

Attention Please!

How Attention Drives Social Media Engagement

Abstract

Social media has become an integral part of Internet usage, with billions of users worldwide. Therefore, it is increasingly important for marketers to understand how to optimize one of the most important variables for success: Engagement. This study examines the relationship between user attention and engagement on social media, considering the effect of caption text length and emojis. Using an eye-tracking experiment, we measure user attention and engagement (likes, clicks, comments) for 161 social media posts. Our results confirm that attention affects engagement. Furthermore, we show that text length and emojis moderate this relationship. This study makes an important contribution to understanding one of the most important mechanisms for driving engagement.

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Introduction

Social media has become the daily cup of coffee of Internet use. There are currently 5.18 billion internet users, of which 4.8 billion also use social media (Statista1 2023). This is not news to marketers, which is why marketing spend on social media has overtaken traditional TV advertising (Statista2 2023). One of the most important performance indicators for marketers is engagement, which is typically measured by the number of interactions (e.g., likes) with content (Leung et al. 2022; Wies et al. 2022). Intuitively, one might assume that a high level of engagement reflects a high level of attention. Surprisingly, this seemingly obvious mechanism has been little studied. However, many users habitually and automatically engage with their social media feeds, such as liking content, without actively noticing. This raises the question:

How does social media users' attention affect their intent to engage?

Attention is known to be an important element in many marketing and consumer behavior studies (Berger et al. 2023). In this paper, we show how attention affects engagement. We use an eye-tracking experiment to measure people's attention when viewing social media content. Specifically, we measure the amount of time users spend looking at a post and observe their engagement behavior (likes, clicks, viewing comments, etc.). Our findings confirm attention as a major mechanism and predictor of user engagement with a social media post.

In addition, we consider novel contextual effects for the attention-engagement relationship: we record and examine how the caption of each post moderates the relationship. Specifically, we examine text length as a proxy for explicit information content and emojis as a proxy for the implicit nonverbal content of a post's caption. In doing so, we uncover countervailing moderating effects.

With this work, we highlight the importance of the often taken for granted mechanism between attention and engagement. Furthermore, we show that the caption is also an important factor influencing engagement. We discuss implications and provide recommendations for managers involved in social media marketing.

Theoretical Background and Conceptual Model

Many drivers of engagement have been identified in the literature (Panzer et al. 2019; Reichstein & Bruschi 2019; Li & Xi 2020; Pezzuti et al. 2021; Ko et al. 2022). However, to our knowledge, one of the most obvious drivers of engagement, attention, has not yet been studied. Berger et al. (2023) identified what holds attention but did not clarify whether attention increases engagement (e.g., likes, comments or clicks). Instead, research has shown that individuals pay more attention to interesting content than to uninteresting content, and also that interest has a positive effect on engagement (Berger & Schwartz 2011; Berger & Milkman 2012; Miquel-Romero & Adame-Sánchez 2013; Jalali & Papatla 2019). This leads to our first derived hypothesis.

H1: Attention has a positive influence on engagement.

In addition, we propose that other components of social media content, such as the caption of a post, may influence this relationship. Specifically, we examine whether the amount of explicit content, such as the text length of a caption, and implicit content, such as the number of emojis, moderate the relationship between attention and engagement. Extant results of studies that have examined the direct effect of caption text length on social media engagement are conflicting. There are studies that find a positive (Panzer et al. 2019; Pezzuti et al. 2021), a negative (Schultz 2017; Chae 2020) or no (De Vries et al. 2012; Li & Xi 2020) effect of text length. We expect

that posts with longer captions may bind individuals more to the content due to the greater amount of information and hence can keep attention longer. Therefore, we assume the subsequent hypothesis.

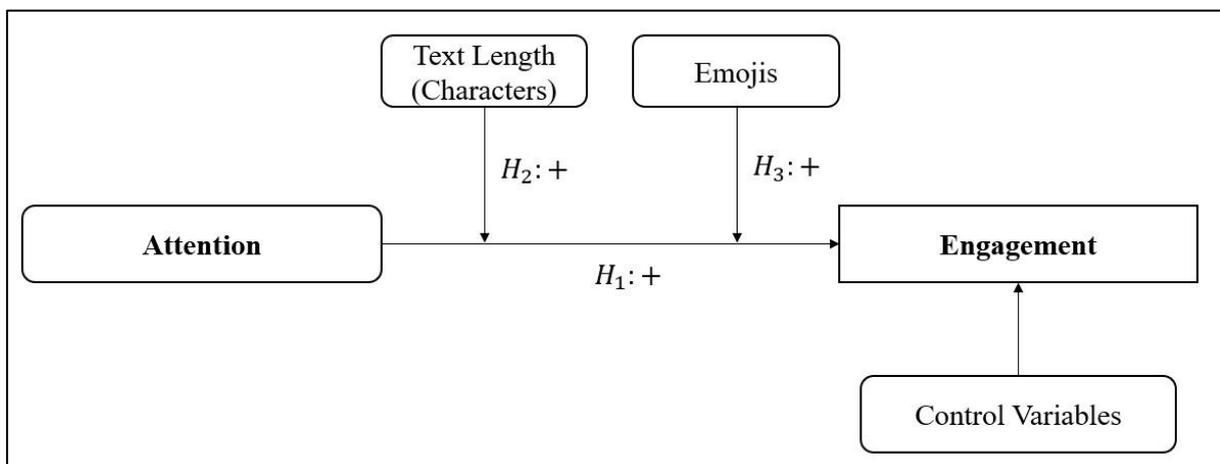
H2: The relationship between attention and engagement is moderated by text length, such that a large number of characters increases the positive effect of attention on engagement.

The effect of emojis on engagement is also not yet fully clarified, as positive and negative effects have been found for this relationship as well. As emojis are a strong visual driver, we assume that they may also influence attention. We therefore expect the following moderating effect, hypothesized in H3.

H3: The relationship between attention and engagement is moderated by emojis, such that a high number of emojis increases the positive effect of attention on engagement.

Our assumptions are illustrated in the conceptual model in Figure 1.

Figure 1. Conceptual Model.



Empirical Strategy

To measure the effect of attention on engagement, we set up an eye-tracking experiment. This experiment measures the amount of time individuals spend looking at a social media post. We also record the individual's engagement behavior while viewing the social media post, as well as the content viewed and its associated captions (including text length and emojis). We use this information to test the assumptions of our conceptual model.

Design

The procedure of the study was as follows. We recruited 14 students for the experiment, who viewed a total of $n=161$ different posts. The subjects had to put on eye-tracking glasses and take a seat at a table. The experimental setup was then explained to them. The subjects were asked to view their personalized Facebook timeline with their own smartphone. The advantage of this is that they see personalized content that is likely to be of interest to them. Subjects were alone in a closed room to do so, but knew they were participating in an experiment and were being observed. They were asked to behave as naturally as possible, viewing the displayed timeline for 5 to 10 minutes and generally behaving as they would in their normal lives (including engagement behaviors such as liking posts or viewing comments). After completion of the experiment, subjects received an allowance of 5€.

Measurements

The dependent variable of the study is engagement, which was recorded as a binary variable (yes = 1). Due to the advantage of eye tracking, it was possible to directly record when the test subjects interacted with a post. Any active action within a post was counted as engagement. Active actions were: clicking on content or a link, liking, commenting, sharing, reading or liking comments.

The focal variable attention was measured by the total fixation time per post, which indicates how many seconds (measured to a thousandth of a second) subjects spent looking at a post. The independent variables text length and emojis were recorded based on the caption text of the considered posts. The caption text was manually recorded by looking at the eye-tracking recordings. The text length variable is measured based on the characters in a post. The emoji variable indicates the number of emojis in the caption text.

Control variables included the number of hashtag characters, the square of the text length (in characters), and the square of the number of emojis. In addition, a dummy variable was used to indicate whether the content of the post was an image with text (1=yes). The descriptive values and the correlation values of the variables are shown in Table 1.

Table 1. Descriptives and Correlations.

Variable	Mean	SD	Min	Max	1	2	3	4	5	6
1 Engagement	.13	.34	0	1	1					
2 Attention	6.92	6.27	.39	35.66	.553	1				
3 Text Length (Character)	84.76	103.19	0	920	.370	.271	1			
4 Emojis	1.02	1.60	0	8	.086	.179	.050	1		
5 Hashtag (Character)	1.22	8.75	0	101	.225	.146	.006	.102	1	
6 Image with Text	.24	.43	0	1	.045	-.048	-.202	-.173	-.026	1

Results

The results of the study are shown in Table 2. The data were analyzed using OLS because it is more robust for smaller samples ($n < 200$) than logit estimation (Stone & Rasp 1991). The term for attention is positively significant in our full model ($\beta_1 = .0220, p < .001$). Accordingly, we can confirm our basic assumption (H1) that attention has a positive effect on engagement. The assumption that text length positively moderates the relationship between attention and engagement (H2) is confirmed ($\beta_4 = .0001, p < .05$). However, our assumption that emojis have a positive effect on this relationship (H3) cannot be confirmed. Surprisingly, the opposite is true. Emojis have a negative moderating effect on this relationship ($\beta_5 = -.0053, p < .01$). Furthermore, we find a positively significant effect of text length on engagement ($\beta_2 = .0012, p < .01$). In contrast, the effect of emojis on engagement is not significant. In addition, we find through the significant negative squared term of text length that a moderate text length optimizes engagement. Furthermore, hashtags have a significantly positive influence on engagement, as does image content with integrated text.

Table 2. Results for Engagement.

Variables	Engagement (No Interactions)	Engagement (Full Model)
Attention	.0255*** (.005)	.0220*** (.006)
Attention x Text Length		.0001* (.000)
Attention x Emoji		-.0050** (.002)
Text Length	.0012** (.000)	.0010* (.000)
Text Length ²	-.0000006 (.000)	-.000004** (.000)
Emojis	-.0857** (.032)	-.0453 (.034)
Emojis ²	.0155** (.005)	.0157** (.005)
Hashtag Characters	.0064** (.002)	.0071** (.002)
Image with Text (1=yes)	.1071* (.051)	.1217* (.050)
Constant	-.1384*** (.048)	-.1437** (.054)
No. of Observations	161	161
Adjusted R-Square	.407	.441
AIC	31.10	23.48
BIC	55.76	54.29

*p < .05, **p < .01, ***p < .001.

Notes: Standard errors are reported in parentheses.

Discussion

This work contributes to social media research in two ways. First, we can demonstrate a mechanism that is taken for granted but has not been studied in the prior literature. We show that as attention to a social media post increase, so does the likelihood of engagement with that post. Thus, the longer individuals view a post, the more likely they are to interact with the post in some way.

Second, we show that text length positively moderates the relationship between attention and engagement. Accordingly, longer texts may help to further increase the engagement of content that already generates high attention.

Third, contrary to our assumption, we show that emojis have a negative impact on the relationship between attention and engagement. Thus, the probability of engagement for high attention posts decreases when the caption contains too many emojis.

From a managerial point of view, therefore, content creators should try to ensure that their posts capture users' interest and keep them engaged for a longer period of time. However, content creators cannot achieve this only through their actual content (e.g., images or videos). Another way to achieve this is through the caption. Our results show the positive effect of text length. However, the texts should not be too long, as we find a significant negative effect for the squared term of the text length. Therefore, we recommend a moderate text length for the caption that provides users with an interesting story about the actual content. In addition, our control

variables show that hashtags increase engagement and that images with text also generate higher engagement.

This work has some limitations. The subjects had different native languages. In two cases, there were some Arabic-language posts in the timeline, which could not be considered for the analysis. Furthermore, we are aware that the results could be biased due to endogeneity problems, for example, by omitted variables. We are aware that the small sample size is a limitation to the robustness of the results. However, this study is a good starting point for further research and provides initial indications of the causal relationships between attention and engagement. Future research could shed light on the factors that increase attention to content and identify additional moderators.

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