.86$ ). There was an overall significant difference across the dependent variables (*Pillai's Trace*  $F(22,703) = 3.21, p < .001$ ; partial  $\eta^2 = .09$ ). Levene's test for equality of variance revealed violations for two of the 22 dependent variables (number of hashtags per post; IG-Status seeking). Although analyses of variance are relatively robust against violations of variance (Ito, 1980; Weerahandi, 1995), since the group sizes are somewhat unequal, a Kruskal-Wallis test was run to offer further validation for the between-subject difference. The results concurred with the MANOVA, thus we continued with adequate confidence, although interpretations should be taken with some caution. F-statistics of the between-subject main effects are summarized in Table 4.

**Table 4. Differences between potential influencers and followers: F-statistics, significance values, and eta-squared**

Variable	<i>F</i> (1, 724)	<i>p</i>	$\eta^2$
<i>Hashtag motives</i>			
Self-presentation	7.79	<.01**	0.01
Inventiveness	0.01	0.91	0.00
Information seeking	0.40	0.53	0.00
Chronicling	0.88	0.35	0.00
Etiquette	0.54	0.46	0.00
Venting	3.77	0.53	0.01
<i>Instagram motives</i>			
Status seeking	22.34	<.01**	0.03
Documentation	3.58	0.06	0.01
Creativity	2.90	0.09	0.00
Surveillance	0.01	0.92	0.00
<i>Behavioral outcomes</i>			
Click frequency	5.74	0.02	0.01
Add frequency	3.36	0.07	0.01
No. of hashtags used per post	6.62	0.02*	0.01
<i>Personality traits</i>			
Narcissism	4.44	0.04*	0.01
Neuroticism	3.51	0.06	0.00
Extraversion	12.46	<.01**	0.01
Openness	0.61	0.44	0.00
Agreeableness	8.00	<.01**	0.01
Conscientiousness	1.13	0.29	0.00
Self-Monitoring	21.97	<.01**	0.03
Genericness of hashtags	3.01	0.08	0.00
Self-consciousness in hashtag use	2.33	0.13	0.00

Note. \*\* $p < .01$ ; \* $p < .05$ .

More specifically, and corroborating our correlation analysis, the group of influencers used more hashtags per post than followers did ( $M_{follow} = 2.02$ ,  $SD = 0.04$  vs.  $M_{influence} = 2.20$ ,  $SD = 0.06$ ,  $p = .02$ ). Interestingly, we found a difference in general clicking frequency, in that

potential influencers were more engaged in clicking than followers were ( $M_{follow} = 2.61, SD = 0.44$  vs.  $M_{influence} = 2.80, SD = 0.66, p = .02$ ), but only a marginally significant difference in general adding frequency ( $M_{follow} = 3.00, SD = 0.43$  vs.  $M_{influence} = 3.14, SD = 0.65, p = .07$ ). As expected, and further supporting our assumptions about two user groups, influencers used hashtags out of motives of Self-presentation more than followers ( $M_{follow} = 2.31, SD = 0.45$  vs.  $M_{influence} = 2.55, SD = 0.74, p < .01$ ). Similarly, influencers were generally more driven to use Instagram for motives of IG-Status seeking than followers ( $M_{follow} = 1.73, SD = 0.05$  vs.  $M_{influence} = 2.16, SD = 0.08, p < .01$ ).

We were further interested in differences in personality traits. Based on the literature review, we suspected potential influencers who were more driven by motives of Self-presentation through hashtags and Status seeking on Instagram to be higher in traits that have been previously linked to similar kinds of motives and behavior. Indeed, we found potential influencers to be higher in narcissism than followers, albeit only showing a small difference ( $M_{follow} = 3.00, SD = 0.30$  vs.  $M_{influence} = 3.12, SD = 0.46, p = .04$ ). Again, a small but significant difference was also found for the Big Five dimensions of extraversion ( $M_{follow} = 2.98, SD = 0.45$  vs.  $M_{influence} = 3.26, SD = 0.67, p < .01$ ) and agreeableness ( $M_{follow} = 3.81, SD = 0.24$  vs.  $M_{influence} = 3.64, SD = 0.51, p < .01$ ), with influencers being more extraverted but less agreeable than followers. Lastly, another important difference was found for self-monitoring: Influencers were higher self-monitors than followers ( $M_{follow} = 2.71, SD = 0.03$  vs.  $M_{influence} = 2.95, SD = 0.04, p < .01$ ).

## 5. Discussion

This study is the first to address underlying motives of hashtag use and found six factors that drive hashtag use on Instagram, namely Self-presentation, Inventiveness, Chronicling, Information seeking, Venting, and Etiquette. More specifically, while one

factor, Information Seeking, pertains to the consumption of media content, the dimensions Self-presentation, Inventiveness, and Chronicling particularly express the media-producing role that consumers take on in social media. Furthermore, we found Instagram use motives to largely predict hashtag use motives, which in turn drive actual hashtag usage, as expressed in general adding and clicking frequencies and the number of hashtags used in a post. Lastly, we found two groups of Instagram users: Potential influencers, in contrast to followers, are heavy hashtag-users with a more favorable followers/followings ratio, are particularly driven by motives of Self-presentation through hashtags and Status-seeking on Instagram, and exhibit higher scores in the personality traits of narcissism, extraversion, and self-monitoring. These findings bear theoretical contributions for information systems research and managerial implications.

### **5.1 Theoretical Contributions**

Firstly, we provide the first exploration focused on uncovering distinct motives of hashtag use, a key feature of social media. U&G research has primarily focused on platforms in their entirety, but has increasingly acknowledged the relevance of distinct features in understanding uses and gratifications (e.g., photo-tagging, Dhir et al., 2017). Our findings underscore the central role of hashtags as a communication device that presents both modes of consumption and production. This demonstrates the increasing importance of viewing social media as media that are not only consumed but that are actively sought out for purposes of production (and eventually visibility). Acknowledgement of this distinction within the U&G approach increases its usefulness to information system scholars where the distinction between consumption and production, be it viewed as binary or on a continuum, is a core area of debate and consideration (cf. Khan, 2017). In a similar vein, our findings corroborate an only implicitly addressed shift in social media research: Social media have been viewed as predominantly “social”, and therefore motives of social interaction have been

emphasized, not exclusively but particularly in U&G research. Our findings demonstrate that motives might have shifted over time. In other words, younger platforms, such as Instagram, do not only perpetuate and promote content-creating motives of all its users, such as chronicling events. Because of the ability of such platforms to allow content production and relatively easy content diffusion, especially through hashtags, social media give increasingly room to self-broadcasting. That is not to say that social interaction per se has been removed. A closer look at our and, for example, Sheldon and Bryant's (2016) scale items reveals that there is still an interest in somewhat connecting to others (e.g., through chronicling). However, underlying reasons for connecting might have shifted. Anecdotally, while users had been initially excited about Facebook because it offered them opportunities to stay in touch with others more easily than ever before, recent years have specifically experienced a growing number of influencers and microcelebrities, who use social media to connect, yet not for the sake of community but for the sake of broadcasting themselves (Arvidsson & Caliendo, 2016; Lahuerta-Otero & Cordero-Gutiérrez, 2016; Shane-Simpson et al., 2018).

Secondly, we provide a better understanding of the centrality of hashtags on Instagram by demonstrating the role of platform use motives as antecedents of hashtag use motives and the prominence of such hashtag motives for hashtagging behaviors. For example, we show that users who chose Instagram to seek status, were largely driven by self-presentation motives, which in turn increased the propensity to add hashtags and use many hashtags in a post. At the same time, other users might deliberately refrain from multiple hashtags per post, since they either are driven by motives different from self-presentation or are highly self-conscious about their hashtag use. Therefore, hashtags do not only entail a semantic meaning (e.g., Page, 2012; Scott, 2015), but also the number of hashtags used in one post appears to be a message in itself. The latter is reminiscent of the notion that appearing to be reach-driven is socially unattractive, as shown in Tong et al.'s (2008) study

on the effect of Facebook friend numbers on perceived attractiveness. Furthermore, users who used hashtags for information seeking purposes were primarily driven by creativity motives and less so by seeking knowledge about others on Instagram. This finding underscores the nature of Instagram where users predominantly post beautifully presented (and often processed) photos, where hashtags serve their function of sorting this plethora of visual material, enabling users to find inspiration for their own postings.

Thirdly, we contribute to an understanding of influencers, becoming increasingly critical to commercial activities within social media (cf. Khamis et al., 2017). Specifically, we distill two distinct user groups, potential influencers and followers, to understand differences in their characteristics and motivations. Potential influencers were found to be more narcissistic, extravert, self-monitoring but less agreeable than followers were. While these traits have been linked to higher propensities to contribute with content and to be opinion-leading (e.g., Buffardi & Campbell, 2008; Rose & Kim, 2011), we show specifically that potential influencers appear to be more motivated to participate in Instagram for reasons of status seeking and use hashtags to present themselves. Moreover, we show that influencers use more hashtags in a post, again corroborating the role of hashtags as a broadcasting medium (cf. Page, 2012). Interestingly, while these leaders appear to be not more driven by the need to seek information than followers are, they still engage in more clicking. An interpretation of this finding is that clicking hashtags helps these potential influencers to reach or maintain their influencer status, as it enables them to catch up on trends and use the “right” hashtags to become or stay part of the conversation. In addition, the association between status seeking and the use of hashtags for etiquette was more pronounced for potential influencers than for followers. Given the centrality of influencers to Instagram, following the premise of social learning theory (Bandura & Walters, 1977), we speculate the

etiquette to use hashtags may have started with them in an endeavor to achieve reach, however has now been to a lesser extent become a socialized practice by followers.

## **5.2 Managerial Implications**

Our findings provide important implications for social media managers wishing to maximize reach and thus subsequent engagement on social media. Managers who aim at increasing users' hashtagging the brand need to consider the different motives. Users who use hashtags for primarily chronicling their experiences will most likely hashtag a commercial account or brand if it is relevant to this experience – and provides the posted visual material with context. Therefore, it is indispensable for commercial entities to engage with general users offline and provide them with material that is worth being shot, posted, and hashtagged. Furthermore, considering the strong impact of self-presentation motives on hashtagging behavior across user groups and specifically for potential influencers, managers must consider that users are primarily working for themselves rather than for the brand. Practitioners need to therefore not only provide visually appealing content that users find worth posting, but they also need to consider how to create meaningful hashtags that themselves add value to a user's overall self-presentation through their posts. Furthermore, knowledge of influencers' motives, personality traits, and behaviors is invaluable in helping managers that leverage these individuals to build successful relationships with influencers and incentivizing them to promote content (cf. Odekerken-Schröder, De Wulf, & Schumacher, 2003).

Lastly, our findings also hold implications for platform designers. Given the value hashtags can provide, platforms should consider machine-learning techniques to provide automated suggested hashtags based on the sentiment/language used in the post. In addition, algorithms can be created that recognize the hashtags used in a post and suggest similar

hashtags used by other users. Furthermore, suggested certain hashtags may be highlighted to users based on data to provide increased reach.

### **5.3 Limitations and Future Research**

Limitations of this study and directions for future research should be noted. Firstly, we sampled U.S. residents in our quantitative study, and while the different dimensions should be generally similar across cultures, relationships between different variables may experience differences in weight between cultures (e.g., Sheldon et al., 2017). Moreover, hashtag use was operationalized as a self-report measurement, and future research could integrate real-time usage data to increase ecological validity. Furthermore, to distinguish between potential influencers and followers, we applied two indicators that we found suitable based on theoretical considerations, practical insights into Instagram etiquette, and our qualitative findings. We could not verify whether those who reported a certain ratio and hashtag use were indeed influencers. Therefore, future research could further investigate influencers' motives and behavior by identifying them a-priori through real-time data or further indicators. In addition, the correlational research does not allow for interpretations of cause and effect. For example, while users might have joined Instagram for motives of status seeking and deliberately used many hashtags to become influencers, others might have joined Instagram for other reasons but might have attracted a reasonable number of followers due to their relevant content and then started to nourish their influencer status by adding more hashtags. Lastly, our study is limited to Instagram. Future research could extend on our findings by investigating hashtag use across platform (e.g., Twitter) to add to the emerging body of research (e.g., A. N. Smith, Fischer, & Yongjian, 2012) that disentangles similarities and differences between social media platforms and features.

## References

- Alhabash, S., & McAlister, A. R. (2015). Redefining virality in less broad strokes: Predicting viral behavioral intentions from motivations and uses of Facebook and Twitter. *New Media & Society, 17*(8), 1317–1339. <https://doi.org/10.1177/1461444814523726>
- Alper, M. (2014). War on Instagram: Framing conflict photojournalism with mobile photography apps. *New Media and Society, 16*(8), 1233–1248. <https://doi.org/10.1177/1461444813504265>
- Arvidsson, A., & Caliandro, A. (2016). Brand Public. *Journal of Consumer Research, 42*(5), 727–748.
- Aynsley, M. (2016). The complete Instagram hashtag guide for business. Retrieved February 19, 2018, from <https://blog.hootsuite.com/instagram-hashtags/>
- Bandura, A., & Walters, R. H. (1977). Social learning theory.
- Bendapudi, N., & Berry, L. L. (1997). Customers' motivations for maintaining relationships with service providers. *Journal of Retailing, 73*(1), 15–37.
- Blumler, J. G. (1979). The role of theory in uses and gratifications studies. *Communication Research, 6*(1), 9–36.
- Blumler, J. G., & Katz, E. (Eds.). (1974). *The uses of mass communication: Current perspectives on gratifications research*. Newbury Park, CA: Sage.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.
- Büchi, M., Just, N., & Latzer, M. (2016). Modeling the second-level digital divide: A five-country study of social differences in Internet use. *New Media & Society, 18*(11), 2703–2722. <https://doi.org/10.1177/1461444815604154>
- Buffardi, L. E., & Campbell, W. K. (2008). Narcissism and social networking web sites. *Personality and Social Psychology Bulletin, 34*(10), 1303–1314.

- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6(1), 3–5.
- Byrne, B. M. (2013). *Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming*. Psychology Press.
- Churchill Jr, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 64–73.
- Clarke, V., & Braun, V. (2014). Thematic Analysis. In T. Teo (Ed.), *Encyclopedia of Critical Psychology* (pp. 1947–1952). New York, NY: Springer New York.  
[https://doi.org/10.1007/978-1-4614-5583-7\\_311](https://doi.org/10.1007/978-1-4614-5583-7_311)
- Colliander, J., Marder, B., Falkman, L. L., Madestam, J., Modig, E., & Sagfossen, S. (2017). The social media balancing act: Testing the use of a balanced self-presentation strategy for politicians using twitter. *Computers in Human Behavior*, 74, 277–285.
- Comrey, A. L., & Lee, H. B. (2013). *A first course in factor analysis*. Psychology Press.
- Courtois, C., Mechant, P., De Marez, L., & Verleye, G. (2009). Gratifications and seeding behavior of online adolescents. *Journal of Computer-Mediated Communication*, 15(1), 109–137. <https://doi.org/10.1111/j.1083-6101.2009.01496.x>
- Dhir, A., Chen, G. M., & Chen, S. (2017). Why do we tag photographs on Facebook? Proposing a new gratifications scale. *New Media & Society*, 19(4), 502–521.  
<https://doi.org/10.1177/1461444815611062>
- Djafarova, E., & Rushworth, C. (2017). Exploring the credibility of online celebrities' Instagram profiles in influencing the purchase decisions of young female users. *Computers in Human Behavior*, 68, 1–7. <https://doi.org/10.1016/j.chb.2016.11.009>
- Dumas, T. M., Maxwell-Smith, M., Davis, J. P., & Giulietti, P. A. (2017). Lying or longing for likes? Narcissism, peer belonging, loneliness and normative versus deceptive like-

- seeking on Instagram in emerging adulthood. *Computers in Human Behavior*, *71*, 1–10.  
<https://doi.org/10.1016/j.chb.2017.01.037>
- Eisenbeiss, M., Blechschmidt, B., Backhaus, K., & Freund, P. A. (2012). “The (Real) World Is Not Enough:” Motivational Drivers and User Behavior in Virtual Worlds. *Journal of Interactive Marketing*, *26*(1), 4–20.  
<https://doi.org/http://dx.doi.org/10.1016/j.intmar.2011.06.002>
- eMarketer. (2018). Most important social media network of their personal brand according to female social influencers in the United States as of June 2017. Retrieved February 16, 2018, from <https://www.statista.com/statistics/760765/most-important-social-media-for-female-influencers/>
- Erz, A., & Heeris Christensen, A.-B. (2018). Transforming Consumers Into Brands: Tracing Transformation Processes of the Practice of Blogging. *Journal of Interactive Marketing*, *43*, 69–82. <https://doi.org/10.1016/j.intmar.2017.12.002>
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, *18*(3), 382–388.
- Freberg, K., Graham, K., McGaughey, K., & Freberg, L. A. (2011). Who are the social media influencers? A study of public perceptions of personality. *Public Relations Review*, *37*(1), 90–92.
- Fullwood, C., Nicholls, W., & Makichi, R. (2015). We’ve got something for everyone: How individual differences predict different blogging motivations. *New Media and Society*, *17*(9), 1583–1600. <https://doi.org/10.1177/1461444814530248>
- Gangestad, S. W., & Snyder, M. (2000). Self-monitoring: Appraisal and reappraisal. *Psychological Bulletin*, *126*(4), 530.
- Gao, Q., & Feng, C. (2016). Branding with social media: User gratifications, usage patterns,

- and brand message content strategies. *Computers in Human Behavior*, *63*, 868–890.  
<https://doi.org/10.1016/j.chb.2016.06.022>
- Gibbs, M., Meese, J., Arnold, M., Nansen, B., & Carter, M. (2015). #Funeral and Instagram: death, social media, and platform vernacular. *Information Communication and Society*, *18*(3), 255–268. <https://doi.org/10.1080/1369118X.2014.987152>
- Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. G. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality*, *40*(1), 84–96.
- Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.
- Heisley, D. D., & Levy, S. J. (1991). Autodriving: A photoelicitation technique. *Journal of Consumer Research*, *18*(3), 257–272.
- Hendin, H. M., & Cheek, J. M. (1997). Assessing hypersensitive narcissism: A reexamination of Murray's Narcism Scale. *Journal of Research in Personality*, *31*(4), 588–599.
- Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the internet? *Journal of Interactive Marketing*, *18*(1), 38–52.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135.
- Ito, P. K. (1980). 7 robustness of anova and manova test procedures. *Handbook of Statistics*, *1*, 199–236.
- Jackson, C. A., & Luchner, A. F. (2016). Self-presentation mediates the relationship between Self-criticism and emotional response to Instagram feedback. *Personality and Individual Differences*. <https://doi.org/10.1016/j.paid.2017.04.052>

- Johnson, B. K., & Ranzini, G. (2018). Click here to look clever: Self-presentation via selective sharing of music and film on social media. *Computers in Human Behavior*, *82*, 148–158.
- Joinson, A. N. (2008). Looking at, looking up or keeping up with people?: motives and use of facebook. In *Proceedings of the SIGCHI conference on Human Factors in Computing Systems* (pp. 1027–1036). ACM.
- Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and gratifications research. *The Public Opinion Quarterly*, *37*(4), 509–523.
- Khamis, S., Ang, L., & Welling, R. (2017). Self-branding, ‘micro-celebrity’ and the rise of Social Media Influencers. *Celebrity Studies*, *8*(2), 191–208.
- Khan, M. L. (2017). Social media engagement: What motivates user participation and consumption on YouTube? *Computers in Human Behavior*, *66*, 236–247.  
<https://doi.org/10.1016/j.chb.2016.09.024>
- Kim, D. H., Seely, N. K., & Jung, J.-H. H. (2017). Do you prefer, Pinterest or Instagram? The role of image-sharing SNSs and self-monitoring in enhancing ad effectiveness. *Computers in Human Behavior*, *70*, 535–543. <https://doi.org/10.1016/j.chb.2017.01.022>
- King, R. A., Racherla, P., & Bush, V. D. (2014). What We Know and Don’t Know About Online Word-of-Mouth: A Review and Synthesis of the Literature. *Journal of Interactive Marketing*, *28*(3), 167–183.  
<https://doi.org/http://dx.doi.org/10.1016/j.intmar.2014.02.001>
- Koivu, L. (2018). Curious about the Instagram follow/unfollow method? Retrieved June 27, 2018, from <https://ohsheblogs.com/follow-unfollow-method-instarevealed/>
- Krause, A. E., North, A. C., & Heritage, B. (2014). The uses and gratifications of using Facebook music listening applications. *Computers in Human Behavior*, *39*, 71–77.
- Lahuerta-Otero, E., & Cordero-Gutiérrez, R. (2016). Looking for the perfect tweet. The use

- of data mining techniques to find influencers on Twitter. *Computers in Human Behavior*, *64*, 575–583.
- Lai, C.-Y., & Yang, H.-L. (2016). Determinants and consequences of Facebook feature use. *New Media & Society*, *18*(7), 1310–1330. <https://doi.org/10.1177/1461444814555959>
- Lamberton, C. P., & Rose, R. L. (2012). When is ours better than mine? A framework for understanding and altering participation in commercial sharing systems. *Journal of Marketing*, *76*(4), 109–125.
- Lang, F. R., John, D., Lüdtke, O., Schupp, J., & Wagner, G. G. (2011). Short assessment of the Big Five: Robust across survey methods except telephone interviewing. *Behavior Research Methods*, *43*(2), 548–567.
- Leung, L. (2013). Generational differences in content generation in social media: The roles of the gratifications sought and of narcissism. *Computers in Human Behavior*, *29*(3), 997–1006.
- Lipsman, A., Mudd, G., Rich, M., & Bruich, S. (2012). The power of “like”: How brands reach (and influence) fans through social-media marketing. *Journal of Advertising Research*, *52*(1), 40–52.
- Loren, T. (2018). The ultimate guide to Instagram Hashtags in 2018. Retrieved June 27, 2018, from <https://later.com/blog/ultimate-guide-to-using-instagram-hashtags/>
- Lup, K., Trub, L., & Rosenthal, L. (2015). Instagram #Instasad?: Exploring Associations Among Instagram Use, Depressive Symptoms, Negative Social Comparison, and Strangers Followed. *Cyberpsychology, Behavior, and Social Networking*, *18*(5), 247–252. <https://doi.org/10.1089/cyber.2014.0560>
- Mäntymäki, M., & Islam, A. K. M. N. (2016). The Janus face of Facebook: Positive and negative sides of social networking site use. *Computers in Human Behavior*, *61*, 14–26.
- Marder, B., Joinson, A., Shankar, A., & Thirlaway, K. (2016). Strength matters: Self-

- presentation to the strongest audience rather than lowest common denominator when faced with multiple audiences in social network sites. *Computers in Human Behavior*, *61*, 56–62.
- Marwick, A. E. (2015). Instafame: Luxury selfies in the attention economy. *Public Culture*, *27*(1 (75)), 137–160.
- Matsunaga, M. (2010). How to Factor-Analyze Your Data Right: Do's, Don'ts, and How-To's. *International Journal of Psychological Research*, *3*(1).
- McGoogan, C. (2017). Hashtag turns 10: Seven facts you didn't know about the trending symbol. Retrieved February 19, 2018, from <http://www.telegraph.co.uk/technology/2017/08/23/hashtag-turns-10-seven-facts-didnt-know-trending-symbol/>
- McQuail, D. (1983). *Mass communication theory, an introduction*. London, UK: Sage Publications.
- McQuail, D. (1984). With the benefit of hindsight: Reflections on uses and gratifications research. *Critical Studies in Media Communication*, *1*(2), 177–193.
- McQuarrie, E. F., Miller, J., & Phillips, B. J. (2013). The Megaphone Effect: Taste and Audience in Fashion Blogging. *Journal of Consumer Research*, *40*(1), 136–158. <https://doi.org/10.1086/669042>
- Moon, J. H., Lee, E., Lee, J. A., Choi, T. R., & Sung, Y. (2016). The role of narcissism in self-promotion on Instagram. *Personality and Individual Differences*, *101*, 22–25. <https://doi.org/10.1016/j.paid.2016.05.042>
- Mull, I. R., & Lee, S.-E. (2014). “PIN” pointing the motivational dimensions behind Pinterest. *Computers in Human Behavior*, *33*, 192–200.
- Myers, L. (2018). How to use hashtags on Instagram for explosive growth. Retrieved June 27, 2018, from <https://louisem.com/7198/how-to-use-hashtags-on-instagram>

- O'Connor, C. (2017). Top Influencers. Retrieved June 27, 2018, from <https://www.forbes.com/sites/clareoconnor/2017/09/26/forbes-top-influencers-fashion-pets-parenting/#520ad7f57683>
- Odekerken-Schröder, G., De Wulf, K., & Schumacher, P. (2003). Strengthening outcomes of retailer–consumer relationships: The dual impact of relationship marketing tactics and consumer personality. *Journal of Business Research*, *56*(3), 177–190.
- Orchard, L. J., Fullwood, C., Galbraith, N., & Morris, N. (2014). Individual differences as predictors of social networking. *Journal of Computer-Mediated Communication*, *19*(3), 388–402. <https://doi.org/10.1111/jcc4.12068>
- Osman, M. (2018). 18 Instagram stats every marketer should know for 2018. Retrieved February 22, 2018, from <https://sproutsocial.com/insights/instagram-stats/>
- Page, R. (2012). The linguistics of self-branding and micro-celebrity in Twitter: The role of hashtags. *Discourse & Communication*, *6*(2), 181–201.
- Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments on amazon mechanical turk.
- Phua, J., Jin, S. V., & Kim, J. J. (2017). Uses and gratifications of social networking sites for bridging and bonding social capital: A comparison of Facebook, Twitter, Instagram, and Snapchat. *Computers in Human Behavior*, *72*, 115–122.
- Pittman, M., & Reich, B. (2016). Social media and loneliness: Why an Instagram picture may be worth more than a thousand Twitter words. *Computers in Human Behavior*, *62*(September), 155–167. <https://doi.org/10.1016/j.chb.2016.03.084>
- Raacke, J., & Bonds-Raacke, J. (2008). MySpace and Facebook: Applying the uses and gratifications theory to exploring friend-networking sites. *Cyberpsychology & Behavior*, *11*(2), 169–174.
- Rose, P., & Kim, J. (2011). Self-monitoring, opinion leadership and opinion seeking: a

- sociomotivational approach. *Current Psychology*, 30(3), 203.
- Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication & Society*, 3(1), 3–37.
- Scott, K. (2015). The pragmatics of hashtags: Inference and conversational style on Twitter. *Journal of Pragmatics*, 81, 8–20. <https://doi.org/10.1016/j.pragma.2015.03.015>
- Scott, K. (2017). “Hashtags work everywhere”: The pragmatic functions of spoken hashtags. *Discourse, Context & Media*, 1–8. <https://doi.org/10.1016/j.dcm.2017.07.002>
- Senft, T. M. (2008). *Camgirls: Celebrity and community in the age of social networks*. Peter Lang.
- Senft, T. M. (2013). Microcelebrity and the branded self. *A Companion to New Media Dynamics*, 346–354.
- Shane-Simpson, C., Manago, A., Gaggi, N., & Gillespie-Lynch, K. (2018). Why Do College Students Prefer Facebook, Twitter, or Instagram? Site Affordances, Tensions Between Privacy and Self-Expression, and Implications for Social Capital. *Computers in Human Behavior*.
- Sheldon, P., & Bryant, K. (2016). Instagram: Motives for its use and relationship to narcissism and contextual age. *Computers in Human Behavior*, 58, 89–97.
- Sheldon, P., Rauschnabel, P. A., Antony, M. G., & Car, S. (2017). A cross-cultural comparison of Croatian and American social network sites: Exploring cultural differences in motives for Instagram use. *Computers in Human Behavior*, 75, 643–651.
- Smith, A. N., Fischer, E., & Yongjian, C. (2012). How does brand-related user-generated content differ across YouTube, Facebook, and Twitter? *Journal of Interactive Marketing*, 26(2), 102–113.
- Smith, L. R., & Sanderson, J. (2015). I’m Going to Instagram It! An Analysis of Athlete Self-Presentation on Instagram. *Journal of Broadcasting and Electronic Media*, 59(2), 342–

358. <https://doi.org/10.1080/08838151.2015.1029125>
- Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology, 30*(4), 526.
- Song, S. Y., Cho, E., & Kim, Y.-K. (2017). Personality factors and flow affecting opinion leadership in social media. *Personality and Individual Differences, 114*, 16–23.
- Statista - The Statistics Portal. (2018a). Distribution of Instagram users worldwide as of January 2018, by age and gender. Retrieved February 1, 2018, from <https://www.statista.com/statistics/248769/age-distribution-of-worldwide-instagram-users/>
- Statista - The Statistics Portal. (2018b). Number of monthly active Instagram users from January 2013 to June 2018 (in millions). Retrieved November 25, 2017, from <https://www.statista.com/statistics/253577/number-of-monthly-active-instagram-users/>
- Tong, S. T., Van Der Heide, B., Langwell, L., & Walther, J. B. (2008). Too much of a good thing? The relationship between number of friends and interpersonal impressions on Facebook. *Journal of Computer-Mediated Communication, 13*(3), 531–549.
- TrackMaven. (2016). *The Best Hashtag Strategies for Social Media*.
- Urista, M. A., Dong, Q., & Day, K. D. (2009). Explaining why young adults use MySpace and Facebook through uses and gratifications theory. *Human Communication, 12*(2), 215–229.
- van Deursen, A. J., & van Dijk, J. A. (2014). The digital divide shifts to differences in usage. *New Media & Society, 16*(3), 507–526. <https://doi.org/10.1177/1461444813487959>
- Wästlund, E., Reinikka, H., Norlander, T., & Archer, T. (2005). Effects of VDT and paper presentation on consumption and production of information: Psychological and physiological factors. *Computers in Human Behavior, 21*(2), 377–394.
- Weerahandi, S. (1995). ANOVA under unequal error variances. *Biometrics, 589–599*.

Williams, B., Onsman, A., & Brown, T. (2010). Exploratory factor analysis: A five-step guide for novices. *Australasian Journal of Paramedicine*, 8(3).

Zappavigna, M. (2015). Searchable talk: the linguistic functions of hashtags. *Social Semiotics*, 25(3), 274–291. <https://doi.org/10.1080/10350330.2014.996948>