Influence of Social Media Posts on Service Performance

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Influence of Social Media Posts on Service Performance

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Abstract

Purpose

Much research regarding social media posts and relevancy has resulted in mixed findings. Furthermore, the mediating role of relevancy has not previously been examined. This paper aims to examine the correlating relationship between types of posts made by hotels and the resulting occupancy rates. Then, the mediating role of relevancy is examined and ways that posts can increase/decrease relevancy of the post to potential hotel users.
Design/methodology/approach
Within the context of the hotel industry, three studies were conducted – one including hotel occupancy data from a corporate chain – to examine the impact of social media posts on relevancy and intentions to stay at the hotel. Experimental studies were conducted to explain the results of the real-world hotel data.

Findings
The findings show that relevancy is an important mediator in linking social media posts to service performance. A locally (vs nationally) themed post can decrease both the relevancy of a post and the viewer’s intentions to stay at a hotel. This relationship, however, can be weakened if a picture is included with the post, as a visual may increase self-identification with a post.

Originality/value
These results have important theoretical and practical implications as social media managers attempt to find the best ways to communicate to their customers and followers. Specifically, there are lower and upper limits to how many times a hotel should be posting to social media. The data also show many hotels post about local events, such as school fundraisers or a job fair, that can be harmful to stay intentions, likely due to the irrelevant nature of local posts to customers who are likely to stay in a hotel. National posts are seen as more relevant and likely to increase stay intentions, and the inclusion of a picture can help local posts seem more relevant.

Keywords
Social media, Hospitality, Customer experience, Experimental design, Service strategy, Relevancy, Social impact theory, Social identity theory, Service performance

Introduction
Businesses are increasingly using social media for marketing purposes; however, many are failing to do so successfully. Over 90% of medium and large companies use social media marketing but cannot accurately calculate the return on investment (Quesenberry, 2018). Additionally, over two-thirds of companies are concerned about their ability to assess the success of their social media accounts (Guttmann, 2019). One reason many companies are struggling to demonstrate social media’s impact is their lack of a specific social media strategy. Many companies believe posting more frequently to social media will increase performance since social media posting is often stated in popular press to directly influence purchase intentions (Better Business Bureau, 2019). In this research, however, we highlight how performance ultimately depends on the quality of social media posts, not quantity.

Quality of posts can refer to how viewers perceive the relevancy of the information (Carlson et al., 2018). Social media should communicate relevant information about a company as it is more likely to be shared. This might mean posting less often to deliver more valuable content (Quesenberry, 2018). Previous literature has confirmed the significance of post relevance in relation to perceptions of quality (Carlson et al., 2018), engagement (Lee et al., 2020), privacy risk (Rehman et al., 2020), information overload and social fatigue (Zhang et al., 2014).
While literature has established that relevancy is important, how to increase perceived relevancy is still unclear. Many professional tips for what to post to social media suggest posts be relevant (Barnhart, 2020; Quesenberry, 2018) but do not offer guidelines on how to ensure the content is relevant to users. Current research also has contradictory findings in offering suggestions of how often to post, further increasing the need for social media guidelines in services marketing. Some studies have suggested that less than once a day is best (Mariani et al., 2016), while other studies have suggested posting four times a day (Mariani et al., 2018).

Therefore, this paper addresses these gaps by using social impact theory in a hotel service context, which produces several unique managerial contributions. First, this research examines the number of social media posts and actual hotel occupancy to show how often a company should post to see the best behavioral results. Second, this research explores the content of actual social media posts to show which content categories that are typically posted (e.g. restaurant menu versus general holiday posts) are most effective in increasing hotel occupancy. These first two managerial contributions clarify previous contradictory findings on how often to post and what general topics garner more hotel stays and contribute clear directions for social media managers in service contexts. Next, we are among the first to provide guidelines on how to increase relevancy of social media posts through national content and picture inclusion.

From a theoretical perspective, the results contribute to social impact theory by illustrating that a company’s social media posts can have social influence over an individual’s consumption behavior (i.e. hotel stays). Social impact theory states that too many targets of influence can diminish strength influence from one source (Latané, 1981). However, the findings presented here show that too much information from one source can also dilute influence. For hotel social media, too much posting can spread influence too thin and lead to a drop in performance. Additionally, while social impact theory recognizes source strength, immediacy and number of sources as factors in creating influence, our research shows that social influence is more impactful when it is relevant to the influenced party. Relevancy of information is an important theoretical contribution to social impact theory’s tenet of influence strength; this provides an important foundation for future work to further examine relevancy as principle of social impact theory. The findings presented suggest practical ways social media managers can increase relevancy through post content and how often to post to optimally influence users. Overall, the results of this paper provide a foundation for service marketers to develop more successful social media strategies.

Conceptual development and hypotheses

Social media and service performance

Research considering firm- and consumer-generated content has shown that social media can influence how consumers respond to firms (Hutter et al., 2013; Gurrieri and Drenten, 2019). Hennig-Thurau et al. (2015) examined the “Twitter effect,” which suggests microblogging word of mouth (MWOM) shared through Twitter positively impacts early product adoption by immediately disseminating consumers’ post-purchase quality evaluations. Social media activities have been shown to positively impact consumer willingness to pay a premium price (Torres et al., 2018) and retail sales (Kumar et al., 2016). Although social media posts are often unidirectional communication, the
frequency of messages can reduce uncertainty and increase credibility (Berger and Calabrese, 1975; Lefebvre and Redd, 2016).

Research on hotel-specific social media has examined how motivation and opportunity increase a user’s involvement with hotel social media that will increase their likelihood to revisit the page (Leung and Bai, 2013). Research has also examined the positive prediction of hotel performance ratings and the impact of responses to negative comments (Kim et al., 2015), as well as similar effectiveness across platforms (Leung et al., 2015). Research indicates that satisfaction with a hotel's social media presence positively influences intentions to stay at the hotel (Choi et al., 2016). See Table 1 for a literature review regarding how social media has been investigated within service contexts.

Social impact, social identity theories and relevancy
Research on social media strategy emphasizes the importance of frequent postings to maintain engagement from consumers (Ashley and Tuten, 2015). However, researchers have yet to find a clear answer regarding how often a company should post on social media. Some research suggests that engagement is strongest for the initial post, while the impact of subsequent posts negatively impacts engagement (Mariani et al., 2016) before beginning to increase again around four posts (Mariani et al., 2018). These findings indicate the relationship between post frequency and consumer response is non-linear. Social impact theory provides an explanation for this non-linear relationship.

Social impact theory (Latané, 1981) has been used to explain social media usage by firms (Torres et al., 2018; Perez-Vega et al., 2016). This theory is uniquely suited to explain consumer responses to social media via the effect of social influences on changes in consumers’ behaviors, beliefs, and attitudes (Cialdini and Goldstein, 2004). A social influence is a direct or indirect influence at the interpersonal, group or socio-cultural level and involves effects that can impact consumers’ thoughts, judgments and behaviors (Turner, 1991). Thus, social media posts from a company (such as a hotel) represent a type of social influence that impacts consumers’ behaviors and attitudes. Social impact theory states that the difference in influence from 0 sources to 1 source is greater than the difference between 1 and 2 sources. Moreover, the number of targets changes the impact. The more targets receiving social influence, the less any one target feels the influence (Latané, 1981; Esmark Jones et al., 2018). Recent research has found that the more often educational institutions post, the less users engage with each post (Peruta and Shields, 2017). The same could hold for other effects in that a threshold exists wherein too much posting dilutes influence and reduces behavioral outcomes.

Traditionally, social influences are perceived in linear terms, whereby the frequency of social influence directly diminishes or enhances behavior. As social impact theory outlines, we suggest that social influence (social media posts) will impact behavior (hotel stays). However, the impact of such social influences need not be linear, suggesting the presence of threshold effects (Stacy et al., 1992). Some research has found that after an initial social influence, the impact of each additional social influence declines before eventually beginning to accelerate again and vice versa (e.g. U-shaped and inverted-U trending; Stacy et al., 1992; Zhang et al., 2014). In terms of social media posting for hotels, we predict that the first post will be the most influential as it initiates awareness; the first post should generate more hotel stays than the second post. However, as social media posts accumulate, the
inconsequential amounts of influence will continue to combine, crossing a threshold of significance to again make the posts impactful on behavior.

**H1.** The relationship between post frequency and hotel stays is non-linear: after a certain number of posts, hotel stays decrease to a minimum, at which point the relationship between posts and stays becomes positive again.

The content of the posts must also be relevant to the audience for it to be effective (Ellis-Chadwick and Doherty, 2012; Henninger et al., 2017). Relevancy has been shown to aid in higher evaluations of a brand’s message (Chang, 2018) and advertising (Campbell and Wright, 2008). Relevant ads get more attention (Jung, 2017) and increase the likelihood viewers will accept the advertising message (Zeng et al., 2009). Research on relevancy typically looks at how the message is relevant to the brand (De Keyzer et al., 2021), website or task (Resnick and Albert, 2016). Less research has focused on how the personal relevancy of social media communications could impact behavior.

Social impact theory suggests immediacy impacts influence. The closer an influence is (either physically or psychologically), the greater the influence (Latané, 1981). According to this tenet of social impact theory, a social media post that is specific to a locale that the viewer is not in could decrease immediacy and influence (hotel stays). Influence is also stronger when coming from a person’s group (Latané, 1981) and local posts limit the number of people who would be considered in-group. Combined with social identity theory, we propose that this reduction in influence from posting about a local event can be explained by decreased relevancy to the viewer. Social identity theory (Tajfel, 1979) suggests that people act according to their identity, explaining how similar others (in-group) tend to be looked upon more favorably than dissimilar others (out-group). Considering research on in-group and out-group messaging evaluation, information associated with one’s in-group is typically positively evaluated, while out-group information is discounted (Leach and Liu, 1998).

In the context of social media posts and hotel stays, viewers of a post will likely see posts aimed at the local community as “them” (out-group) posts and nationally directed posts as “us” (in-group) posts. Because an object or activity (i.e. social media post) is personally relevant when it is perceived to be self-related or influential in motivating or achieving personal goals (i.e. choosing a hotel; Broderick, 2007; Xia and Bechwati, 2008), in-group posts should be more relevant to the customer (Huang, 2006; Carlson et al., 2016). Thus, posts about national events will be relevant as more individuals associate national posts with their in-group compared to posts about local events, which are associated with the hotel user’s out-group.

**H2.** A social media post about a local event will be perceived as less relevant than a post about a national event.

We expect relevancy to be positively related with intentions to stay at a hotel. Social identity theory suggests that individuals will act in ways consistent with their identity and group (Tajfel, 1979), such as increased likelihood to stay in a hotel that posts relevant information. Research on relevancy confirms its role in cognitive, affective and behavioral responses (Howard and Kerin, 2004). Perceptions of message relevancy can increase persuasion (Petty and Cacioppo, 1986), attention to advertisements (Jung, 2017), favorable attitudes (Trampe et al., 2010) and influence intentions to purchase (Alalwan, 2018). Research using social identity theory has shown the use of certain social media features
depends on interaction with relevant groups (Pan et al., 2017). Therefore, we predict that perceptions of relevancy will positively impact intentions to stay at a hotel.

**H3.** Relevancy will have a positive relationship with intentions to stay at a hotel.

Social identity posits that identity salience will increase the likelihood of behaving in accordance with one’s identity. Research has shown that images on social media can help create an identity (Lindahl and Öhlund, 2013), increase engagement (Peruta and Shields, 2017), increase perceptions of social presence, decrease loneliness and offer increased intimacy by better simulating real-life interactions (Pittman and Reich, 2016). When compared to text only, text combined with an image increases the impact of a product’s message (Yoon, 2018). Further, images are trusted more than text due to their perception of being more “real.” The viewer of an image is therefore more likely to feel the same emotions as the poster felt and intended (Pittman and Reich, 2016), increasing the relevancy and influence of the post to the viewer. Adding a visual may make an identity more salient by increasing the probability that the viewer will identify with the post and lessen the negative impact of a local post on relevancy.

**H4.** Including an image will moderate the relationship between post type and relevancy such that the negative relationship between a local post and relevancy will be weakened when a picture accompanies the post.

**Methods**

The conceptual framework is presented in Figure 1. To test the hypotheses, three studies were conducted. The first study uses actual social media posts and hotel occupancy to determine the optimal number of times a company should post to social media. This study also examines the content of posts to determine what types of topics have the most beneficial impact on hotel occupancy rates. An experiment is used for the second study showing the impact of a locally versus nationally themed post on hotel stay intentions as explained through the relevancy of the post. Lastly, a third study shows the moderating influence of a visual included in a post.

As social media metrics may be context-specific and differ by industry, a small pilot study was conducted using secondary data. Data were gathered from a 12-year period (2008–2019) that included annual rates of US adult social media users (Clement, 2020; Perrin, 2020) and the average US hotel RevPAR (revenue per available room = average daily room rate x occupancy rate; Lock, 2020). The results show a strong and significant correlation ($r = 0.96, p < 0.001$) between social media use and hotel RevPAR. The results highlight the importance of understanding how social media and RevPAR operate together.

**Study 1A: number of posts per week and occupancy**

**Procedure.**

Study 1a tests **H1**, examining the relationship between the frequency of social media posts and hotel stays. Data were obtained containing average occupancy (average number of rooms filled out of 100 per night for the week) rates over two one-week periods (April 8–14, 2018 and June 17–23, 2018) for 44 hotels in the eastern USA, all owned by the same parent company. The hotels consisted of multiple hotel brands ranging from 71 to 343 rooms ($M = 128$) and an average daily rate of approximately $75–
325 (M= $140). Additional data were then collected for each hotel about their social media presence, including the average number of tweets per week (total number of tweets divided by the number of weeks since the hotel joined Twitter), the average number of Instagram posts per week (total number of Instagram posts divided by the number of weeks since the hotel joined Instagram) and the average number of Facebook posts (average number of posts per week for the four weeks of March 10 to April 7, 2018 and the four weeks of May 20 to June 16, 2018; Facebook does not have an exact user start date or total number of posts feature). The three averages for each social media platform were then combined to obtain a total average of how often each hotel posts per week. An average occupancy score was created for the two weeks of occupancy data for the hotels.

Results.
A sequential polynomial regression analysis was conducted on the average occupancy rate for average social media posts. A linear model was first examined, which resulted in an insignificant regression, followed by additional steps involving the next higher power of social media posts. As shown in Table 2, the quadratic component addition to the model produced a significant increase in fit, as did the cubic addition. The cubic model added 7% $r^2$ to the 13% reflected in the quadratic model, supporting $H1$, and the cubic model was adopted, $F(3,40) = 3.336, p < 0.05, r^2 = 0.20; Y' = 82.42 + 0.75X - 0.13X^2 + 0.004X^3$ (Figure 2). The critical points for the cubic regression are at the local maxima of 3.43 posts at an occupancy rate of 83.62 and local minima of 18.24 posts, lowering the occupancy rate to 77.12, or 6.5 fewer rooms filled on average per night. Once hotels posted over three messages to social media, occupancy rates tended to decline until they posted more than 18 messages [1], at which point occupancy rates increased again.

Discussion
The results suggest that the relationship between social media posts and hotel occupancy rates is non-linear, providing support for $H1$. Hotels should stay at or below two social media posts per week or increase to above 20. Examining the nature of the data shows that those hotels posting greater amounts to social media did so across multiple platforms (i.e. Twitter, Instagram, Facebook). Similarly, those hotels posting once or twice a week were typically doing so from one platform. Those posting between 2 and 20 posts per week across multiple platforms (most typically two) saw a negative effect on occupancy rates. Next, the content of social media posts was analyzed to determine what kind of social media posts are best for acquiring hotel customers.

Study 1B: content of posts analysis on occupancy

Procedure
Study 1B builds upon Study 1 A by examining the content of social media posts. A total of 332 social media posts from the hotels in Study 1 A were examined over a five-week period prior to the average occupancy rates across Instagram, Facebook and Twitter. The captured text and images of each social media post were then moved into a file for coding on several variables: original content or shared from another platform, image presence, mentioning of an event, how many replies, whether it contained the hotel responses to a reply, generic (e.g. Happy Easter) or personalized (e.g. the hotel bistro’s menu) content, the number of words and how many times the post was shared.

Coding instructions were created and given to a coder not associated with the research project. All variables with no/yes responses, as well as the generic/personalized variable, were coded as 0/1. All
other responses were considered summation variables with the total number entered as the value (i.e. number of replies on a post). After initial coding, the researchers reviewed the coding for accuracy and agreement. Given that almost every variable was either no/yes or a summation (i.e. counting), there was almost perfect agreement. Any discrepancies were discussed until an IRR of 100% was reached for each variable.

Results
First, an ANOVA was conducted to assess the impact of a post’s originality (vs shared from another source) on occupancy rates. The results show that a hotel has a higher average weekly occupancy when it does not share posts from another source (i.e. the post is native to that platform and not shared from another) ($F(1,330) = 11.96$, $p < 0.001$; $M_{\text{original}} = 82.06$, $M_{\text{shared}} = 77.94$). Additionally, posts with an image were related to significantly higher occupancy rates than posts without an image ($F(1,330) = 9.71$, $p < 0.01$; $M_{\text{photo}} = 81.70$, $M_{\text{none}} = 75.85$). There was also a significant interaction between originality and photo presence ($F(3,328) = 16.78$, $p < 0.001$). When a post was not shared, the main effect of having an image included in the post was not significant ($F(1,271) = 0.004$, $p = 0.95$; $M_{\text{photo}} = 82.07$, $M_{\text{nophoto}} = 81.92$). However, when the post was shared to other platforms ($F(1,57) = 25.03$, $p < 0.001$), a significantly higher occupancy rate was evident when a photo was included ($M = 79.86$) than when no picture was included ($M = 63.71$). These results suggest that hotels should include an image when sharing content across multiple platforms, lending support to $H4$.

Next, the mention of an event was examined and found to be negatively related to occupancy rates ($F(1,330) = 4.12$, $p < 0.05$) $M_{\text{noevent}} = 82.51$, $M_{\text{event}} = 80.59$). To further examine this variable, events were broken down to see whether the type of event mattered. There were nine categories of events: no event, food/drink, hotel sponsored event, national sports team event, concert/festival, city-related (e.g. a parade), major university-related (e.g. sporting events), holiday, and small local events (e.g. job fair, fundraiser). The ANOVA for the type of event was also significant ($F(8,323) = 4.92$, $p < 0.001$), where the type of event mentioned had an impact on occupancy rates. The highest occupancy rate was related to the mention of a concert or festival ($M = 84.41$), which resulted in higher occupancy compared to a food/drink post ($M = 74.56$, $p < 0.001$), national sports game ($M = 70.52$, $p < 0.001$) or city-related event ($M = 78.89$, $p < 0.05$). The second-highest occupancy was related to holiday postings ($M = 83.53$), which were also higher than food/drink ($p < 0.001$), national sports game ($p < 0.001$) and city-related event ($p < 0.05$). The lowest occupancy was for posts related to a national sports game, which was lower than all other posts except food/drink. Posting about no event ($M = 81.67$) had higher occupancy than food/drink ($p < 0.001$) or national sports game ($p < 0.001$). Ultimately, if a hotel posts about an event, it should post about a concert/festival or a holiday and should stay clear of posting about a national sports game.

Several other analyses garnered insignificant results. Specifically, the relationship between responding to a reply and occupancy rates was not significant ($F(1,330) = 0.86$, $p = 0.35$). Neither was a personalized versus generic post ($F(1,330) = 1.13$, $p = 0.29$). Regressions were conducted for the total number of words ($F(1,330) = 0.08$, $t = -0.01$, $p = 0.78$), how many replies a post received ($F(1,330) = 0.03$, $t = -0.07$, $t = -0.18$, $p = 0.86$), and how many times a post was shared ($F(1,330) = 0.86$, $t = -0.14$, $t = -0.93$, $p = 0.35$).
Discussion.
The results indicate posts should be original content not been previously shared on another platform unless a photo is included. Additionally, posts should include an image about either non-events (e.g., happy summer), a holiday or concerts and festivals. Hotels should avoid posting about food and drink specials or events around the city (e.g., restaurant week), national sporting events or city events like parades. The following two experimental studies explore the content of social media posts in more detail.

Study 2: the mediating effect of relevancy
To further examine social media content and hotel stays, an experiment was conducted in Study 2 to increase the level of control and understand how social media can impact occupancy through an explanatory variable of relevancy (H2-H3).

Procedure 2
A total of 160 participants (56.3% female; 60% between 21 and 40 years old) completed the main survey on Amazon’s Mechanical Turk (set to US only, HIT approval of 95% or greater, and number of HITs approved greater than 1,000) for payment. Each participant was told they would be shown a social media page and to answer the questions that followed about that page. Participants were randomly shown a social media page for a fictional hotel (The Cozy Inn) that either had a post related to a national event (“Happy National Independence Day!”) or a local event (“Happy City Founder’s Day!”). Neither post included an image. Participants were not told what city the hotel was in but were told it was a city they did not live in but needed to stay in.

Participants were then asked survey questions regarding the relevancy of the post ($\alpha = 0.96$; Miyazaki et al., 2005) (all constructs, items and reliabilities available in Table 3; descriptive statistics and correlations available in Appendix 1) and their intent to stay at that hotel ($\alpha = 0.95$; adapted from Oliver and Swan, 1989).

Discriminant validity was assessed among the constructs using Fornell and Larcker’s (1981) criterion and was not problematic (see Appendix 1 for correlations between constructs and AVEs). Two manipulation check questions (“The post was very specific to that city” and “This post seemed to be only for people who live in the local area”) were asked on a seven-point Likert-type scale (1 = strongly disagree, 7 = strongly agree) and combined ($r = 0.59, p < 0.01$) to create a composite score. Participants who saw the local post ($M = 4.84$) found it to be much more local in nature than those who saw the national post ($M = 3.14$, $F(1, 158) = 46.32, p < 0.001$). Lastly, a question asked how realistic participants found the social media page (1–7 on a Likert-type scale) and showed that participants found the manipulations to be mostly realistic ($M = 5.02$) without differences between the two scenarios ($F(1,159) = 0.003, p = 0.96$).

Results.
$H2$ predicts that a social media post about a national topic (compared to a local topic) will have a positive relationship with relevancy. A significant ANOVA ($F(1,158) = 90.93, power > 0.96, p < 0.001$) lends support to this hypothesis. Viewers found the post about a national event to be significantly more relevant ($M = 5.18$) than a local event ($M = 2.79$). $H3$ was supported as more relevant posts led to a greater likelihood to stay at that hotel ($B = 0.20, t = 0.31, power > 0.82, p < 0.001$). PROCESS (Hayes,
2018) model 4 was run for mediation analysis. The indirect effect (ab = 0.73, 95% CI: [0.44, 1.07]) was significant, showing that a national social media post can lead to an increase in intentions to stay at a hotel as explained through the relevancy of the post.

Another possible explanation, however, could be that a local post makes viewers feel either like they are intruding or that they do not belong. An alternative model was tested with intrusiveness (α = 0.97; Li et al., 2002) and sense of belonging (α = 0.87; Pechmann et al., 2003) as explanatory mechanisms. The relationship between post type and intrusiveness was not significant (F(1,158) = 3.14, p = 0.08); neither was the relationship between intrusiveness and stay intentions (B = 0.09, t = 1.41, p = 0.16). The post type did not have a significant relationship with sense of belonging (F(1,158) = 2.92, p = 0.09), but a sense of belonging did have a positive and significant relationship with stay intentions (B = 0.69, t = 9.69, p < 0.001). However, as the relationship between post type and belonging was not significant, the mediation analysis was also not significant (ab = 0.21, 95% CI: [−0.04, 0.46]). Therefore, relevancy is the best-suited mediator to explain how the content of a post can impact stay intentions.

Discussion.
As hypothesized, a more inclusive, national post was perceived as more relevant than a post about a local event, and relevancy led to greater stay intentions. Additionally, relevancy acted as a mediator between post type and stay intentions. The post type did not have a significant impact on either intrusiveness or sense of belonging. However, belonging did have a positive relationship with stay intentions, suggesting a possible avenue for future research on social media post content. The results suggest that relevancy is the best mediator variable when trying to predict hotel stays from social media posts, supporting H2 and H3.

Study 3: the moderating effect of visual inclusion
Study 3 was conducted to test the generalizability of Study 2 by examining relevancy of posts in a different context and confirming support for H2-3. Additionally, Study 3 was designed to assess H4 directly by investigating the moderating impact of including an image within a post.

Procedure
A total of 253 participants (55.7% female; 55.7 between 21 and 40 years old) completed the survey, with a similar setup to Study 2. Each participant was told they would be shown a social media page and to answer the questions that followed about the page. They were then randomly shown a social media page for a fictional hotel (The Modern Hotel) that either had a post related to a national or local football game. The post was either accompanied by an image (a close up of a football and white helmet on a non-identifiable field) or not. Participants were not told what city the hotel was in, only that it was a city they did not live in but needed to stay in.

Participants were then asked survey questions regarding the relevancy of the post (α = 0.97) (all constructs, items and reliabilities available in Table 3) and their intent to stay at that hotel (α = 0.96). Discriminant validity was assessed as in Study 2 and was not problematic (see Appendix 1 for the correlations between constructs and AVEs). Two manipulation check questions were asked as outlined in Study 2 and combined (r = 0.68, p < 0.01) to create a composite score. Participants who saw the local football post (M = 5.21) found it to be much more local in nature than those who saw the national post
(M = 3.47, F(1,251) = 77.54, p < 0.001). Participants also answered a realism question (1–7 on a Likert-type scale) and found the scenarios to be realistic overall (M = 4.94). No differences were found to exist between groups (F(3, 249) = 0.50, p = 0.68).

Results

H2 predicts that a social media post about a local event will have lower relevancy than a post about a national event. A significant main effect (F(1, 249) = 12.01, power > 0.99, p < 0.001) supports this as people who saw the national football post (M = 4.16) felt it was more relevant than those who saw the local football post (M = 3.35). H3 predicts that relevancy has a positive relationship with intentions to stay at the hotel (B = 0.31, t = 8.50, power > 0.99, p < 0.001) and is also supported by a significant and positive effect. These results support H2 and H3 and replicate findings from Study 2.

H4 examines the interaction between post type, the presence of an image and relevancy. The presence of an image did not have a significant main effect (F(1, 249) = 1.49, p = 0.22) on relevancy, but the interaction of post type and image was significant (F(1, 249) = 4.03, power > 0.95, p < 0.05; see Figure 3). When there is no picture alongside the text in the post, there is a significant effect of national versus local content (F(1, 123) = 15.23, power > 0.99, p < 0.001). When a picture was absent, the post about a local event (M = 2.97) was found to be significantly less relevant than a post about a national event (M = 4.26). However, this effect was not evident when a picture was present (F(1, 126) = 1.06, p = 0.31; Mnational=4.07, Mlocal= 3.73).

PROCESS (Hayes, 2018) model 7 tested the moderated mediation of relevancy. The index of moderated mediation was significant (0.31, 95% CI: [−0.63, −0.01]), indicating differences between the indirect effects at the moderator level. When a picture was absent, a national post led to greater stay intentions as explained through relevancy (ab = 0.42, 95% CI: [0.20, 0.67]) but not when a picture was present (ab = 0.11, 95% Ci: [−0.10, 0.36]).

Discussion

Study 3 replicates our findings from Study 2 and supports H4 by examining a moderator of image presence. The impact of a local or national event on relevancy can be negated when the post is accompanied by an image. Including an image with a post about a local event can help the post seem more relevant, increasing the likelihood of staying at the hotel.

General discussion

Consumers are increasingly using traditional social media platforms to research services in their decision-making process (Beer, 2018) and stay informed. For example, 90% of social media users follow a brand on Instagram to stay up to date with the company (Zote, 2020). Despite the importance of social media, the majority of companies are unsure whether they have implemented successful social media strategies (Guttmann, 2019). Our findings indicate that a purposeful social media strategy influences intentions to stay at the focal hotel, highlighting the role of the quantity and content of social media posts.

The results contribute to social impact theory by illustrating that a company’s social media posts can generate social influence on an individual’s consumption behavior. First, the relationship between the number of posts and occupancy is non-linear. Specifically, the number of posts has a positive
relationship with occupancy until 3.43 posts per week, at which point the relationship turns negative. This is in line with social impact theory’s premise that the number of influencers becomes less impactful as frequency increases (Latané, 1981) and with research suggesting that social influences do not have to be linear (Stacy et al., 1992). An overabundance of posts spreads influence too thin for any one post, leading to a drop in performance as indicated by fewer hotel stays. Yet, as the number of posts exceeded 18.24 per week, posts started to positively influence hotel occupancy again. Consistent with social impact theory, there should be a re-strengthening of influence as the number of sources starts to increase and the immediacy of the effect starts to become more frequent (Latané, 1981). Additionally, the content of posts was examined, indicating that original posts about a concert, festival, holiday or non-event that include an image are the most beneficial to occupancy. Posts that are about food/drink specials, national sports games or local events resulted in the lowest occupancy rates.

Previous research has shown that information relevancy can impact perceptions of quality (Carlson et al., 2018) and increase engagement (Lee et al., 2020). The findings presented here add to relevancy literature and social impact theory (Latané, 1981) by showing that social impact theory can be used in social media contexts to explain how relevancy increases the strength of influence. Social influence is most impactful when it is relevant to the influenced party, which can be accomplished by posting about a broader geographical topic rather than specific locations. Posting locally themed content places the viewer into an out-group (Tajfel, 1979), which lessens their identification with the hotel. Posting about a local matter caused the viewer to feel the post was less relevant, thus reducing the likelihood to stay. Social impact theory (Latané, 1981) posits that influence is determined by strength, immediacy and number of sources. Combined with elements of social identity theory, the results show that relevancy of information from a source can significantly impact influence, adding to the tenets of social impact theory.

Lastly, we contribute to social impact theory by showing that influence can be altered by the inclusion of a picture. Previous research has shown that text with an image is more influential than text alone (Yoon, 2018). The findings here indicate that when an image is included with a text post, relevancy was increased for a local post and the relationship between local/national post and relevancy was no longer significant. This is likely due to the image helping the viewer create an identity (Lindahl and Öhlund, 2013) that is more in line with the identity of the poster (Pittman and Reich, 2016). With 90% of US companies being involved with social media as a marketing tool (Guttmann, 2019), it is important to know the best means to influence social targets.

Managerial implications
These findings also have important practical implications for social media marketers. Prior research has produced conflicting findings when recommending how often a brand should be posting (Mariani et al., 2016; Mariani et al., 2018). Social media managers should ensure their accounts post between 1 and 3 times per week (either three times on one platform or one time on three platforms) or more than 19 times per week across multiple platforms. These posts should be original (i.e. not shared from another platform) about a concert, festival, holiday or national event and include a picture. Furthermore, posts should not be about food/drink specials or local stories. As with other advertising
messages, communications seen via social media should be relevant to the brand (Alalwan, 2018), website and task (Resnick and Albert, 2016).

The findings show that the communications should also be relevant to the social media viewers. Increasing relevancy can increase product/service usage intent. Social media managers should be careful not to exclude viewers by making posts too specific and exclusive. Users tested here felt that national geographical content was more relevant than location-specific posts. Including a picture with a post can help a viewer find more relevancy in the post, even if the post’s text alone would be seen as exclusionary.

Limitations and future research
The current research has its limitations and presents viable opportunities for future research. The data were limited by the hotels in the dataset collected. Future research could look at whether the guests who stayed at the hotels used social media in making their decision. Since the data were collected in the spring, future research could examine the possibility of a time-of-year effect. Additionally, because this research only examines the hotel industry, future research could expand to other service industries to see whether the results hold.

There are also many other variables of interest, such as sound or animation, that could be used in isolation or in combination with the variables examined here to determine their effectiveness and impact on relevancy and stay intentions. The images used in Study 3 did not include people, which could impact in-group feelings (Brown et al., 2006).

For most companies with a social media presence, it is important to determine best practices of communication with consumers. More than two-thirds of companies, however, are concerned about their ability to assess the effectiveness of their social media efforts (Guttmann, 2019). The research presented here shows the direct effects of social media posts on hotel occupancy rates while outlining several practical ways to increase the relevancy of such posts.

Figures

Figure 1 Conceptual model
Figure 2: Cubic estimation of weekly social media posts on occupancy rate.

Figure 3: Interaction of post type and picture in Study 3.
<table>
<thead>
<tr>
<th>Authors</th>
<th>Theoretical foundations</th>
<th>Focus</th>
<th>Medium</th>
<th>Industry</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paulin <em>et al.</em> (2014)</td>
<td>Self-determination theory</td>
<td>Traditional SN</td>
<td>Facebook</td>
<td>Nonprofit</td>
<td>There is a positive association between support for social causes and efficient social media use. It is better to appeal to the benefits to others than benefits to the self when gaining support for social causes through social media.</td>
</tr>
<tr>
<td>Kim <em>et al.</em> (2015)</td>
<td>Online Reviews</td>
<td>TripAdvisor, Priceline, Hotels.com, Expedia, &amp; Yelp</td>
<td>Hotel</td>
<td>Overall ratings are the most salient predictor of hotel performance, followed by response to negative comments.</td>
<td></td>
</tr>
<tr>
<td>Leung <em>et al.</em> (2015)</td>
<td>Attitude-Toward-the-Ad Model; Attitude-Toward-the-Website/Social-Media-Page Model</td>
<td>Traditional SN</td>
<td>Facebook &amp; Twitter</td>
<td>Hotel</td>
<td>Hotel customers’ social media experiences influence their attitudes-toward-social-media-site, which in turn influences their attitudes-toward-hotel-brand, affecting booking intentions and intentions to spread eWOM.</td>
</tr>
<tr>
<td>Choi <em>et al.</em> (2016)</td>
<td>Uses and Gratification Theory</td>
<td>Traditional SN</td>
<td>Facebook</td>
<td>Hotel</td>
<td>Information, convenience, and self-expression are antecedents for user satisfaction with the hotel’s Facebook page, where satisfaction positively influences intentions to stay at the hotel in the future.</td>
</tr>
<tr>
<td>Leung and Tanford (2016)</td>
<td>Social Identity Theory; Social Influence Model; Uses and Gratification Model</td>
<td>Traditional SN</td>
<td>Facebook</td>
<td>Hotel</td>
<td>Social influence factors (i.e., compliance, internalization, and identification) had different effects on attitudes toward and behavioral intentions to like hotel Facebook pages.</td>
</tr>
<tr>
<td>Viglia <em>et al.</em> (2016)</td>
<td>Dual Process Theory</td>
<td>Travel SN/Online Reviews</td>
<td>Booking.com, TripAdvisor, &amp; Venere.com</td>
<td>Hotel</td>
<td>Review score and number of reviews has a positive impact on hotel occupancy rates. The number of reviews has decreasing returns, where the higher the number of reviews, the lower the beneficial effect on occupancy rate.</td>
</tr>
<tr>
<td>Authors</td>
<td>Focus Area</td>
<td>SN Platform</td>
<td>Social Media Platform</td>
<td>Industry</td>
<td>Findings</td>
</tr>
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<tr>
<td>Xie et al. (2016)</td>
<td>Managerial response</td>
<td>Travel SN</td>
<td>TripAdvisor</td>
<td>Hotel</td>
<td>Managerial response increases stars in TripAdvisor ratings for sampled hotels and increases the volume of subsequent consumer eWOM. Managerial response moderates the influence of ratings and volume of consumer eWOM on hotel performance.</td>
</tr>
<tr>
<td>Garrigos-Simon et al. (2017)</td>
<td>Crowdsourcing</td>
<td>Travel SN</td>
<td>Booking.com</td>
<td>Hotel</td>
<td>Direct and positive opinions of the crowd on the amount of hotel sales do not depend on physical intermediaries, nor on the impact that this has on the performance dimensions of hotels.</td>
</tr>
<tr>
<td>Kim and Park (2017)</td>
<td>Regulatory Focus Theory</td>
<td>Travel SN/Online Reviews</td>
<td>TripAdvisor</td>
<td>Hotel</td>
<td>Social media review ratings are more significant predictors than traditional customer satisfaction for explaining hotel performance metrics.</td>
</tr>
<tr>
<td>Abney et al. (2017)</td>
<td>Justice Theory</td>
<td>Traditional SN</td>
<td>Twitter</td>
<td>Restaurant</td>
<td>Customized social media recovery responses positively impact consumers’ evaluations of service recovery satisfaction, leading to greater consumer behavioral intentions.</td>
</tr>
<tr>
<td>Sorensen et al. (2017)</td>
<td>Customer Engagement Theory</td>
<td>Traditional SN</td>
<td>Facebook; Twitter; YouTube</td>
<td>Nonprofit</td>
<td>Characteristics of social media posts need to be member-centric. The tone and language of posts can be leveraged to engage members effectively.</td>
</tr>
<tr>
<td>Huang et al. (2018)</td>
<td>Narrative Transportation Theory; Transportation-Imagery Model</td>
<td>Traditional SN</td>
<td>Instagram</td>
<td>Hotel</td>
<td>Within the luxury hotel industry, comprehension fluency, imagery fluency, and transportability positively affect narrative transportation. Narrative transportation leads to positive affect, brand social network attitudes, and visit intentions.</td>
</tr>
<tr>
<td>Kim and Chae (2018)</td>
<td>Resource and Capabilities-Based Perspective</td>
<td>Traditional SN</td>
<td>Twitter</td>
<td>Hotel</td>
<td>There is a positive association between a hotel’s resources and Twitter use, and a positive association between Twitter use by hotels and their RevPAR.</td>
</tr>
<tr>
<td>Authors</td>
<td>Theory/Approach</td>
<td>Social Media Platform</td>
<td>Industry</td>
<td>Summary</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Torres et al. (2018)</td>
<td>Social Identity Theory; Complexity Theory</td>
<td>Traditional SN</td>
<td>Facebook</td>
<td>Banking</td>
<td>Social media activities increase consumers’ willingness to pay a premium price in the banking industry. This effect is fully mediated by the role of consumer-brand identification.</td>
</tr>
<tr>
<td>Carlson et al. (2018)</td>
<td>Consumption Values Theory</td>
<td>Traditional SN</td>
<td>Facebook</td>
<td>Misc.</td>
<td>Online service design characteristics in social media posts encourage an identified set of customer value perceptions that influence customer feedback and collaboration intentions.</td>
</tr>
<tr>
<td>Bigné et al. (2019)</td>
<td>Information Processing Approach; Consumer Socialization Theory</td>
<td>Traditional SN</td>
<td>Twitter</td>
<td>Hotel</td>
<td>The number of retweets and replies by users and the number of event tweets, tourist attraction tweets, and retweets by direct marketing organizations can predict the hotel occupancy rate for a given destination.</td>
</tr>
<tr>
<td>Diffley and McCole (2019)</td>
<td>Service-Dominant Logic</td>
<td>Traditional SN; Travel SN</td>
<td></td>
<td>Hotel</td>
<td>Networked interactions facilitated by social networks influence the marketing activities of hotels (i.e., deeper connections and co-creating value with customers to enhance the market offerings and promotional activities of the firm).</td>
</tr>
<tr>
<td>Moon et al. (2019)</td>
<td>False Information Bias</td>
<td>Travel SN/Online Reviews</td>
<td>TripAdvisor, Priceline, Hotels.com, Expedia, &amp; Yelp</td>
<td>Hotel</td>
<td>Open- versus closed-review posting policies play different roles in creating social media bias. Using the hotel industry, a trust measure was found to serve as a correction factor that reduces social media bias.</td>
</tr>
<tr>
<td>Tsiotsou (2019)</td>
<td>Hofstede’s Framework</td>
<td>Travel SN/Online Reviews</td>
<td>TripAdvisor</td>
<td>Hotel</td>
<td>Cultural differences in overall service evaluations and attributes (value, location, sleeping quality, rooms, cleanliness, and service) were found among tourists from various European regions.</td>
</tr>
<tr>
<td>Moon et al. (2020)</td>
<td>Reality Monitoring Theory</td>
<td>Online reviews</td>
<td></td>
<td>Hotel</td>
<td>Real-world hotel reviews were analyzed to detect fake reviews and identify the hotel and review characteristics influencing review fakery (e.g. star rating, franchise hotel, hotel...</td>
</tr>
</tbody>
</table>
Lee et al. (2020)  Theory of Customer Engagement  Traditional SN  Facebook; Twitter  Hospital  There is a positive association between a hospital’s social media engagement and experiential quality

Bacile (2020)  Customer Compatibility Management Theory  Traditional SN  Facebook  Restaurant  Perceptions of a firm’s service climate are negatively affected by online incivility but only when incivility produces perceptions of customer-to-customer injustice

Notes: SN = Social Network; Traditional SN = Facebook, Instagram, Twitter, Pinterest, or MySpace; Travel SN = Travel-related websites that allow for users to post reviews and ratings

Table 2 Predicting occupancy from number of social media posts

<table>
<thead>
<tr>
<th>Step</th>
<th>$R^2$</th>
<th>$F$ for $R^2$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Linear</td>
<td>0.004</td>
<td>0.15</td>
<td>1, 42</td>
<td>0.70</td>
</tr>
<tr>
<td>2: Quadratic</td>
<td>0.13</td>
<td>2.99</td>
<td>2, 41</td>
<td>0.06</td>
</tr>
<tr>
<td>3: Cubic</td>
<td>0.20</td>
<td>3.36</td>
<td>3, 40</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Table 3 Constructs, items and reliabilities

<table>
<thead>
<tr>
<th>Construct and definition</th>
<th>Items</th>
<th>Reliability Study 2/3</th>
</tr>
</thead>
</table>
| Relevance                | Miyazaki et al. (2005)  
Very relevant  
Very useful  
Very important | 0.96/ 0.97 |
| Belonging                | Pechmann et al. (2003)  
I really fit in there  
People would accept me there  
What I offer is valued there  
It made me feel like I have a place in this world  
I would feel a part of mainstream society there | 0.87/ na |
| Intrusiveness            | Li et al. (2002)  
I felt like I was interfering | 0.97/ na |
<table>
<thead>
<tr>
<th>Stay Intentions</th>
<th>Oliver and Swan (1989)</th>
<th>0.95/ 0.96</th>
</tr>
</thead>
<tbody>
<tr>
<td>The likelihood of the customer staying at the hotel</td>
<td>Not at all likely/very likely</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-existent/existent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improbable/probable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impossible/possible</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Uncertain/certain</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Probably not/probably</td>
<td></td>
</tr>
</tbody>
</table>
Table A1. Study 2: Mediation

<table>
<thead>
<tr>
<th>Construct</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance (1)</td>
<td>3.95</td>
<td>1.98</td>
<td>0.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belonging (2)</td>
<td>4.43</td>
<td>1.13</td>
<td>0.47</td>
<td>0.43**</td>
<td></td>
</tr>
<tr>
<td>Intrusiveness (3)</td>
<td>2.38</td>
<td>1.63</td>
<td>0.82</td>
<td>0.29**</td>
<td>0.30**</td>
</tr>
<tr>
<td>Stay intentions (4)</td>
<td>4.94</td>
<td>1.27</td>
<td>0.65</td>
<td>0.31**</td>
<td>0.61**</td>
</tr>
</tbody>
</table>

Notes: AVE = average variance extracted
**p < 0.01

Table A2. Study 3: Local × Picture

<table>
<thead>
<tr>
<th>Construct</th>
<th>M</th>
<th>SD</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance (1)</td>
<td>3.77</td>
<td>1.92</td>
<td>0.81</td>
</tr>
<tr>
<td>Stay intentions (2)</td>
<td>5.28</td>
<td>1.25</td>
<td>0.64</td>
</tr>
</tbody>
</table>

Note: AVE = average variance extracted
**p < 0.01

Notes
1 Similar results were seen when analyzing the weeks individually or when stacking the data to have 88 hotel-to-occupancy dyads.
2 A pretest was conducted with similar results to the main study.
3 A pretest was conducted with similar results to the main study.

References


Further reading