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HOW LANGUAGE AROUSAL SHAPES RESPONSES TO INFLUENCERSPONSORED CONTENT

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HOW LANGUAGE AROUSAL SHAPES RESPONSES TO INFLUENCER-SPONSORED CONTENT

Abstract

Influencer marketing has become big business. But while influencers have the potential to diffuse marketing messages and drive sales, some posts get lots of engagement, while others do not. Could a subtle change in language boost engagement? This work investigates how language arousal in micro versus macro influencers' sponsored posts can shape engagement. Four studies, combining a text analysis of thousands of influencer's social media posts and controlled experiments, demonstrate that a more aroused language increases engagement for micro influencers, while it decreases engagement for macro influencers. This effect occurs because a more aroused language boosts (reduces) feelings of interpersonal closeness between micro (macro) influencers and their audience, which makes the influencers seem more (less) credible. These findings deepen the understanding of how language arousal and influencer type shape consumer behavior, reveal a psychological mechanism through which language arousal affects consumer perceptions, and provide actionable insights for composing more effective social media content.

Keywords: language arousal, influencers, engagement, credibility, natural language processing

Influencer marketing has become a huge business, with more than 90% of brands enlisting micro and macro influencers to connect with consumers and achieve a variety of marketing goals (Leung et al. 2022b). Despite the popularity and relevance of influencer marketing, its effectiveness widely depends on the engagement influencers get on social media (Hughes, Swaminathan, and Brooks 2019). Some posts garner engagement, stimulating interest toward the product endorsed, while others do not. So, what makes some posts more engaging?

Beyond the topic of the post, consumer engagement with influencer content might depend on how credible influencers seem. Influencers get paid to promote products, and as a result, consumers may think that they are motivated by the payout rather than their genuine opinion. Indeed, only 4% of people trust what influencers say in sponsored posts (Leung et al. 2022a).

This research examines whether a subtle shift in language arousal (i.e., words like *sensational*, *hectic*, and *shocked* that provoke an excitatory state in message recipients) can shape engagement by affecting how credible influencers are perceived. A great deal of research has demonstrated that a more aroused language can have positive (Berger and Milkman 2012) or even reverse effects (Weingarten and Berger 2017). In the context of influencers, we suggest that language arousal's effects depend on *who* is talking, namely on whether the influencer is a micro (i.e., people with a small-scale audience) or a macro (i.e., people with a massive reach). In particular, we suggest that more aroused language increases engagement for micro influencers, while it decreases engagement for macro influencers. This happens because more aroused language may boost (reduce) consumer feelings of interpersonal closeness (hereafter, IC) with micro (macro) influencers, which makes the influencer more (less) credible. Consider an influencer sponsoring a lipstick. If a micro influencer (or field expert; Valsesia et al. 2020) says that a new lipstick is *sensational*, rather than *good*, for example, it suggests that she is genuinely excited about that product and wants to share such an excitement with followers (i.e., increasing IC). This, in turn, should make the influencer seem more credible, thus increasing engagement. In the case of macro influencers, instead, people know that they are generally less specialized people paid by companies to get higher social media reach (Karagür et al. 2022). This could make consumers feel an aroused claim as being "over-try-hard" to persuade, thus leading to decreased IC, and thus reduced credibility and engagement.

A multimethod approach, combining a field study using automated text analysis of thousands of influencers' Instagram sponsored posts with controlled experiments, tests these possibilities. We make four main contributions. First, we contribute to literature investigating how language arousal in online communications shapes consumer responses. While prior work has shown that a more aroused content can boost (Berger and Milkman 2012) or even reduce (Weingarten and Berger 2017) some forms of engagement, whether such an effect might depend on the source of the message remains unknown. We fill this gap with an analysis of the role of influencer type (micro vs. macro influencer) as an important boundary condition for the effects of language arousal on consumer engagement.

Second, we advance knowledge on the drivers of influencer credibility. Although a growing body of research has begun to examine the importance of what

affects influencer credibility (Karagür et al. 2022), less is known about how language cues in social media posts shared by different types of influencers (micro vs. macro) shape their credibility.

Third, we contribute to literature on the social function of language (Packard and Berger, 2021). An emerging stream of research has begun to investigate how message recipients elaborate on language arousal cues to make inferences about the message sender (Yin, Bond, and Zhang 2017). We supplement this work by examining how people elaborate on language arousal cues, along with influencer type, to inform their judgments about IC and influencer credibility.

Fourth, we advance the use of text analysis for consumer insights in the context of social media marketing (Berger et al. 2020). Due to the greater use of nonverbal elements in social media (e.g., emojis), we extend previous arousal operationalizations based on words by incorporating paralanguage features such as emojis, capital letters and punctuation (Luangrath, Peck, and Barger 2017). In doing so, we integrate literature on language arousal (Berger and Milkman, 2012), language intensity (Pogacar et al. 2018), sentiment strength (Villarroel Ordenes et al. 2017), and paralanguage (Luangrath et al. 2017) to provide a deeper conceptual and empirical understanding of language arousal and its implications on consumer behavior.

Finally, our results offer clear implications for influencers in charge of composing sponsored messages for brands. Small shifts in language can have a substantial effect. The field data suggest that increasing arousal by one standard deviation (e.g., moving from *great* to *fantastic*) is associated with 25 more likes and comments for micro influencers and 232 less likes and comments for macro influencers.

Study 1: Language Arousal in the Field

To provide a preliminary investigation of the joint impact of language arousal and influencer type (micro vs. macro) on engagement, we turn to the field. We collaborated with a large influencer marketing agency to acquire a sample of 20,923 influencer-sponsored Instagram posts across 18 industries (e.g., beauty, food, travel). We used automated textual analysis to measure language arousal and operationalized it combining simple words (VAD lexicon; Mohammad 2018) with paralanguage features (i.e., emojis, capital letters, and punctuation; Luangrath et al. 2017). We measured influencer type by classifying all influencers with anywhere between 10,000 and 100,000 followers as micro, and influencers with between 100,000 and 1,000,000 followers as macro (Lee and Junqué de Fortuny 2021). Following prior research (Herhausen et al. 2019), we measured engagement as the total number of likes and comments a post received. Finally, we accounted for a variety of controls, including aspects of the influencer (e.g., influencer fixed effects), text (e.g., topics, questions, hashtags), image (face emotionality, color saturation) and additional factors (e.g., time fixed effects).

Results

As predicted, we found a significant, negative effect of arousal X macro ($b = –.093$; SE =.012; $t = –7.85$; $p < .001$) on engagement. Consumers engaged more with content

when micro influencers used more aroused language (b = .033; SE =.008; t = 4.28; p < .001), suggesting a one-standard deviation increase in arousal is associated with 25 additional likes or comments. Conversely, consumers engaged less with content when macro influencers used more aroused language (b = –.056; SE =.009; t = –6.26; p < .001), suggesting a one-standard deviation increase in arousal is associated with 232 likes or comments less. The development of constructs through study 1 ensures validity of our measurements, and the modelling accounts for several additional analysis to test the robustness of our model specification (e.g., endogeneity) and measurements (both arousal and influencer type classification).

Study 2: Manipulating Language Arousal

Results from study 1 are consistent with our theorizing and cast doubt on various alternative explanations. But one could still wonder whether the relationship between language arousal and engagement is truly causal. Study 2 manipulates arousal to examine whether a high-arousal language increases engagement for micro influencers, while it decreases engagement for macro influencers. Study 2 also tests the hypothesized mechanism. If using high arousal increases (decreases) engagement for micro (macro) influencers by making consumers feel like the influencer is more (less) credible, as we suggest, then credibility should mediate the effect.

Method and Results

Participants (n = 279; Prolific) were randomly assigned to condition in a 2 (language arousal: high vs. low) x 2 (influencer type: micro vs. macro) between-subjects design. Our experimental stimuli were designed to have similar levels of arousal and number of followers to the field data in study 1. Everyone was shown a fictious influencer's Instagram post sponsoring a ski resort. Conditions varied on the arousal of the language contained in the post. To illustrate, in the high [*low*] arousal condition, the post was: "#ad Recently discovered the @whistle.whitecomb, a place with amazing [*nice*] slopes, great [*good*] restaurants and such a welcoming [*pleasant*] staff. So excited [*happy*] to stay here for a week! [.]" (arousal score = .537 [*.401*]). A pretest confirmed the effectiveness of the manipulation (M = 5.54 vs 4.94, F(1, 78) = 4.35, p = .040). Conditions also varied on the influencer type (micro: 20,000 followers, macro: 658,000 followers). A pretest confirmed the effectiveness of the manipulation (M = 6.02 vs. 5.30, F(1, 82) = 8.30, p = .005).

Next, we measured process and dependent measures. Participants were asked to rate their perception of influencer credibility on a 10-item scale (Ohanian 1990) and as a measure of engagement, their likelihood to like or comment on the post (1 = "not at all likely" and 9 = "very likely"; Valsesia et al. 2020).

Engagement. A 2x2 ANOVA revealed the predicted Arousal X Influencer Type interaction (F (3, 275) = 5.12; p = .001). Consistent with study 1, high- (vs. low-) arousal language increased engagement for the micro influencer (M = 3.83 vs 2.91, F(1, 138) = 4.16, p = .043), while it decreased engagement for the macro influencer (M= 2.36 vs. 3.43, F(1, 137) = 8.67, p = .004; see Figure 1).

Credibility. We found similar results for credibility. A 2x2 ANOVA revealed the predicted Arousal X Influencer Type interaction (F (3, 275) = 7.70; p < .001). High (vs. low) arousal increased credibility for the micro influencer (M = 5.15

vs 4.33, F(1, 138) = 18.91, $p < .001$), while it decreased credibility for the macro influencer (M = 4.47 vs 4.88, F(1, 137) = 4.25, $p = .041$).

Moderated mediation. We performed moderated mediation analysis (PROCESS model 7; Hayes 2018) incorporating influencer type as a moderator of language arousal's effects on credibility (a path) in the main process model found a significant moderated mediation on engagement ($b = - 1.52$; 95% CI = - 2.21; - 0.87). As expected, the effects of language arousal were driven by credibility in the micro influencer condition ($b = 1.01$; 95% CI = 0.53; 1.54). High-arousal language increased respondents' perceptions that the influencer is credible ($b = .82$, SE = 0.19, $t = 4.23$, $p < .001$), which led to enhanced engagement ($b = 1.24$, SE = 0.10, $t = 12.11$, $p < .001$). Also in the macro influencer condition, the language arousal's effects were driven by credibility ($b = -.51$; 95% CI = -0.98; -0.06), such that high-arousal language decreased perceptions that the influencer is credible ($b = -0.41$, SE = 0.19, $t = -2.11$, $p = .035$), which led to reduced engagement.

Study 3: Process by Moderation

Study 3 further tests the hypothesized process through both mediation and moderation. If high-arousal language increases (decreases) engagement for micro (macro) influencers by making it seem like the influencer is more (less) credible, as we suggest, then the effect should be mitigated in the presence of other post cues signaling credibility. To test this possibility, in addition to manipulating language arousal, for half the participants, we add additional content suggesting the influencer has expertise in what she is sponsoring to the stimuli from study 2 ("I grew up skiing in the Rocky Mountains"). If our theorizing is correct, high-arousal language should have less of an effect when it already seems like the influencer is a field expert. To do that, we conducted separate analysis for micro and macro influencers.

Micro Influencers: Method and Results

Participants (n = 256) were randomly assigned to condition in a 2 (language arousal: high vs. low) x 2 (expertise: baseline [no expertise] vs. expertise) between-subjects design. The baseline condition was the same as in study 2. The expertise condition added a brief sentence at the beginning of the post suggesting it.

Engagement. Consistent with study 2, in the baseline condition, high- (vs. low-) arousal language increased engagement for the micro influencer (M= 2.57 vs 1.81, F(1, 129) = 5.81, $p = .017$). Consistent with the hypothesized underlying role of credibility, however, when the influencer mentioned she had previous experience with skiing, this difference disappeared ($p = .599$).

Credibility. We found similar results for credibility. Consistent with study 2, in the baseline condition, high- (vs. low-) arousal language increased credibility (M= 4.91 vs 4.35, F(1, 129) = 7.07, $p = .009$), but when the influencer mentioned she had previous experience, this difference disappeared ($p = .870$).

Moderated mediation. A moderated mediation analysis (PROCESS model 7; Hayes 2018), incorporating expertise as a moderator of language arousal's effects on credibility found significant moderated mediation on engagement ($b = – 0.53$, 95% CI = – 1.08, – 0.02). As in study 2, in the baseline condition the effect of language arousal on engagement was driven by credibility ($b = 0.50$, 95% CI = 0.13, 0.91).

High-arousal language made the influencer seem more credible (b = 0.57, SE = 0.20, t = 2.83, p = .005), which increased engagement (b = 0.88, SE = 0.09, t = 10.08, p < .001). When the influencer mentioned she had previous experience with skiing, however, using high-arousal language no longer impacted credibility (b = – 0.03, SE = 0.20, t = – 0.15, p = .878), and the mediation on engagement was no longer significant (b = – 0.03, 95% CI = – 0.35, 0.30).

Macro Influencers: Method and Results

Participants (n = 280) were randomly assigned to condition in a 2 (language arousal: high vs. low) x 2 (expertise: baseline [no expertise] vs. expertise) between-subjects design. The baseline condition was the same as in study 2. The expertise condition added a brief sentence at the beginning of the post suggesting it.

Engagement. Consistent with study 2, in the baseline condition, high- (vs. low-) arousal language increased engagement for the micro influencer (M= 2.07 vs 2.81, F(1, 141) = 5.56, p = .020). Consistent with the hypothesized underlying role of credibility, however, when the influencer mentioned she had previous experience with skiing, this difference disappeared (p = .135).

Credibility. We found similar results for credibility. Consistent with study 2, in the baseline condition, high- (vs. low-) arousal language increased credibility (M= 4.38 vs 4.89, F(1, 141) = 6.96, p = .009), but when the influencer mentioned she had previous experience, this difference disappeared (p = .190).

Moderated mediation. A moderated mediation analysis (PROCESS model 7; Hayes 2018), incorporating expertise as a moderator of language arousal's effects on credibility found significant moderated mediation on engagement (b = 0.60, 95% CI = 0.18, 1.00). As in study 2, in the baseline condition the effect of language arousal on engagement was driven by credibility (b = – 0.51, 95% CI = – 0.72, – 0.11). High-arousal language made the influencer seem more credible (b = – 0.51, SE = 0.18, t = – 2.82, p = .005), which increased engagement (b = 0.82, SE = 0.09, t = 8.90, p < .001). When the influencer mentioned she had previous experience with skiing, however, using high-arousal language no longer impacted credibility (b = 0.22, SE = 0.18, t = 1.22, p = .225), and the mediation on engagement was no longer significant (b = 0.18, 95% CI = – 0.09, 0.45).

Study 4: Testing the Sequential Process [not reported for lack of space]

We suggested that using a more aroused language increases (decreases) engagement for micro (macro) influencers because it makes consumers think the influencer is more (less) interpersonally closed. This, in turn, makes the influencer seem more (less) credible. Study 4 tests this sequential process. Second, while study 1 examines a broad range of product categories, to text generalizability in an experimental context, study 3 uses a different product category than previous experimental studies.

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