**CONSUMER RELEVANCE AND CONTRIBUTION STATEMENT**

Influencers have become an important marketing tool. More than 75% of marketers intend to dedicate a budget to influencer marketing in 2022 and 68% of brands say they will increase their influencer marketing spending. But not all posts are equally effective. Some generate a great deal of engagement and boost sales, while others do not. Why are some posts more impactful than others?

Given the importance of authenticity, we suggest that sensory language, or words that engage sense, can boost engagement and purchase because it makes influencers seem more authentic. This happens because sensory language signals that the influencer might have actually used the product sponsored. Across two field studies using real influencers’ posts and three experiments, we demonstrate that sensory language improves influencers’ impact by affecting how authentic influencers seem.

Our research contributes to different research streams. First, we extend influencer marketing literature by introducing sensory language as a novel predictor of engagement with influencer posts. Second, we advance literature on sensory marketing, by exploring the important role of language. Third, we shed new light on the concept of influencer authenticity by conceptualizing and demonstrating that it might be linked to recipients’ perception about actual product use. Fourth, we extend research on how language shapes consumer responses to online advertising by testing the effect of sensory language.

Practically, our results suggest that using more sensory language can significantly increase the impact of influencer marketing. Our field data show that a single additional sensory word is associated with 41 more likes or comments on Instagram and more than 4,000 additional likes or comments on TikTok.

**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 and boost sales, while others do not. What makes some posts more impactful? This work examines how sensory language (e.g., words like crumble and juicy that engage the senses) shapes consumer responses to influencer-sponsored content. A multimethod investigation, combining controlled experiments with automated text analysis of thousands of sponsored social media posts, demonstrates that using more sensory language increases engagement and willingness to buy the sponsored product. Further, the studies illustrates that these effects are driven, at least in part, by perceived authenticity. Sensory language leads consumers to infer that influencers actually use the product they are endorsing, which increases perceived authenticity, and thus engagement and purchase. These findings shed light on how language shapes responses to influencer-sponsored content, deepen understanding of the drivers of authenticity, and suggest how to develop more impactful social media campaigns.

*Keywords*: influencer marketing, sensory language, authenticity, product use, engagement.

Influencer marketing has become a huge business, with marketers increasingly leveraging social media influencers to connect with consumers and achieve marketing goals. Rather than using traditional advertising, or posting on social media themselves, having influencers post about a brand can generate awareness, increase engagement, and drive sales (Lee and Junquè de Fortuny 2022; Leung, Gu, and Palmatier 2022a). This strategy has become extremely popular, and spending on influencer marketing is expected to reach $16.4 billion in 2022 (Influencer Marketing Hub 2022).

But while there has been a great deal of attention to influencers, their effectiveness depends on what they post. Further, given the multitude of platforms and posts, “cutting through the content clutter” has become even more challenging (Villarroel Ordenes et al. 2019). Some posts get lots of engagement and boost sales, while others do not. What makes some posts more impactful?

One key challenge is authenticity. Consumers know that influencers are often paid to post, and as a result, may see product endorsements as driven more by economic incentives than actual liking or use. Indeed, anecdotal evidence suggests that only 6% of consumers believe that influencers really use the product they are promoting (Influence 2022).

Consequently, we examine whether a subtle linguistic shift may shape influencers’ impact by influencing how authentic they seem. In particular, we focus on sensory language (i.e., words like *spread*, *crumble*, and *juicy* that engage the senses). We suggest that sensory language can boost engagement and purchase because it increases the perception that influencers actually use the product they are promoting. This, in turn, should make the influencer seem more authentic, which should increase likes, comments, and willingness to purchase the product.

A multimethod investigation, combining controlled experiments with textual analysis of thousands of sponsored posts, tests these possibilities. Five studies demonstrate that sensory language increases engagement and purchase likelihood and illustrate that perceived authenticity underlies these effects.

This work makes five main contributions. First, we contribute to research on influencer marketing. While previous work has investigated some predictors of engagement (e.g., Hughes, Swaminathan, and Brown 2019; Karagür et al. 2022; Leung et al. 2022b; Valsesia, Proserpio, and Nunes 2020), language has been overlooked. This is a particularly important topic, though, as it is easy for companies (and influencers) to change. We fill this gap, studying the impact of sensory language and the process underlying its effect.

Second, we contribute to the literature on sensory marketing. While researchhas examined how stimuli that engage the senses influence consumer attitudes and behaviors (e.g., Krishna 2012; Krishna and Schwarz 2014; Krishna, Cian, and Sokolova 2016), there has been less attention to the role of language in driving these effects (see Akpinar and Berger 2015 and Elder et al. 2017 for a few exceptions). Further, while work has studied sensory appeals in ads and products (Elder and Krishna 2010, 2022; Krishna and Schwarz 2014; Elder et al. 2017), less is known about whether sensory cues might shape how message senders are perceived. We explore the role of language in sensory marketing and demonstrate that it can impact inferences about influencer authenticity.

Third, and along these lines, we advance knowledge on the drivers and consequences of authenticity. While previous work has shown that brand authenticity impacts things like sales and word-of-mouth (e.g., Morhart et al. 2015 Nunes, Ordanini, and Giambastiani 2021), there has been less attention to how it might impact social media engagement. Further, we extend research on influencer authenticity (e.g., Gerrath and Usrey 2021) by highlighting the role of perceptions that influencers actually use the products they endorse.

Fourth, we deepen understanding of how language shapes consumer responses to marketing communications. While a burgeoning stream of research has begun to examine the importance of language in online communication (e.g., Berger and Milkman 2012; Moore 2012; Moore and Lafreniere 2020; Pogacar, Shrum, and Lowrey 2018), little is known about how sensory language affects consumer responses to online advertising. We fill this gap, demonstrating the important role of sensory language in influencer marketing and an underlying process that drives its impact.

Finally, from a substantive perspective, our results have clear implications for increasing influencer marketing’s impact. Small shifts in language can have a substantial effect. The field data, for example, suggests that a single additional sensory word is associated with 41 more likes or comments on Instagram and more than 4,000 additional likes or comments on TikTok.

**INFLUENCER MARKETING**

The rise of social media has led to increased interest in influencer marketing. Influencer marketing is defined as “a strategy in which a firm selects and incentivizes online influencers to engage their followers on social media in an attempt to leverage these influencers’ unique resources to promote the firm’s offerings” (Leung et al. 2022a, p. 1). Said another way, it often involves firms paying influencers (or providing free products or services) in exchange for influencers saying positive things about those products and services to their online followers.

Given the shift from consuming traditional media (e.g., television) to social media, and the mounting skepticism toward traditional advertising, brands are looking for ways to communicate their messages to consumers, where consumers are, in ways that will have more impact. Consumers trust other people more than they trust ads (Hughes et al. 2019), and so sponsored influencer posts provide a way for brands to increase their reach while hopefully making their messages more persuasive. Indeed, over 75% of marketers now invest a portion of their communication budget in influencer marketing (Influencer Marketing Hub 2022).

But while many companies now use influencer marketing, not all posts are equally effective. Consumers may not resonate with what was shared, or feel like the influencers only endorse the product because they got paid. Consequently, in addition to measures like number of followers, companies also pay attention to engagement, or how many likes and comments a post receives. More likes and comments not only suggest more consumers saw a post (i.e., reach), but that it resonated with more people, which should increase liking or purchase of the sponsored product or service (Leung et al. 2022a).

Given its importance, research has begun to examine factors linked to greater engagement (e.g., Hughes et al. 2019; Leung et al. 2022b; Valsesia et al. 2020). Conditional on having many followers, for example, following fewer others is linked to higher engagement because it signals that the influencer is less susceptible to outside influence (Valsesia et al. 2020). Similarly, disclosing a post as advertising increases engagement because it makes the influencer seem more trustworthy (Karagür et al. 2022). Other work finds that things like follower count, sponsor salience, and influencer characteristics are all linked to increased engagement (Hughes et al. 2019; Leung et al. 2022b).

But while it is clear that disclosure, audience characteristics, or influencer characteristics may shape engagement, less is known about the content posted. While some topics (e.g., new high-tech products) might get more engagement than others (e.g., toilet paper), might the language influencers use increase the impact of their posts?

**SENSORY LANGUAGE**

We suggest that sensory language should impact consumer responses to sponsored posts. Sensory marketing is “marketing that engages the consumers’ senses and affects their perceptions, judgments, and behaviors” (Krishna 2012, p. 332; see Krishna et al. 2016 for a review). Cognitive processes are grounded in bodily states (Barsalou 2008) and, as a result, consumer experiences are based on the integration of sensory inputs that shape consumer perceptions and behavior (Krishna 2012). Along these lines, research has examined how elements of vision (e.g., Hagtvedt and Patrick 2008), touch (e.g., Peck and Childers 2003a; Krishna and Morrin 2008), audition (Meyers-Levy, Bublitz, and Peracchio 2009), smell (Morrin and Ratneshwar 2003) and taste (Hoyer and Stokburger-Sauer 2012) shape consumers’ responses. Haptic elements (e.g., a brochure including a soft, enjoyable touch element), for example, make messages more persuasive (Peck and Wiggins 2006), adding scents (e.g., to direct mail) boosts memory (Krishna, Lwin, and Morrin 2010), and familiar musical clips can increase brand choice (Anglada-Tort et al. 2022).

But while a good deal of research has examined traditional advertising outcomes (e.g., memory or choice), there has been less attention to how sensory marketing might impact consumer engagement with online posts. Moreover, while a good deal of research has investigated visual aesthetics, haptic elements, scents, or music on consumer responses, less is known about the potential effects of sensory language (Akpinar and Berger, 2015).

Following prior research (Akpinar and Berger 2015; Krishna 2012), we define sensory language as language that engages consumers’ senses by affecting their perceptions, intentions, and behavior. To illustrate, influencers can promote a food product by saying it is “good” (i.e., a non-sensory word) or “tasty” (i.e., a sensory word). Further, they can promote a body cream by encouraging followers to “put” (e.g., a non-sensory word) or “rub” (i.e., a sensory word) it on their skin.

We suggest that sensory language will shape consumer responses to influencer sponsored content. Specifically, we suggest that using sensory language may boost engagement (e.g., likes and comments) and purchase likelihood because it makes the influencer seem more authentic.

**AUTHENTICITY**

Authenticity has been called “one of the cornerstones of contemporary marketing” (Brown, Kozients, and Sherry 2003, p. 21) and is conceptualized as “what is genuine, real, and/or true” (Beverland and Farrelly 2010, p. 839). In the context of influencer marketing, authenticity often refers to perceived genuineness. Do influencers genuinely like something they are recommending, or are they recommending it simply because they were compensated? This relates to the integrity dimension of authenticity, or “the extent to which a provider is perceived as being intrinsically motivated, not acting out of its own financial interest, while acting autonomously and consistently over time” (Nunes et al. 2021, p. 3).

Various cues can impact perceived authenticity. Self-disclosing intrinsic motives (e.g., an influencer’s interest in a product), for example, can make consumers perceive influencers as less driven by economic incentives (Gerrath and Usrey 2021). Increased transparency (i.e., providing truthful and exhaustive representation of brand partnerships) can have similar effects (Audrezet, de Kerviler, and Moulard 2020).

We suggest that sensory language should boost perceived authenticity because it suggests direct experience. It suggests that influencers actually use the product they are posting about. Anyone can say a cookie is good, for example, but unless they are lying, saying a cookie is tasty requires actually having taken a bite. Similarly, while words like great, amazing, or wonderful suggest positive attitudes or attributes, sensory words like juicy, soft, and fragrant suggest more direct experience. Someone actually tasted, touched, or smelled whatever they are talking about.

Believing that someone actually used whatever they are talking about, in turn, should increase perceived authenticity. After all, if influencers actually use a particular shampoo every day, or rely on a particular software package, it signals that they like it enough to use it themselves. It is less likely that they recommended it simply because a company compensated them and more likely that they recommended it because they think it is good.

**THE CURRENT RESEARCH**

Overall then, we suggest that sensory language should increase the impact of sponsored posts. Specifically, it should increase engagement and purchase likelihood. Further, we suggest that this is driven by sensory language’s effects on perceived authenticity. Sensory language should increase beliefs that the influencer actually uses the product, which should increase perceived authenticity, and this, in turn, should boost engagement and purchase.

A multimethod approach tests these possibilities. The first two studies use natural language processing of field data. Study 1 provides a preliminary test, examining whether Instagram posts that use more sensory language receive more engagement. Study 2 tests whether the results of Study 1 generalize to spoken (rather than written) language and a different social media platform (i.e., TikTok).

To demonstrate sensory language’s causal impact and test the hypothesized underlying process, the next three studies use experiments. Study 3 examines whether manipulating sensory language increases consumer’s willingness to engage with sponsored posts and purchase the mentioned product. Studies 4 and 5 further investigate sensory language’s impact and the underlying role of influencer authenticity. Study 4 tests our proposed process through mediation, examining whether sensory language boosts positive responses by signaling that the influencer really uses the product, which enhances perceived authenticity. Study 5 tests the process through moderation. If the effects are driven by perceived authenticity, as we suggest, then they should be mitigated when the influencer explicitly says they have previously used the product.

**STUDY 1: SENSORY LANGUAGE ON INSTAGRAM**

To provide an initial test of the relationship between sensory language and engagement, Study 1 turns to the field. We used automated textual analysis to measure the degree to which nearly 7,000 sponsored Instagram posts used sensory language. Then, controlling for a range of other factors, we tested whether posts that used more sensory language received more engagement.

Method

We worked with a large influencer marketing agency to acquire a sample of 6,938 sponsored Instagram posts from 385 influencers between October 16, 2019, and Oct 29, 2021. The posts cover both products and services and include a range of industries (i.e., beauty, food, fashion and lifestyle, gaming, and travel; see Table A1).

Natural language processing was used to measure sensory language. Following prior work (Elder et al. 2017), we use Linguistic Inquiry and Word Count’s (LIWC; Pennebaker et al. 2015) “perceptual” measure. This includes 433 words associated with the senses (e.g., look, hear, feel, smell, and savor). Ancillary analyses further demonstrate that this measure is strongly correlated with human perceptions. Two coders (blinded to hypotheses) were given a definition of sensory language (i.e., “language that engages senses. For example, the phrase ‘spreading on’ involves the senses more than ‘putting on,’ and ‘relishing’ involves the senses more than ‘drinking’”) and rated a random sample of 100 posts on how sensory the language was (1 = not at all, 7 = very much, κ = 0.79). The automated measure was strongly related to human perceptions of sensory language (*r* = .66), confirming its validity.

Following prior research (e.g., Herhausen et al. 2019; Lee, Hosanagar, and Nair 2018), engagement was measured as the number of likes and comments posts received. On average, posts received 3,574 likes (SD = 5,112, ranging from 25 to 73,406) and 115 comments (SD = 287, ranging from 0 to 8,248). See Table A2 for descriptive statistics and correlations.

Finally, we examined the relationship between sensory language and engagement. Given the dependent variable is a count, and the outcome variable is overdispersed (*p* < .001, likelihood ratio test), a negative binomial regression was used. Given that the different variables do not share similar scales, all continuous variables were standardized (z-scored). Unstandardized results do not differ in sign or significance.

Results

As predicted, when influencers used more sensory language, their posts received greater engagement (*b* = .038; SE =.007, *t* = 5.39; *p* < .001; Table 1, model 1). A one standard deviation increase in sensory language, for example, is associated with a 4% increase in engagement. Said another way, each additional sensory word is associated with 135 additional likes or comments.

**TABLE 1:** SENSORY LANGUAGE AND ENGAGEMENT

|  |  |  |
| --- | --- | --- |
|  | **(1) Base Model** | **(2) Inc. controls** |
| IV: Sensory  Controls  *Influencer*  Follower Number  if Verified  Influencer FE  Category FE  *Text*  Topic discussed  # of Questions  # of Hashtags  Words Count  # of Emojis  Arousal  Complexity  Valence  # of Mentions  if Promotional Post | .038\*\*\* (.007) | .019\*\*\* (.004)  1.141\*\*\* (.062)  –.248\*\*\* (.174)  Included  Included  Included  –.001\*\*\* (.006)  .014\*\*\* (.011)  .039\*\*\* (.009)  .013\*\*\* (.008)  –.005\*\*\* (.006)  .008\*\*\* (.008)  –.014\*\*\* (.007)  –.012\*\*\* (.007)  .002\*\*\* (.013) |
| *Image* |  |  |
| Image (vs. Video) |  | .400\*\*\* (.023) |
| if Face Present |  | .139\*\*\* (.128) |
| Joy |  | –.025\*\*\* (.011) |
| Anger |  | –.002\*\*\* (.033) |
| Sorrow |  | .006\*\*\* (.050) |
| Surprise  Color Dominance  Color Saturation |  | –.039\*\*\* (.018)  –.005\*\*\* (.006)  –.025\*\*\* (.006) |
| Intercept | 8.160\*\*\* (.016) | 8.020\*\*\* (.192) |
| N | 6,908\*\*\*\*\*\* \*\* | 6,908\*\* \*\*\*\*\*\* |

\* *p* < .05, \*\* *p* <. 01

NOTE. — Standard errors are shown in parentheses. Fixed effects for year, month, weekday,

and time of the day are included. We do not report coefficients for fixed effects and topics

for parsimony.

*Control variables.* While this initial relationship is intriguing, one could wonder whether the results are driven by some other factor. Consequently, we include various variables to test alternative explanations and robustness. Even controlling for aspects of the influencer, message, image, and time-invariant factors, however, results remain the same.

*Aspects of the Influencer*. Rather than being driven by sensory language, one could argue that the results are driven by the person posting the content. If an influencer has more followers, for example, more people may see their posts, which should lead to more likes and comments (Leung et al. 2022b). Similarly, some influencers have verified accounts, which may lead to higher engagement (Valsesia et al. 2020). Consequently, we control for both aspects.

More generally, different influencers might be better or worse at garnering engagement, so we control for this using fixed effects.

Finally, influencers tend to post about particular product categories, and some categories (e.g., beauty products) may generate more engagement than others (e.g., snack food), so we control for the product category discussed (provided by the marketing agency).

*Aspects of the Text.* Beyond the person posting, we also controlled for aspects of the message itself. First, one could wonder whether some topics or themes get more engagement, and this, rather than sensory language, is driving the effect. Consequently, we use topic modeling to control for the topics or themes discussed in each post. While latent Dirichlet allocation (LDA) is often used for larger bodies of text, it provides weak coherence and efficacy on short messy text like social media posts (Hong and Davison 2010; Mehrotra et al. 2013), so we use Empath’s (Fast, Chen, and Bernstein 2016) 194 built-in, pre-validated categories (e.g., friends, eating, and technology).

Second, influencers often ask questions to prompt dialogues with followers, which can increase engagement (De Vries, Gensler, and Leeflang 2012), so we control for the number of questions within the message.

Third, given that hashtags can boost the number of people who see a post, and thus engagement, we control for the number of hashtags.

Fourth, longer posts may convey more information, which could impact engagement, so we control for the length of the post (in words).

Fifth, the number of emojis may impact engagement (McShane et al. 2021), so we used the “ji\_count” function from the R package *emo* [[1]](#footnote-2) to control for the number of emojis.

Sixth, arousal can increase engagement (Berger and Milkman 2012; Herhausen et al. 2019), so we control for arousal using the VAD (Valence, Arousal, Dominance) lexicon developed by Mohammad (2018).

Seventh, easy-to-read posts might be easier to process, which may increase engagement (Pancer et. al 2019), so we control for text complexity using Flesch–Kincaid (Berger et al. 2020).

Eighth, message positivity can increase engagement (Berger and Milkman 2012), so we control for valence using the difference between LIWC dictionary “posemo” (proportion of positive words) and “negemo” (proportion of negative words).

Ninth, while sponsored posts always mention the sponsoring brand (@brandname), some posts mention more brands than others, which could help or hurt engagement (Leung et al. 2022b; Li and Xie 2020). Consequently, we control for the number of brand mentions.

Tenth, some sponsored posts offer incentives (e.g., free gifts or personalized discount codes) in exchange for followers leaving a comment or tagging other people (i.e., @username). Given that this might increase engagement, we included a dummy variable to account for whether a post is a sales-promotional one. We used Jalali and Papatla (2019)’s list of eight promotional words (i.e., chance, commercial, free, gift, giveaway, promo, win, and sale), and augmented it with four additional frequent promotional words in our sample (i.e., coupon, discount, giftcard, and blackfriday), and any post that included at least one of these words was counted as sales-promotional.

*Other Post Features.* Beyond who posts, or the post’s text, the accompanying image or video also likely impacts engagement. Consequently, we controlled for aspects of this as well. First, images and videos might encourage different levels of engagement (Borah et al. 2020; Tellis et al. 2019), so we controlled for post type (image or video).[[2]](#footnote-3)

Second, human faces may receive heightened attention, so we controlled for whether a post features a face. To do so, following prior work in marketing (e.g., Klostermann et al. 2018; Li and Xie 2020), we used Google’s Cloud Vision API (<https://cloud.google.com/vision/>). In addition, we also used this API to control for the emotional state of faces when they appeared (i.e., joy, sorrow, anger, and surprise). The face detection service assigns to each human face a score for each emotion on a 5-points scale. Posts can feature multiple images, and each image contains multiple faces, so we averaged emotion scores across them.

Third, color dominance and saturation consistently enhance viewers’ attention (Finn 1988) and can increase engagement (Li and Xie 2020), so we measured these features in the images using the Python’s *Image* module from PIL,[[3]](#footnote-4) and included them as controls.

*Additional Controls.* To control for seasonality, we included the year and month. We also included fixed effects for weekdays and time of the day (Kanuri, Chen, and Sridhar 2018).

*Results Including Controls*. Even after accounting for all these controls, however, posts that included more sensory language received greater engagement (*b* = .019; SE =.004; *t* = 4.79; *p* < .001; Table 1, model 2). A one standard deviation increase in sensory language is associated with a 2% increase in engagement (i.e., likes and comments). Said another way, an additional sensory word is associated with 41 additional likes or comments.

Robustness

We also ran a number of additional robustness tests. First, while the results are consistent with our theorizing, one could wonder whether they are somehow driven by the sensory language measure used. To explore this possibility, we used an alternative measure (i.e., the list of sensory adjectives developed by Akpinar and Berger 2015). Even using this alternative measure, however, results remained the same (*b* = .016; SE = .008; *t* = 2.03; *p* = .043; Table A3, column 1).

Second, while we focused on sensory language, one could argue that emojis can also be used to express sensory experiences (e.g., “👫” expresses bodily touch and “😋” expresses savoring, Luangrath, Peck, and Berger 2017). To explore this possibility, we calculated a sensory score for more than a thousand emojis and included emojis in our main analysis (see Web Appendix for more detail). Even including this additional means of expressing emotionality, however, results remained the same (*b* = .035; SE = .009; *t* = 4.04; *p* < .001; Table A3, column 2).

Third, one might wonder if there is a relationship between sensory language and linguistic concreteness. But while sensory language is about whether something engages the sense (e.g., touch or smell), concreteness captures a different construct (i.e., how tangible, specific, or imaginable something is; Brysbaert, Warriner, and Kuperman 2014; Packard and Berger 2021). Indeed, the two constructs are not very correlated (*r* = .21), and when concreteness was included as a control in the model, the effect of sensory language persists (*b* = .019; SE = .004; *t* = 4.91; *p* < .001, Table A3, column 3). Further, replacing sensory language with concreteness as focal variable finds no effect of concreteness overall (*b* = –.007; SE = .010; *t* = – 0.73; *p* = .468; Table A1, column 4). This casts doubt on the notion that concreteness could be driving the effect.

Fourth, one could wonder whether the results are somehow driven by the modeling approach used. In particular, one could argue that the ranges of the data and extreme values (i.e., engagement ranges from 32 to 74,279) make count distributions less appropriate. Consequently, we re-ran things using an OLS regression with log-transformed dependent variable. Results remain the same (*b* = .014; SE = .004; *t* = 3.52; *p* < .001; Table A3, column 5).

Fifth, one could worry that how much sensory language an influencer includes in a post may not be random. The use of sensory language might be driven by some factors that are unobserved or not available in the dataset, leading to potential endogeneity. Consequently, to accommodate this potential source of endogeneity, we adopted a control function approach (Petrin and Train 2010). In addition, the number of likes and comments influencers receive on their last post might influence the visibility of the next post, so we also controlled for potential carryover effects (including the lagged dependent variable engagementt-1 in the predictor set). Even accounting for these endogeneity corrections, however, results remained the same (*b* = .098; SE = .036; *t* = 2.70; *p* = .007; Table A3, column 6 and see Web Appendix for more detail).

Discussion

Study 1 provides preliminary support for our theorizing. Analyzing nearly 7,000 sponsored influencer posts demonstrates that posts which use more sensory language receive greater engagement. The size of the effect is non-trivial (i.e., one additional sensory word is associated with more than 40 additional likes and comments), and robust to a variety of controls and model specifications.

*Exploring the Process.* Ancillary analyses also begin to explore the hypothesized underlying process. If sensory language increases engagement because it makes consumers think the post comes from a more authentic source, as we suggest, then the effect should be stronger in situations where authenticity is in more doubt.

To test this possibility, we explored the moderating role of follower number. While “micro-influencers” (i.e., those who have fewer followers but strong connection to them) tend to be seen as trusted sources of information (Valsesia et al. 2020), “macro influencers” (i.e., celebrities with many followers) are typically seen as less credible (Karagür et al. 2022). Consequently, if our theorizing about the role of authenticity is correct, sensory language should have a larger effect among influencers with more followers, who tend to be seen as less credible otherwise.

Consistent with this suggestion, including a sensory x follower number in the model yielded a significant interaction (*b* = –.010; SE = .003; *t* = –3.13; *p* = .002; Table A2). Specifically, consistent with the notion that these effects are driven by authenticity, higher sensory has a more beneficial effect on engagement for influencers whose credibility is in more doubt (i.e., who have more followers).

**STUDY 2: SENSORY LANGUAGE ON TIKTOK**

Results of Study 1 are consistent with our theorizing, and cast doubt on various alternative explanations, but one could still wonder whether the effects are somehow restricted to the particular platform used. Further, one could wonder whether they are somehow restricted to written communication.[[4]](#footnote-5) Consequently, to test whether the effects also extend to a different platform, and cases where sensory language is spoken, we examine a video-based platform (i.e., TikTok).

Method

We worked with a leading influencer marketing agency to identify a broad range of TikTok influencers. The agency selected all influencers they work with who had published at least 2 sponsored posts in the last 2 years. Data include 654 TikTok posts from 172 influencers between January 23, 2020, and Oct 30, 2021 (see Table A5).

TikTok is a video-sharing social network and, as a result, engagement is driven by the content of the videos. Consequently, rather than focusing on the text of the post (which are often just a title and relevant hashtags), we focused on what influencers say in their videos. Professionals transcribed the videos, and we measured sensory language using the approach from Study 1.

As in Study 1, engagement was operationalized as the sum of likes and comments. On average, posts received 137,603 likes (SD = 483,608, ranging from 31 to 5,700,000) and 2,319 comments (SD = 20,953, ranging from 0 to 461,600; see Table A6 for descriptive statistics and correlations).

Finally, we included similar controls to Study 1 (see Table A7 for full list) and used the same approach as in Study 1 to test the relationship between sensory language and engagement.[[5]](#footnote-6) All influencers in our dataset were verified, so this variable was not included, and speech does not include hashtags and emojis, so these were not included either. To extract video features, we used Python and employed an open-source video mining tool provided by Schwenzow et al. (2021).[[6]](#footnote-7)

Results

As predicted, when influencers used more sensory language, their posts received more engagement (*b* = .181; SE =.081; *t* = 2.23; *p* = .026; Table A7). A one standard deviation increase in sensory language is associated with a 20% increase in engagement (i.e., likes and comments). Said another way, an additional sensory word is associated with 4,493 additional likes or comments.

Discussion

Study 2 underscores the relationship between sensory language and engagement in the field. When TikTok influencers used more sensory language, their posts received more engagement. This effect holds controlling for a range of alternative explanations. Finding the same effect using a different social media platform, and spoken (rather than written) language, speaks to the robustness and generalizability of the effect.

Further, consistent with Study 1 and our suggestion about the underlying role of authenticity, ancillary analyses revealed a significant sensory language x follower number interaction (*b* = .182; SE = .080; *t* = 2.27; *p* = .023), indicating that sensory language is more beneficial for influencers with more followers. We more deeply explored the hypothesized process in Study 4 and Study 5.

**STUDY 3: MANIPULATING SENSORY LANGUAGE**

Results of the first two studies are consistent with the notion that using sensory language boosts engagement with sponsored posts. That said, one could still wonder whether the relationship is truly causal. While we included a number of controls to test alternative explanations, an even stronger test would be to manipulate sensory language and measure its corresponding impact on engagement. Study 3 does this.

In addition, to further explore the potential consequences of sensory language, Study 3 examines whether it also impacts purchase likelihood.

Method

Following the preregistration (https://aspredicted.org/M2M\_WHV), the final sample consists of 266 people randomly assigned to condition in a 2 (sensory language: low vs. high) between-subjects design. See Web Appendix for exclusions and demographics for all experiments.

Everyone was shown a fictious influencer’s Instagram post sponsoring a dressing gown. The only difference between conditions was the degree of sensory language used. In the low [high] sensory language condition, the post read: “#ad Silk dressing gowns by @atelierenè are so *cozy* [*soft*] and *classy* [*lush*]. Nothing *is* [*looks*] more glam!”. Confirming the manipulation’s effectiveness, a pretest indicated that the high sensory language condition was seen as involving more sensory language (Mhigh = 4.89, SDhigh = 1.35 vs. Mlow = 4.17, SDlow = 1.25, F(1, 78) = 5.92, *p* = .017). [[7]](#footnote-8)

Next, we measured the dependent variables. Participants were asked how likely they would be to engage with the post (i.e., like it or comment on it, adapted from Valsesia et al. 2020; 1 = “Not at all likely” and 9 = “Very likely”). To explore whether sensory language also impacts purchase, they were asked how likely they would be to buy the sponsored product (3-item scale adapted from Bearden, Lichtenstein, and Teel 1984; “Unlikely to Likely,” “Uncertain to Certain” and “Definitely not to Definitely”; α = 0.87).

Finally, participants completed an attention check and demographics.

Results

As predicted, and consistent with studies 1 and 2, sensory language increased engagement (Mhigh = 3.46, SDhigh = 2.25 vs Mlow= 2.64, SDlow = 2.31, F(1, 264) = 6.96, *p* = .009).

In addition, sensory language also increased purchase likelihood (Mhigh = 4.07, SDhigh = 2.31 vs. Mlow= 3.38, SDlow = 1.91, F(1, 264) = 6.97, *p* = .009).

Discussion

Study 3 provides direct causal support for our theorizing and demonstrates that the effects of sensory language extend to purchase likelihood. First, consistent with the first two studies, consumers were more willing to engage with a sponsored post when influencers used more sensory language.

Second, sensory language also increased purchase likelihood. Consumers were more willing to buy the sponsored product when influencers talked about it using more sensory language.

**STUDY 4: TESTING THE UNDERLYING PROCESS**

Study 4 has two main goals. First, we tested the hypothesized underlying process. We suggest that using sensory language increases engagement and purchase because it makes influencers seem like they have actually used the product they are promoting. This, in turn, makes influencers seem more authentic, which increases consumer engagement and willingness to buy. Study 4 tests this sequential process.

Second, while studies 1 and 2 used a broad range of products and product categories, to test generalizability in an experimental context, Study 4 uses a different product category and different language.

Method

Following the preregistration (https://aspredicted.org/BXW\_KXY), the final sample consists of 291 people randomly assigned to condition in a 2 (sensory language: low vs. high) between-subjects design.

Everyone was shown a fictious influencer’s Instagram post sponsoring a peanut butter. The only difference between conditions was the degree of sensory language used. In the low [high] sensory condition, the post read: “#ad Try @betterbutter!! *Put* [*Spread*] it on bread, *add* [*crumble*] coconut flakes on top, or *drink* [*relish*] in a smoothie. Makes for a *great* *[juicy]* meal!”. Confirming the manipulation’s effectiveness, a pretest indicated that the high sensory language condition was seen as involving more sensory language (Mhigh = 4.87, SDhigh = 1.20 vs. Mlow = 3.55, SDlow = 1.80, F(1, 78) = 15.03, *p* < .001).

Next, we collected process measures. Participants rated the degree to which they believed the influencer actually uses the sponsored product in their everyday life (1 = “Not at all”, 7 = “Very much”). Further, they rated perceptions of influencer authenticity using a 3-item scale adapted from prior work (i.e., Beverland and Farrelly 2010; “She is genuine”, “She seems a real user”, “She is authentic”, 1 = Strongly disagree, 7 = Strongly agree; α = 0.96).

The dependent variables (i.e., engagement and purchase likelihood) were the same as in Study 3.

Finally, participants completed a manipulation check, some ancillary measures to test alternative explanations (see below), an attention check, and demographics.

Results

*Dependent variables.* As predicted, and consistent with the first three studies, sensory language increased engagement (Mhigh = 2.85, SDhigh = 2.52 vs Mlow= 2.06, SDlow = 1.89, F(1, 289) = 8.89, *p* = .003). Further, consistent with Study 3, sensory language also increased purchase likelihood (Mhigh = 3.51, SDhigh = 2.11 vs Mlow= 2.88, SDlow = 1.84, F(1, 289) = 7.38, *p* = .007).

*Actual use.* In addition, consistent with our theorizing, sensory language increased beliefs that the influencer actually uses the product (Mhigh = 4.46, SDhigh = 2.18 vs Mlow= 3.75, SDlow = 2.25, F(1, 289) = 7.48, *p* = .007).

*Authenticity.* Sensory language alsomade the influencer seem more authentic (Mhigh = 3.70, SDhigh = 1.52 vs Mlow= 3.30, SDlow = 1.51, F(1, 289) = 5.00, *p* = .026).

*Mediation.* Finally, as expected, serial mediation analysis (PROCESS model 6; Hayes 2018) found that using more sensory language increased consumers’ belief that the influencer actually uses the product (*b* = 0.70, SE = 0.26, *t* = 2.70, *p* = .007), which made the influencer seem more authentic (*b* = 0.50, SE = 0.03, *t* = 17.87, *p* < .001), which increased both engagement (*b* = 0.55, SE = 0.10, *t* = 5.68, *p* < .001) and purchase likelihood (*b* = 0.51, SE = 0.08, *t* = 6.18, *p* < .001). In both cases, the resulting 95% confidence interval indicated significant indirect effects for both engagement (*b* = 0.18, 95% Confidence Interval (CI) = 0.05, 0.37) and purchase (*b* = 0.18, 95% CI = 0.04, 0.34) and including these mediators led the direct effect to be reduced to non-significance (with engagement: *b* = 0.34, 95% CI = – 0.06, 0.74; with purchase: *b* = 0.23, 95% CI = – 0.11, 0.57), indicating “full” mediation. [[8]](#footnote-9)

Discussion

Study 4 further demonstrates the effects of sensory language while also illustrating why these effects occur. First, as predicted, sensory language increased engagement and purchase likelihood. Consumers were more likely to like and comment on an influencer post, and buy the sponsored product, when the post used more sensory language.

Second, consistent with our theorizing, these effects were driven by perceived authenticity. Using sensory language made influencers seem like they really used the product, which made them seem more authentic, which increased engagement and purchase.

*Alternative explanations.* Ancillary measures also cast doubt on a number of alternative explanations. First, maybe language in the high sensory condition was somehow more memorable and that could drive the effects. To test this possibility, we adapted a two-item measure of memorability from Packard and Berger (2021, “memorable, “easily memorable”, *r* = .80). Casting the doubt on this alternative, however, memorability did not vary by condition (F(1, 289) = 0.04, *p* = .851).

Second, maybe the high sensory language somehow seemed more typical, and this drove the effect. To test this possibility, we used a three-item measure of linguistic typicality from Kronrod, Grinstein, and Wathieu (2012) (α = 0.85). Casting the doubt on this alternative, however, typicality did not vary by condition (F(1, 289) = 0.18, *p* = .674).

Third, as noted in Study 1, rather than being driven by sensory language, one could wonder whether the results are driven by linguistic concreteness. While Study 1 casts doubt on this possibility, to further explore it, we adapted Packard and Berger (2021)’s measure of linguistic concreteness (“How concrete was the influencer’s language? By concrete, we mean it used words that describe something in a more precise, specific, or clear manner. For example, the word "lizard" is more concrete than "creature", and "walk" is more concrete than "go"” 1 = “Not at all concrete”, 7 = “Very much concrete”). Casting the doubt on this alternative, however, concreteness was actually non-significantly higher in the low sensory language condition (Mhigh = 4.27 vs. Mlow 4.57, F(1, 289) = 2.71, *p* = .101) and did not mediate the effect of sensory language on either engagement (indirect effect = -0.06, 95% CI = -0.18, 0.01) or purchase likelihood (indirect effect = -0.07, 95% CI = -0.19, 0.01).

Fourth, perhaps more sensory language is more fluent, and this is driving the effect. To test this possibility, we adapted Lee and Aaker’s (2004) two-item measure of processing fluency (“How easy was it to process the influencer’s message?”, “How easy was it to understand the influencer’s message?”; *r* = .86). Casting the doubt on this alternative, however, fluency was actually marginally higher in the high sensory language condition (Mhigh = 5.73 vs. Mlow = 6.00, F(1, 289) = 3.83, *p* = .051) and did not mediate the effect of sensory language on either engagement (indirect effect = 0.03, 95% CI = -0.04, 0.12) or purchase likelihood (indirect effect = 0.01, 95% CI = -0.06, 0.09).

Taken together, these analyses cast doubt on the possibility that memorability, typicality, concreteness, or fluency are driving the effects.

**STUDY 5: PROCESS BY MODERATION**

Study 5 further tests the hypothesized process through both mediation and moderation. If sensory language increases engagement by making it seem like the influencer has actually used the product, as we suggest, then the effect should be mitigated in the presence of other usage cues. To test this possibility, in addition to manipulating sensory language, for half the participants, we add additional content suggesting the influencer has used the product. If our theorizing is correct, sensory language should have less of an effect when it already seems like the influencer commonly uses the product.

Method

Following the preregistration (https://aspredicted.org/L68\_Z12), the final sample consists of 292 people randomly assigned to condition in a 2 (sensory language: low vs. high) x 2 (product use: baseline [no use] vs. use) between-subjects design.

The baseline condition was the same as in Study 4. To make it clear that the influencer used the product, the product use condition added a brief sentence at the beginning of the post indicating the influencer’s prior use (i.e., “Here’s how I do it”).

Dependent variables and process measures were the same as in Study 4. Participants then completed a manipulation check, tests of alternative explanations (see below), the attention check used in Study 4, and demographics.

Results

*Engagement.* A main effect of sensory language (F(1, 290) = 8.80, *p* = .003) was qualified by the predicted sensory language X prior use interaction (F(3, 288) = 9.60, *p* = .019). Consistent with our prior experiments, in the baseline condition, sensory language increased engagement (Mhigh = 3.88, SDhigh = 2.19 vs Mlow= 2.47, SDlow = 2.21, F(1, 145) = 11.71, *p* = .001). Consistent with the hypothesized underlying role of prior experience, however, when the influencer mentioned she had previously used the product, this difference disappeared (Mhigh = 2.25, SDhigh = 1.77 vs Mlow= 2.06, SDlow = 1.95, F(1, 143) = 0.37, *p* = .543).

*Purchase Likelihood.* Similar effects were observed on purchase likelihood. A main effect of sensory language (F(1, 290) = 6.79, *p* = .010) was qualified by the predicted sensory language X prior use interaction (F(3, 288) = 8.80, *p* = .006). Consistent with our prior experiments, in the baseline condition, sensory language increased purchase likelihood (Mhigh = 4.47, SDhigh = 2.10 vs Mlow= 3.18, SDlow = 1.90, F(1, 145) = 12.51, *p* = .001). Consistent with the hypothesized underlying role of prior experience, however, when the influencer mentioned she had previously used the product, this difference disappeared (Mhigh = 2.97, SDhigh = 1.70 vs Mlow= 2.98, SDlow = 1.84, F(1, 143) = 0.01, *p* = .966).

*Actual use.* A 2X2 ANOVA revealed the predicted sensory language X prior use interaction (F(3, 288) = 3.46, *p* = .007). Consistent with Study 4, in the baseline condition sensory language increased perceived actual use (Mhigh = 5.11, SDhigh = 2.08 vs Mlow = 4.11, SDlow = 2.13, F(1, 145) = 6.57, *p* = .011). As expected, however, when the influencer mentioned she had previously used the product, this difference disappeared (Mhigh = 4.03, SDhigh = 1.99 vs Mlow= 4.41, SDlow = 1.97, F(1, 143) = 1.33, *p* = .251).

*Authenticity.* A 2X2 ANOVA revealed the predicted sensory language X prior use interaction (F(3, 288) = 3.59, *p* = .033). Consistent with Study 4, in the baseline condition sensory language increased perceived authenticity (Mhigh = 4.19, SDhigh = 1.81 vs Mlow= 3.50, SDlow = 1.55, F(1, 145) = 6.08, *p* = .015). As expected, however, when the influencer mentioned she had previously used the product, this difference disappeared (Mhigh = 3.40, SDhigh = 1.40 vs Mlow= 3.51, SDlow = 1.49, F(1, 143) = 0.19, *p* = .662).

*Serial moderated mediation.* A moderated serial mediation analysis (PROCESS model 83; Hayes 2018), incorporating product use as a moderator of sensory language’s effects on actual use and authenticity found significant moderated mediation on both engagement (*b* = – 0.47, 95% CI = – 0.90, – 0.11) and purchase (*b* = – 0.40, 95% CI = – 0.77, – 0.10). As in Study 4, in the baseline conditions the effect of sensory language was sequentially driven by actual use and authenticity on both engagement (*b* = 0.34, 95% CI = 0.06, 0.67) and purchase likelihood (*b* = 0.29, 95% CI = 0.05, 0.58). Sensory language made it seem like the influencer actually used the product (*b* = 0.99, SE = 0.36, *t* = 2.77, *p* = .006), which made them seem more authentic (*b* = 0.55, SE = 0.03, *t* = 19.78, *p* < .001), which increased both engagement (*b* = 0.63, SE = 0.10, *t* = 6.48, *p* < .001) and purchase likelihood (*b* = 0.53, SE = 0.09, *t* = 6.14, *p* < .001). When the influencer mentioned prior use, however, using more sensory language no longer impacted perceived use (*b* = – 0.38, SE = 0.36, *t* = -1.05, *p* = .293), and the serial mediation was no longer significant on either engagement (*b* = – 0.13, 95% CI = – 0.37, 0.10) or purchase likelihood (*b* = – 0.11, 95% CI = – 0.32, 0.08). [[9]](#footnote-10)

Discussion

Results of Study 5 underscore sensory language’s impact on engagement and purchase, and the hypothesized process underlying these effects. First, consistent with the first four studies, sensory language increased consumers engagement and purchase likelihood with influencer-generated content. Consumers were more likely to like and comment on an influencer post, and buy the sponsored product, when the post used more sensory language.

Second, the results reinforce the role of authenticity in driving these effects through both mediation and moderation. Using more sensory language made consumers think the influencer was more likely to have actually used the product, which made them think the influencer was more authentic, which increased both engagement and purchase likelihood. That said, consistent with the role of authenticity and prior use, when other cues made it clear the influencer used the product, sensory language’s effect was mitigated.

*Alternative explanations.* Ancillary analyses using the same measures as Study 4 also further test alternative explanations. Given we only expected sensory language to impact things in the baseline control condition, we focus the analyses there. There were no effects of condition or either memorability (F(1, 145) = 1.72, *p* = .192), typicality (F(1, 145) = 1.21, *p* = .274), or concreteness (F(1, 145) = 0.45, p = .504). Further, while fluency was marginally higher in the low sensory language condition (Mhigh = 5.70 vs. Mlow = 5.98, F(1, 145) = 3.72, *p* = .061), it did not mediate the effect of sensory language on either engagement (indirect effect = 0.05, 95% CI = -0.08, 0.28) or purchase likelihood (indirect effect = 0.04, 95% CI = -0.07, 0.27). Overall, these results cast further doubt on alternative explanations of the effect.

**GENERAL DISCUSSION**

While there has been a great deal of recent interest in influencer marketing, less is known about ways companies (and influencers) can increase the impact of this emerging marketing strategy. Further, consumers often question influencer’s authenticity, so influencers are striving to understand how to seem more authentic.

The present research investigates both these aspects, and whether the words influencers use can help. In particular, a multimethod investigation, combining field data and controlled experiments, demonstrates the impact of sensory language, and the process underlying these effects.

First, automated text analysis of thousands of Instagram and TikTok posts demonstrates that consumers engage more with content when influencers use more sensory language (studies 1 and 2). Experiments further underscore sensory language’s causal impact, illustrating that it boosts consumers’ willingness to engage with the content and purchase the sponsored product (studies 3, 4, and 5).

Second, results shed light on the underlying process through both mediation and moderation (studies 4 and 5). Sensory language increases engagement and purchase likelihood because it makes influencers seem like they actually use the product, which, in turn, makes them seem authentic (Study 4). Consistent with this notion, the effect of sensory is mitigated in the presence of other usage cues (Study 5).

Third, the studies cast doubt on a number of alternative explanations. The effects persisted in the field data even controlling for aspects of the influencer, text, visual (i.e., image or video), and other features that might otherwise explain these outcomes. Experimental evidence found that linguistic concreteness, processing fluency, memorability, and typicality did not explain the relationship between sensory language and engagement.

Contributions and Implications

This research makes several contributions. First, while research on engagement with influencer content has begun to explore things like disclosure, audience characteristics, and influencer characteristics, there has been less attention to how influencers talk, or the *language* they use. We contribute to this emerging area, demonstrating that sensory language can affect engagement and purchase intentions. Given that companies select influencers, in part, based on their engagement rates (Hughes et al. 2019; Leung et al. 2022a), boosting engagement is particularly important.

Second, we contribute to the literature on sensory marketing. While prior research has studied the effect of sensory cues like visual aesthetics, haptic elements, scent, or music, we complement this work by demonstrating how sensory language shapes consumer behavior. In particular, we explore the role of sensory language in influencer posts. In doing so, this work contributes to the growing literature on how subtle linguistic devices shape information processing, perceptions, and behavior (Pogacar et al. 2018).

Third, we contribute to literature on authenticity. While prior work has highlighted how brand authenticity affects sales and word-of-mouth (e.g., Becker et al. 2019; Morhart et al. 2015), we illustrate how it affects engagement in influencer marketing. Further, we further advance knowledge on the social function of language (Packard and Berger 2017, 2021; Schellekens, Verlegh, and Smidts 2010) by revealing that sensory language shapes recipients’ perceptions about the message sender. Specifically, we demonstrate that sensory language cues lead to inferences about product usage, and thus authenticity. In doing so, we deepen understanding on what drives influencer authenticity (Gerrath and Usrey 2021).

Fourth, these results also have important practical implications. More than 75% of brand marketers use influencer marketing and 68% of marketers plan to increase their influencer marketing spend (Influencer Marketing Hub 2022). Engaging consumers with sponsored content is often challenging, however, due to emerging concerns that influencers do not actually use of the products they endorse (Influence 2022). Our findings suggest that sensory language can help. As our experiments demonstrate, rather than saying “put it on the bread”, saying “spread it on the bread” instead should boost consumer perceptions that influencers actually use the product.

Limitations and Future Research

One interesting question is whether the effects of sensory language are moderated by parts of speech (e.g., verbs, adjectives, and nouns). In the two field studies, for example, we account for sensory language of verbs (e.g., caressing), adjectives (e.g., gently) and nouns (e.g., flavor), but one could argue that they may have differing effects. Given their respective linguistic roles, sensory verbs (e.g., rubbing, savoring, or hearing) may be more important for shaping perceptions of usage, while sensory adjectives and nouns may be more important for shaping perceptions about product attributes (e.g., smooth, crunchy, or silent). It is also important to remember that these relationships may depend on the context in which they were observed. Sensory verbs could be more important for products or services that are related to motion (e.g., running shoes, or travel services). Adjectives might have stronger effects for products that do not involve motion (e.g., an aromatic candle).

It would be also interesting to examine individual differences. People vary in their need for sensory or bodily experience (e.g., the need-for-touch scale; Peck and Childers 2003b) and one could argue that these differences might moderate the effects of sensory language. The need for sensory interaction might amplify sensory language’s effect by allowing consumers to acquire the sensory information needed for action. There may also be individual differences in other sensory inputs (e.g., taste, smell, vision, and hearing), and future research might investigate whether individuals who score higher on such scales are more affected by sensory language.

This article examined actual influencers, but many more interesting questions remain. Given the rise of metaverse, for example, marketers have begun to use virtual influencers (i.e., artificial Computer-Generated Imagery people with realistic human features) to promote products and services (Appel et al. 2020). Given they cannot actually use products, though, would sensory language still have benefits in this context?

Similarly, while we focused on language, future research could examine images. Prior research on sensory marketing (Cian, Krishna and Elder 2014; Elder and Krishna 2012) has shown how things like object orientation or dynamic imagery facilitate mental stimulation of interacting with the product. Influencers can post pictures showing the product, themselves with the product, or themselves using the product. Someone posting about a moisturizer, for example, could show themselves holding the bottle, or spreading it on their hands. The latter might be more likely to evoke the senses and thus have greater impact. Research is increasingly demonstrating the value of image data for marketing insights (Li and Xie 2020; Hartmann et al. 2021), and thus it is a fruitful area to explore further.

In conclusion, the current research demonstrates that a subtle shift in how influencers endorse products can have important consequences for consumer perceptions and behavior. In doing so, this work deepens our understanding of language effects in marketplace and on consumer behavior more broadly.

**REFERENCES**

Anglada-Tort, Manuel, Keller, Steve, Steffens, Jochen, and Müllensiefen, Daniel (2021), “The Impact of Source Effects on the Evaluation of Music for Advertising: Are there Differences in How Advertising Professionals and Consumers Judge Music?” *Journal of Advertising Research*, 61 (1), 95-109.

Akpinar, Ezgi and Berger, Jonah (2015), “Drivers of Cultural Success: The Case of Sensory Metaphors,” *Journal of Personality and Social Psychology*, 109 (1), 20.

Appel, Gil, Grewal, Lauren, Hadi, Rhonda, and Stephen, Andrew T. (2020), “The Future of Social Media in Marketing,” *Journal of the Academy of Marketing Science*, 48 (1), 79-95.

Audrezet, Alice, de Kerviler, Gwarlann, and Moulard, Julie G. (2020), “Authenticity Under Threat: When Social Media Influencers Need To Go Beyond Self-presentation,” *Journal of Business Research*,” 117, 557-569.

Barsalou, Lawrence W. (2008), “Grounded Cognition,” *Annual Review of Psychology*, 59(1), 617-645.

Bearden, William O., Lichtenstein, Donald R., and Teel, Jesse E. (1984), “Comparison Price, Coupon, and Brand Effects on Consumer Reactions to Retail Newspaper Advertisements,” *Journal of Retailing*, 60 (2), 11-36.

Becker, Maren, Wiegand, Nico, and Reinartz, Werner J. (2019), “Does it Pay To Be Real? Understanding Authenticity in TV Advertising,” *Journal of Marketing*, 83 (1), 24-50.

Berger, Jonah, Humphreys, Ashlee, Ludwig, Stephan, Moe, Wendy W., Netzer, Oded, and Schweidel, David A. (2020), “Uniting the Tribes: Using Text for Marketing Insight,” *Journal of Marketing*, 84 (1), 1-25.

Berger, Jonah, and Milkman, Katherine L. (2012), “What Makes Online Content Viral?” *Journal of Marketing Research*, 49 (2), 192-205.

Berger, Jonah, Rocklage, Matthew D., and Packard, Grant (2021), “Expression Modalities: How Speaking Versus Writing Shapes Word of Mouth,” *Journal of Consumer Research*.

Beverland, Michael B. and Farrelly, Francis J. (2010), “The Quest for Authenticity in Consumption: Consumers’ Purposive Choice of Authentic Cues to Shape Experienced Outcomes,” *Journal of Consumer Research*, 36 (5), 838-856.

Borah, Abhishek, Banerjee, Sourindra, Lin, Yu-Ting, Jain, Apurv, and Eisingerich, Andreas B. (2020), “Improvised Marketing Interventions in Social Media,” *Journal of Marketing*, 84 (2), 69-91.

Brown, Stephen, Kozinets, Robert V., and Sherry Jr, John F. (2003), “Teaching Old Brands New Tricks: Retro Branding and the Revival of Brand Meaning,” *Journal of Marketing*, 67 (3), 19-33.

Brysbaert, Marc, Warriner, Amy B., and Kuperman, Victor (2014), “Concreteness Ratings for 40 Thousand Generally Known English Word Lemmas,” *Behavior Research Methods*, 46 (3), 904-911.

Cian, Luca, Krishna, Aradhna, and Elder, Ryan S. (2014), “This Logo Moves Me: Dynamic Imagery from Static Images,” *Journal of Marketing Research*, 51 (2), 184-197.

De Vries, Lisette, Gensler, Sonja, and Leeflang, Peter S. (2012), “Popularity of Brand Posts on Brand Fan Pages: An Investigation of the Effects of Social Media Marketing,” *Journal of interactive marketing*, 26 (2), 83-91.

Elder, Ryan S., Schlosser, Ann E., Poor, Morgan, and Xu, Lidan (2017), “So Close I Can Almost Sense It: The Interplay Between Sensory Imagery and Psychological Distance,” *Journal of Consumer Research*, 44 (4), 877-894.

Elder, Ryan S. and Krishna, Aradhna (2010), “The Effects of Advertising Copy on Sensory Thoughts and Perceived Taste,” *Journal of Consumer Research*, 36 (5), 748-756.

Elder, Ryan S. and Krishna, Aradhna (2022), “A Review of Sensory Imagery for Consumer Psychology,” *Journal of Consumer Psychology*, 32 (2), 293-315.

Fast, Ethan, Chen, Binbin, and Bernstein, Michael S. (2016, May). Empath: Understanding Topic Signals in Large-scale Text. In *Proceedings of the 2016 CHI conference on human factors in computing systems* (pp. 4647-4657).

Finn, Adam (1988), “Print Ad Recognition Readership Scores: An Information Processing Perspective,” *Journal of Marketing Research*, 25 (2), 168-177.

Gerrath, Maximilian H.E.E. and Usrey, Bryan (2021), “The Impact of Influencer Motives and Commonness Perceptions on Follower Reactions Toward Incentivized Reviews,” *International Journal of Research in Marketing*, 38 (3), 531-548.

Hagtvedt, Henrik and Patrick, Vanessa M. (2008), “Art Infusion: The Influence of Visual Art on the Perception and Evaluation of Consumer Products,” *Journal of marketing research*, 45 (3), 379-389.

Hartmann, Jochen, Heitmann, Mark, Schamp, Christina, and Netzer, Oded (2021), “The Power of Brand Selfies,” *Journal of Marketing Research*, 58 (6), 1159-1177.

Hayes, Andrew F. (2018), “Partial, Conditional, and Moderated Moderated Mediation: Quantification, Inference, and Interpretation,” *Communication Monographs*, 85 (1), 4-40.

Herhausen, Dennis, Ludwig, Stephan, Grewal, Dhruv, Wulf, Jochen, and Schoegel, Marcus (2019), “Detecting, Preventing, and Mitigating Online Firestorms in Brand Communities,” *Journal of Marketing*, 83 (3), 1-21.

Hong, L. and Davison, B. D. (2010, July). Empirical Study of Topic Modeling in Twitter. In *Proceedings of the first workshop on social media analytics* (pp. 80-88).

Hoyer, Wayne D. and Stokburger-Sauer, Nicola E. (2012), “The Role of Aesthetic Taste in Consumer Behavior,” *Journal of the Academy of Marketing Science*, 40 (1), 167-180.

Hughes, Christian, Swaminathan, Vanitha, and Brooks, Gillian (2019), “Driving Brand Engagement Through Online Social Influencers: An empirical Investigation of Sponsored Blogging Campaigns,” *Journal of Marketing*, 83 (5), 78-96.

Influence (2022). “Ethics & Influencers: Exploring Influencers and the Ethics Behind Their Sharing”, (accessed April 15, 2022), https://influence.co/go/content/influencer-ethics.

Influencer Marketing Hub (2022). “The State of Influencer Marketing 2021: Benchmark Report”, (accessed April 22, 2022), https://influencermarketinghub.com/influencer-marketing-benchmark-report-2021/.

Jalali, Nima Y. and Papatla, Purushottam (2019), “Composing Tweets to Increase Retweets,” *International Journal of Research in Marketing*, 36 (4), 647-668.

Kanuri, Vamsi K., Chen, Yixing, and Sridhar, Shirhari (2018), “Scheduling Content on Social Media: Theory, Evidence, and Application,” *Journal of Marketing*, 82 (6), 89-108.

Karagür, Zeynep, Becker, Jan-Michael M., Klein, Kristina, and Edeling, Alexander (2022), “How, Why, and When Disclosure Type Matters for Influencer Marketing,” *International Journal of Research in Marketing*, 39 (2), 313-335.

Klostermann, Jan, Plumeyer, Anja, Böger, Daniel, and Decker, Reinhold (2018), “Extracting Brand Information From Social Networks: Integrating Image, Text, and Social Tagging Data,” *International Journal of Research in Marketing*, 35 (4), 538-556.

Krishna, Aradhna (2012), “An Integrative Review of Sensory Marketing: Engaging the Senses to Affect Perception, Judgment and Behavior,” *Journal of Consumer Psychology*, 22 (3), 332-351.

Krishna, Aradhna, Cian, Luca, and Sokolova, Tatiana (2016), “The Power of Sensory Marketing in Advertising,” *Current Opinion in Psychology*, 10, 142-147.

Krishna, Aradhna, Lwin, May O., and Morrin, Maureen (2010), “Product Scent and Memory,” *Journal of Consumer Research*, 37 (1), 57-67.

Krishna, Aradhna and Morrin, Maureen (2008), “Does Touch Affect Taste? The Perceptual Transfer of Product Container Haptic Cues,” *Journal of Consumer Research*, 34 (6), 807-818.

Krishna, Aradhna and Schwarz, Norbert (2014), “Sensory Marketing, Embodiment, and Grounded Cognition: A Review and Introduction,” *Journal of Consumer Psychology*, 24 (2), 159-168.

Kronrod, Ann, Grinstein, Amir, and Wathieu, Luc (2012), “Go Green! Should Environmental Messages Be So Assertive?” *Journal of Marketing*, 76 (1), 95-102.

Lee, Jeffrey K. and Junqué De Fortuny, Enric (2022), “Influencer-Generated Reference Groups,” *Journal of Consumer Research*, 49 (1), 25-45.

Lee, Angela Y. and Aaker, Jennifer L. (2004), “Bringing the Frame Into Focus: The Influence of Regulatory Fit on Processing Fluency and Persuasion,” *Journal of Personality and Social Psychology*, 86 (2), 205.

Lee, Dokyun, Hosanagar, Kartik, and Nair, Harikesh S. (2018), “Advertising Content and Consumer Engagement on Social Media: Evidence from Facebook. *Management Science*, 64 (11), 5105-5131.

Leung, Fine F., Gu, Flora F., and Palmatier, Robert W. (2022a), “Online Influencer Marketing,” *Journal of the Academy of Marketing Science*, 50 (2), 226-251.

Leung, Fine, F., Gu, Flora F., Li, Yiwei, Zhang, Jonathan Z., and Palmatier, Robert W. (2022b), “EXPRESS: Influencer Marketing Effectiveness,” *Journal of Marketing*, 00222429221102889.

Li, Yiyi and Xie, Ying (2020), “Is a Picture Worth a Thousand Words? An Empirical Study of Image Content and Social Media Engagement,” *Journal of Marketing Research*, 57 (1), 1-19.

Luangrath, Andrea W., Peck, Joann, and Barger, Victor A. (2017), “Textual Paralanguage and Its Implications for Marketing Communications,” *Journal of Consumer Psychology*, 27 (1), 98-107.

McShane, Lindsay, Pancer, Ethan, Poole, Maxwell, and Deng, Qi (2021), “Emoji, Playfulness, and Brand Engagement on Twitter,” *Journal of Interactive Marketing*, 53, 96-110.

Mehrotra, Rishabh, Sanner, Scott, Buntine, Wray, and Xie, Lexing (2013, July). Improving lda topic models for microblogs via tweet pooling and automatic labeling. In *Proceedings of the 36th international ACM SIGIR conference on Research and development in information retrieval* (pp. 889-892).

Meyers-Levy, Joan, Bublitz, Melissa G., and Peracchio, Laura A. (2009). The sounds of the marketplace. *Sensory marketing: Research on the sensuality of products*, 137-156.

Mohammad, Saif (2018, July). Obtaining reliable human ratings of valence, arousal, and dominance for 20,000 English words. In *Proceedings of the 56th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)* (pp. 174-184).

Moore, Sarah G. and Lafreniere, Katherine C. (2020), “How Online Word‐of‐mouth Impacts Receivers,” *Consumer Psychology Review*, 3 (1), 34-59.

Moore, Sarah G. (2012), “Some Things are Better Left Unsaid: How Word of Mouth Influences the Storyteller,” *Journal of Consumer Research*, 38 (6), 1140-54.

Morhart, Felicitas, Malär, Lucia, Guèvremont, Amèlie, Girardin, Florent, and Grohmann, Bianca (2015), “Brand Authenticity: An Integrative Framework and Measurement Scale,” *Journal of Consumer Psychology*, 25 (2), 200-218.

Morrin, Maureen and Ratneshwar, S. (2003), “Does It Make Sense to Use Scents to Enhance Brand Memory?” *Journal of Marketing Research*, 40 (1), 10-25.

Nunes, Joseph C., Ordanini, Andrea, and Giambastiani, Gaia (2021), “The Concept of Authenticity: What It Means to Consumers,” *Journal of Marketing*, 85 (4), 1-20.

Packard, Grant and Berger, Jonah (2017), “How Language Shapes Word of Mouth’s Impact,” *Journal of Marketing Research*, 54 (4), 572-588.

Packard, Grant and Berger, Jonah (2021), “How Concrete Language Shapes Customer Satisfaction,” *Journal of Consumer Research*, 47 (5), 787-806.

Pancer, Ethan, Chandler, Vincent, Poole, Maxwell, and Noseworthy, Theodore J. (2019), “How Readability Shapes Social Media Engagement,” *Journal of Consumer Psychology*, 29 (2), 262-270.

Peck, Joann and Childers, Terry L. (2003a), “To Have and To Hold: The Influence of Haptic Information on Product Judgments,” *Journal of Marketing*, 67 (2), 35-48.

Peck, Joann and Childers, Terry L. (2003b), “Individual Differences in Haptic Information Processing: The “need for touch” scale,” *Journal of Consumer Research*, 30, (3), 430–442.

Peck, Joann and Wiggins, Jennifer (2006),” It Just Feels Good: Customers’ Affective Response to Touch and Its Influence on Persuasion,” *Journal of Marketing*, 70 (4), 56-69.

Pennebaker, James W., Boyd, Ryan L., Jordan, Kayla, and Blackburn, Kate (2015). *The development and psychometric properties of LIWC2015*.

Petrin, Amil and Train, Kenneth (2010), “A Control Function Approach to Endogeneity in Consumer Choice Models,” *Journal of Marketing Research*, 47 (1), 3-13.

Pogacar, Ruth, Shrum, L. J., and Lowrey, Tina M. (2018), “The Effects of Linguistic Devices on Consumer Information Processing and Persuasion: A Language Complexity × Processing Mode Framework,” *Journal of Consumer Psychology*, 28 (4), 689-711.

Schellekens, Gaby A.C., Verlegh, Peeter W.J., and Smidts, Ale (2010), “Language Abstraction in Word of Mouth,” *Journal of Consumer Research*, 37 (2), 207-223.

Schwenzow, Jasper, Hartmann, Jochen, Schikowsky, Amos, and Heitmann, Mark (2021), “Understanding Videos at Scale: How to Extract Insights for Business Research,” *Journal of Business Research*, 123, 367-379.

Tellis, Gerard J., MacInnis, Deborah J., Tirunillai, Seshadri, and Zhang, Yanwei (2019), “What Drives Virality (Sharing) of Online Digital Content? The Critical Role of Information, Emotion, and Brand Prominence,” *Journal of Marketing*, 83 (4), 1-20.

Valsesia, Francesca, Proserpio, Davide, and Nunes, Joseph C. (2020), “The Positive Effect of Not Following Others on Social Media,” *Journal of Marketing Research*, 57 (6), 1152-1168.

Villarroel Ordenes, Francisco, Grewal, Dhruv, Ludwig, Stephan, De Ruyter, Ko, Mahr, Dominik., and Wetzels, Martin (2019), “Cutting Through Content Clutter: How Speech and Image Acts Drive Consumer Sharing of Social Media Brand Messages,” *Journal of Consumer Research*, 45 (5), 988-1012.

**WEB APPENDIX**

**STUDY 1**

## **TABLE A1**: SAMPLE DESCRIPTION

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Number of influencers** | **Number of Posts** | **Avg Post Likes (SD)** | **Avg Post Comments (SD)** |
| Beauty | 69 | 1,228 | 3,351 (5,764) | 98 (132) |
| Fashion & Lifestyle  Food & Drinks | 114  101 | 2,007  2,231 | 4,008 (4,893)  2,709 (4,005) | 119 (293)  131 (393) |
| Gaming | 42 | 351 | 2,208 (2,893) | 41 (55) |
| Travel & Tourism | 59 | 1,091 | 5,180 (6,542) | 116 (166) |

## **TABLE A2:** DESCRIPTIVE STATISTICS AND CORRELATIONS

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **M** | **SD** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** |
| 1. Engagement | 3,680 | 5,183 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Sensory  3. Follower Number  4. if Verified  5. # of Questions  6. # of Hashtags  7. Word Count  8. # of Emojis  9. Arousal  10. Complexity  11. Valence  12. # of Mentions  13. if Promotional Post  14. Image (vs. Video)  15. if Face Present  16. Joy  17. Anger  18. Sorrow  19. Surprise  20. Color Dominance  21. Color Saturation | 1.47  216,324  .33  .49  7.57  119.02  2.01  .43  10.94  4.72  1.99  .53  .89  .60  2.02  .60  .60  .61  .72  .22 | 1.55  210,502  .47  .84  8.52  72.84  2.85  .05  5.61  3.34  1.85  .50  .31  .49  2.08  .50  .50  .54  .21  .21 | .04  .64  .32  .06  -.15  -.01  .06  -.04  -.06  -.04  .02  -.05  -.03  .10  .04  .10  .10  .09  -.04  .02 | -.02  -.01  .10  .03  .54  .14  -.11  -.01  -.05  .06  .09  .04  -.09  -.07  -.09  -.09  -.09  -.07  -.01 | .54  .01  -.22  -.06  .01  -.01  -.07  -.05  -.05  -.09  -.19  .01  -.01  .02  .01  .02  -.01  -.01 | -.01  -.20  -.02  -.06  -.01  -.05  -.08  -.07  -.05  -.12  .02  -.01  .02  .02  .03  .01  -.02 | .04  .21  .08  .01  -.12  -.06  .08  .05  .02  .04  .05  .04  .05  .05  .01  .02 | .13  .06  -.03  .42  -.04  .16  .20  .01  -.16  -.15  -.16  -.16  -.16  .06  -.01 | .20  -.07  .02  -.12  .19  .23  .09  -.11  -.06  -.11  -.11  -.11  .08  -.01 | -.04  .13  -.02  .12  .11  -.01  -.03  -.01  -.03  -.03  -.03  .04  .04 | -.04  .13  .03  .01  -.02  .14  .09  .14  .13  .13  -.06  .03 | -.06  .15  .07  -.03  -.10  -.11  -.10  -.10  -.10  .03  .01 | -.03  .05  -.01  .05  .07  .04  .05  .04  .04  .01 | .12  -.01  .02  .02  .02  .03  .02  -.03  .02 | .03  -.04  -.04  -.04  -.03  -.04  -.04  -.02 | .25  .21  .24  .25  .22  -.06  -.02 | .80  .98  .99  .94  -.15  .02 | .77  .79  .72  -.09  .01 | .97  .93  -.16  .03 | .94  -.15  .02 | -.15  .03 | -.33 |

NOTE. — Fixed effects and topis are not included.

## **TABLE A3**: ROBUSTNESS CHECKS

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **(1)** | **(2)** | **(3)** | | **(4)** | | **(5)** | **(6)** | |
| IV: Sensory  Controls  *Influencer*  Follower Number  if Verified  Influencer FE  Category FE  *Text*  Topic discussed  # of Questions  # of Hashtags  Words Count  # of Emojis  Arousal  Complexity  Valence  # of Mentions  if Promotional Post | .016\*\*\* (.008)  1.144\*\*\* (.062)  –.256\*\*\* (.175)  Included  Included  Included  –.001\*\*\* (.006)  .012\*\*\* (.011)  .033\*\*\* (.009)  .013\*\*\* (.008)  –.005\*\*\* (.007)  .010\*\*\* (.008)  –.014\*\*\* (.007)  –.012\*\*\* (.007)  .002\*\*\* (.013) | .035\*\*\* (.009)  1.146\*\*\* (.062)  –.257\*\*\* (.174)  Included  Included  Included  –.001\*\*\* (.006)  .014\*\*\* (.011)  .020\*\*\* (.010)  .007\*\*\* (.008)  –.005\*\*\* (.007)  .009\*\*\* (.008)  –.013\*\*\* (.007)  –.013\*\*\* (.007)  .001\*\*\* (.013) | .019\*\*\* (.004)  1.137\*\*\* (.062)  –.242\*\*\* (.174)  Included  Included  Included  –.001\*\*\* (.006)  .010\*\*\* (.011)  .043\*\*\* (.009)  .007\*\*\* (.009)  –.005\*\*\* (.007)  .007\*\*\* (.008)  –.015\*\*\* (.007)  –.012\*\*\* (.007)  .002\*\*\* (.013) | 1.143\*\*\* (.062)  –.255\*\*\* (.175)  Included  Included  Included  –.001\*\*\* (.006)  .009\*\*\* (.011)  .041\*\*\* (.009)  .010\*\*\* (.009)  –.005\*\*\* (.007)  .009\*\*\* (.008)  –.013\*\*\* (.007)  –.012\*\*\* (.007)  .001\*\*\* (.013) | | .014\*\*\* (.004)  1.029\*\*\* (.061)  –.094\*\*\* (.183)  Included  Included  Included  .001\*\*\* (.007)  .023\*\*\* (.011)  .040\*\*\* (.009)  .022\*\*\* (.008)  –.004\*\*\* (.007)  .008\*\*\* (.008)  –.017\*\*\* (.008)  –.013\*\*\* (.007)  –.007\*\*\* (.014) | | | .098\*\*\* (.036)  1.084\*\*\* (.071)  –.226\*\*\* (.183)  Included  Included  Included  –.001\*\*\* (.007)  .017\*\*\* (.011)  .035\*\*\* (.009)  .016\*\*\* (.008)  –.001\*\*\* (.007)  .011\*\*\* (.008)  –.019\*\*\* (.007)  –.014\*\*\* (.007)  .002\*\*\* (.014) | |
| *Image* |  |  |  |  | |  | | |  | |
| Image (vs. Video) | .398\*\*\* (.023) | .400\*\*\* (.023) | .399\*\*\* (.023) | .399\*\*\* (.023) | | .461\*\*\* (.024) | | | .399\*\*\* (.024) | |
| if Face Present | .146\*\*\* (.129) | .152\*\*\* (.129) | .138\*\*\* (.128) | .133\*\*\* (.129) | | .084\*\*\* (.134) | | | .139\*\*\* (.132) | |
| Joy | –.026\*\*\* (.011) | –.026\*\*\* (.011) | –.025\*\*\* (.011) | –.027\*\*\* (.011) | | –.019\*\*\* (.011) | | | –.025\*\*\* (.011) | |
| Anger | –.004\*\*\* (.033) | –.003\*\*\* (.033) | –.001\*\*\* (.033) | –.002\*\*\* (.033) | | .001\*\*\* (.034) | | | –.022\*\*\* (.036) | |
| Sorrow | .006\*\*\* (.050) | .003\*\*\* (.050) | .006\*\*\* (.050) | .011\*\*\* (.050) | | .021\*\*\* (.053) | | | .012\*\*\* (.051) | |
| Surprise  Color Dominance  Color Saturation  *Concreteness*  *Endogeneity Correction* | –.039\*\*\* (.018)  –.005\*\*\* (.006)  –.025\*\*\* (.006) | –.040\*\*\* (.018)  –.005\*\*\* (.006)  –.025\*\*\* (.006) | –.039\*\*\* (.018)  –.005\*\*\* (.006)  –.024\*\*\* (.006)  –.013\*\*\* (.010) | –.039\*\*\* (.018)  –.005\*\*\* (.006)  –.025\*\*\* (.006)  –.007\*\*\* (.010) | | –.028\*\*\* (.019)  –.007\*\*\* (.007)  –.021\*\*\* (.007) | | | –.028\*\*\* (.018)  –.005\*\*\* (.007)  –.021\*\*\* (.006)    Included | |
| Intercept | 8.046\*\*\* (.193) | 8.048\*\*\* (.192) | 8.005\*\*\* (.193) | 8.043\*\*\* (.193) | | 7.975\*\*\* (.202) | | | 7.860\*\*\* (.216) | |
| N | 6,908\*\* \*\*\*\*\*\* | 6,908\*\* \*\*\*\*\*\* | 6,908\*\* \*\*\*\*\*\* | 6,908\*\* \*\*\*\*\*\* | | 6,908\*\* \*\*\*\*\*\* | | | 6,523\*\* \*\*\*\*\*\* | |

\**p* < .05, \*\**p* <. 01

NOTE. — Standard errors are shown in parentheses. Fixed effects for year, month, weekday, and time of the day are included. We do not report coefficients for fixed effects and topics for parsimony.

Lexicon Augmented with Emojis

Using textual paralanguage elements (e.g., emojis) is increasingly prominent in social media, and online communicators may employ emojis as a shorthand to express sensory experience with the depicted content (e.g., “👫” expresses bodily touch; Luangrath, Peck, and Barger 2017). Thus, to have a more granular and accurate representation of sensory language, we augmented the existing LIWC perceptual lexicon by including emojis. We accounted for that with the Full Emoji List (available at <https://unicode.org/emoji/charts/full-emoji-list.html>), which provides a list of 3,570 emoji characters and sequences. Specifically, this list associates each emoji with a description (e.g., “😋”: face savoring food). Whenever a word of the LIWC perceptual lexicon appeared in the emoji description (e.g., “savor\*” in the previous example), we regarded that emoji as a sensory one, and included it into the lexicon. After completing this process, the final dictionary consisted of 433 words and 1,111 unique emojis. [[10]](#footnote-11)

Addressing Endogeneity

The level of sensory influencers use may depend on many factors, such as what they are sponsoring or other content characteristics. Consequently, the “observed” sensory level decision may not be random and there could be variables that impact the influencers’ sensory decision that are unobserved or not available in the dataset leading to potential endogeneity. We accounted for a learning effect by including engagementt-1 in the predictor set. If endogeneity from a carryover effect biases our parameter estimates, this variable would increase the engagement of posts.

In addition to carry over effects on engagement, influencers can adjust their content based on exogenous factors or posting characteristics in a preceding post. To accommodate such a potential source of endogeneity, we adopted a control function (CF) approach (Petrin and Train 2010), already used in marketing research (Kumar, Choi, and Greene 2017; George, Kumar, and Grewal 2013; Rutz and Watson 2019). The correlation between the endogenous variable and unobserved (omitted) variables is the cause for endogeneity. Thus, the idea behind the CF approach is to derive the part of the endogenous variable that depends on the unobserved variables in the first-stage regression, and then include fitted residuals into the main response function in the second stage. In doing so, the fitted residuals capture the omitted variables that make our focal variable sensory endogenous. By including this term in the main response function, we can control for endogeneity, and obtain correct(ed) estimates of the coefficients (Imbens and Wooldridge 2007).

We applied the control function sequentially. In the first stage, we regressed sensory on the lagged form of sensory (Sensory(t-1)), and an additional instrument, that is the Product Category. The rationale for including this instrument is the following. Prior research (Krishna 2012) and field data observation suggest that influencers can employ a different degree of sensory in language depending on which product/service they are sponsoring. It is reasonable to expect, for example, that an influencer sponsoring a skincare product will use a greater sensory in language compared to an influencer sponsoring a tourist location. Given that our sample consists of five categories (beauty, fashion & lifestyle, gaming, food, travel), we accounted for such a variable as an instrument.

Thus, we express sensory as follows:

Sensory = β0 + β1 Sensory(t-1) + β2 Category + ε

After estimating the first-stage regression with OLS, we computed fitted residuals τ, and in the second stage we included them in the main response function.

Engagement = β1 Sensory + **X'** γ + τ + ε,

in which the dependent variable is the engagement a post generated at the time it was published; sensory is the focal variable; **X'** includes all the controls; τ indicates the endogeneity correction, and ε is the error term.

RESULTS FROM FIRST STAGE-REGRESSION

|  |  |
| --- | --- |
| DV: SENSORY | |
| Lagged Sensory | .095\*\*\* (.012) |
| Category |  |
| Food & Drink | –.645\*\*\* (.064) |
| Gaming | –.906\*\*\* (.112) |
| Lifestyle | –.761\*\*\* (.066) |
| Travel & Tourism | –.848\*\*\* (.076) |
| N | 6,523\*\*\* (.042) |
| R-square | .042\*\*\* (.042) |

\* *p* < .05, \*\* *p* <. 01

NOTE. — Standard errors are shown in parentheses. Beauty is the

benchmark for Category.

Sensory in Spoken Language

Professionals transcribed the videos, and we measured sensory language in speeches using the same approach from the main analysis.

## **TABLE A4:** SENSORY LANGUAGE IN SPOKEN LANGUAGE

|  |  |
| --- | --- |
| IV: Sensory  Controls  *Influencer*  Follower Number  if Verified  Influencer FE  Category FE  *Speech*  Topic discussed  if Present  # of Questions  Words Count  Arousal  Complexity  Valence  # of Mentions  if Promotional Post | .156\*\*\* (.070)  1.548\*\*\* (.307)  –.673\*\*\* (.173)  Included  Included  Included  –.732\*\*\* (.557)  .046\*\*\* (.046)  –.051\*\*\* (.102)  .320\*\*\* (.289)  .130\*\*\* (.076)  .052\*\*\* (.043)  –.252\*\*\* (.134)  –.005\*\*\* (.097) |
| *Image* |  |
| if Face Present | –.404\*\*\* (.211) |
| Joy | –.007\*\*\* (.058) |
| Anger | .136\*\*\* (.116) |
| Sorrow | .003\*\*\* (.050) |
| Surprise  Color Dominance  Color Saturation | .004\*\*\* (.038)  –.043\*\*\* (.026)  –.001\*\*\* (.024) |
| Intercept | 10.607\*\*\* (.659) |
| N | 742\*\* \*\*\*\*\*\* |

\* *p* < .05, \*\* *p* <. 01

NOTE. — Standard errors are shown in parentheses. Fixed effects for year,

month, weekday, and time of the day are included. We do not report coefficients

for fixed effects and topics for parsimony.

**STUDY 2**

## **TABLE A5**: SAMPLE DESCRIPTION

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Number of influencers** | **Number of Posts** | **Avg Post Likes (SD)** | **Avg Post Comments (SD)** |
| Beauty | 68 | 183 | 86,626 (215,086) | 782 (5,894) |
| Fashion & Lifestyle  Food & Drinks | 139  48 | 333  101 | 144,505 (488,272)  196,201 (759,171) | 1,970 (12,553)  6,162 (47,373) |
| Gaming | 12 | 31 | 203,719 (462,749) | 3,043 (7,350) |
| Travel & Tourism | 5 | 6 | 42,316 (70,919) | 168 (191) |

## **TABLE A6**: DESCRIPTIVE STATISTICS AND CORRELATIONS

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **M** | **SD** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** |
| 1. Engagement | 139,922 | 500,260 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Sensory  3. Follower Number  4. if Present  5. # of Questions  6. Word Count  7. Arousal  8. Complexity  9. Valence  10. # of Mentions  11. if Promotional Post  12. if Face Present  13. Joy  14. Anger  15. Sorrow  16. Surprise  17. Color Dominance  18. Color Saturation | 1.91  5,725,121  .53  .62  59.30  .23  6.96  2.67  .48  .15  .49  .30  .07  .16  .05  .69  .57 | 2.76  14,700,000  .50  1.49  71.51  .33  8.00  4.40  .50  .36  .50  .21  .07  .11  .07  .09  .07 | .03  .89  .05  .03  .01  .03  -.01  .01  .04  .01  .03  .09  -.02  -.05  -.03  .03  .03 | -.02  .61  .12  .78  .58  .50  .29  .64  .22  -.03  -.15  .04  .01  .13  .07  -.01 | .05 -.01  .01  .04  .02  .01  .05  .04  .03  .08 -.01  -.05  .03  .04  .02 | .38  .77  .97  .81  .56  .90  .39  .09  -.14  .08  .05  .14  -.05  .01 | .20  .38  .19  .20  .28  .14  .14 -.01  -.02  .11  -.03  .01  -.03 | .75  .64  .34  .80  .34  .03  -.16  .08  .01  .16  .02  .02 | .80  .58  .88  .39  .11  -.13  .09  .05  .13  -.06  .01 | .47  .79  .37  .01  -.10  .02  -.03  .16  -.06  .01 | .51  .23  .07  -.03  .05  .02  .03  -.06  .03 | .39  .04  -.12  .07  .03  .13  -.05  .04 | .05  -.04  .04  .02  .03  -.01  -.03 | .06  .08  .07  -.11  -.12  -.03 | -.30  -.42  -.24  -.04  -.01 | .02  .08  -.01  .01 | -.18  -.02  -.01 | .05  .04 | -.10 |

NOTE. — Fixed effects and topis are not included.

**TABLE A7:** SENSORY LANGUAGE AND ENGAGEMENT

|  |  |
| --- | --- |
| IV: Sensory  Controls  *Influencer*  Follower number  Influencer fixed effects  Category fixed effects  *Speech*  Present  Topic discussed  # of Questions  Word Count  Arousal  Complexity  Valence  # of Mentions  if Promotional Post | .181\*\*\* (.081)  .960\*\*\* (.119)  Included  Included  .785\*\*\* (.417)  Included  .048\*\*\* (.055)  –.181\*\*\* (.112)  –.010\*\*\* (.187)  –.472\*\*\* (.114)  .012\*\*\* (.068)  –.049\*\*\* (.253)  –.083\*\*\* (.161) |
| *Video* |  |
| Face present | –.055\*\*\* (.079) |
| Joy | .200\*\*\* (.050) |
| Anger | .026\*\*\* (.039) |
| Sorrow | .105\*\*\* (.047) |
| Surprise  Color Dominance  Color Saturation | –.002\*\*\* (.046)  .009\*\*\* (.038)  –.060\*\*\* (.034) |
| Intercept  N | 11.222\*\*\* (.488)  654\*\*\* (.192) |

\* *p* < .05, \*\* *p* <. 01

NOTE. — Standard errors are shown in parentheses. Fixed effects for year, month,

weekday, and time of the day are included. We do not report coefficients for fixed

effects and topics for parsimony.

**STUDY 3**

*Exclusion and Demographic Information*. Three hundred US Instagram users were recruited from Prolific. Following the preregistration (https://aspredicted.org/M2M\_WHV), participants (*n* = 34) were excluded if they failed an attention check asking them “what product is the influencer sponsoring?: dressing gown, suit, evening dress.” The final sample consisted of 266 participants (65.4% female; mean age = 34.6 years).

## Stimuli

|  |  |
| --- | --- |
| *High sensory* | *Low sensory* |
| **Immagine che contiene testo, interni, parete, pavimento  Descrizione generata automaticamente** | **Immagine che contiene testo, interni, parete, pavimento  Descrizione generata automaticamente** |

*Manipulation check*. Participants in the high sensory condition perceived the post to be higher in sensory language (Mhigh = 5.15, SDhigh = 1.24) than those in low sensory condition (Mlow = 4.25, SDlow = 1.54, F(1, 264) = 27.40, *p* < .001).

Given our suggestion that the effect is driven by perceptions that the influencer actually uses the product in their real life, one might wonder if including an image showing them using the product might mitigate the effect. While that is certainly possible, note that just because someone takes a photo of themselves using the product does not mean they actually use it in their real life. Indeed, most sponsored influencer posts show them using the product, so followers may still be skeptical that this actually means they use the product. Given most photos show influencers using the product, we did the same in our experiments.

**STUDY 4**

*Exclusion and Demographic Information*. Three hundred US Instagram users were recruited from Prolific. Following the preregistration (https://aspredicted.org/BXW\_KX), participants (*n* = 9) were excluded if they failed an attention check asking them “what product is the influencer sponsoring?: peanut butter, white yogurt, ice cream.” The final sample consisted of 291 participants (74.2% female; mean age = 35.2 years).

## Stimuli

|  |  |
| --- | --- |
| *High sensory* | *Low sensory* |
| **Immagine che contiene testo, persona  Descrizione generata automaticamente** | **Immagine che contiene testo, persona  Descrizione generata automaticamente** |

*Manipulation check*. Participants in the high sensory condition perceived the post to be higher in sensory language (Mhigh = 4.64, SDhigh = 1.51) than those in low sensory condition (Mlow = 3.20, SDlow = 1.53, F(1, 289) = 66.01, *p* < .001).

*Mediation with actual use.* Mediation analysis (PROCESS model 4; Hayes 2018) found that using more sensory language increases consumers’ belief that the influencer actually uses the product (*b* = 0.71, SE = 0.26, *t* = 2.73, *p* = .007), which increased both engagement (*b* = 0.59, SE = 0.05, *t* = 12.28, *p* < .001) and purchase likelihood (*b* = 0.55, SE = 0.04, *t* = 13.35, *p* < .001). In both cases, the resulting 95% confidence interval indicated significant indirect effects (Engagement: *b* = 0.42, 95% CI = 0.10, 0.74 andPurchase: *b* = 0.39, 95% CI = 0.11, 0.70) and including this mediator led the direct effect to be reduced to non-significance (Engagement: *b* = 0.36, 95% CI = – 0.06, 0.79 and Purchase: *b* = 0.24, 95% CI = – 0.13, 0.60), indicating “full” mediation.

*Mediation with authenticity.* Mediation analysis (PROCESS model 4; Hayes 2018) found that using more sensory language increases perceived authenticity (*b* = 0.40, SE = 0.18, *t* = 2.23, *p* = .026), which increased both engagement (*b* = 0.89, SE = 0.07, *t* = 12.78, *p* < .001) and purchase likelihood (*b* = 0.83, SE = 0.06, *t* = 13.84, *p* < .001). In both cases, the resulting 95% confidence interval indicated significant indirect effects (Engagement: *b* = 0.43, 95% CI = 0.01, 0.85 andPurchase: *b* = 0.33, 95% CI = 0.04, 0.65) and including this mediator led the direct effect to be reduced to non-significance (Engagement: *b* = 0.43, 95% CI = – 0.01, 0.85 and Purchase: *b* = 0.30, 95% CI = – 0.05, 0.66), indicating “full” mediation.

**STUDY 5**

*Exclusion and Demographic Information*. Three hundred US Instagram users were recruited from Prolific. Following the preregistration (https://aspredicted.org/L68\_Z12), participants (*n* = 8) were excluded if they failed an attention check asking them “what product is the influencer sponsoring?: peanut butter, white yogurt, ice cream.” The final sample consisted of 292 participants (61.6% female; mean age= 33.81 years).

*Manipulation check.* Participants in the high sensory condition perceived the post to be higher in sensory language (Mhigh = 4.74, SDhigh = 1.44) than those in low sensory condition (Mlow = 3.36, SDlow = 1.51, F(1, 290) = 62.10, *p* < .001).

*Moderated mediation with actual use.* A moderated mediation analysis (PROCESS model 7; Hayes 2018) incorporating product use as a moderator of sensory language’s effect on actual use showed a significant moderated mediation on both engagement (*b* = – 0.84; 95% CI = – 1.54; – 0.21) and purchase (*b* = – 0.81; 95% CI = – 1.47; – 0.19). As in Study 4, in the baseline condition the effect of sensory language on both engagement (*b* = 0.61, 95% CI = 0.13, 1.13) and purchase likelihood (*b* = 0.29, 95% CI = 0.05, 0.58) was driven by actual use. Sensory language made it seem like the influencer actually used the product (*b* = 0.99, SE = 0.36, *t* = 2.77, *p* = .006), which increased both engagement (*b* = 0.61, SE = 0.05, *t* = 12.59, *p* < .001) and purchase likelihood (*b* = 0.59, SE = 0.04, *t* = 13.72, *p* < .001). When the influencer mentioned a prior use, however, using more sensory language no longer impacted perceived use (*b* = – 0.38, SE = 0.36, *t* = – 1.05, *p* = .293), and the mediation was no longer significant on either engagement (*b* = – 0.23, 95% CI = – 0.64, 0.17) or purchase likelihood (*b* = – 0.22, 95% CI = – 0.63, 0.15).

*Moderated mediation with authenticity.* Incorporating product use as a moderator of sensory language’s effect on perceived authenticity shows a significant moderated mediation (PROCESS model 7; Hayes 2018) on both engagement (*b* = – 0.72; 95% CI = – 1.41, – 0.06) and purchase (*b* = – 0.66; 95% CI = – 1.33, – 0.06). As in Study 4, in the baseline condition the effect of sensory language on both engagement (*b* = 0.63, 95% CI = 0.11, 1.16) and purchase likelihood (*b* = 0.58, 95% CI = 0.10, 1.08) was driven by perceived authenticity. Sensory language increased perceptions that the influencer is authentic (*b* = 0.69, SE = 0.26, *t* = 2.64, *p* = .009), which increased both engagement (*b* = 0.91, SE = 0.06, *t* = 14.09, *p* < .001) and purchase likelihood (*b* = 0.84, SE = 0.06, *t* = 14.50, *p* < .001). When the influencer mentioned a prior use of the product, however, sensory language no longer impacted perceived authenticity (*b* = – 0.10, SE = 0.26, *t* = – 0.40, *p* = .686), and the mediation was not significant on either engagement (*b* = – 0.10, 95% CI = – 0.54, 0.33) or purchase likelihood (*b* = – 0.09, 95% CI = – 0.51, 0.29).

1. Available at https://www.rdocumentation.org/packages/emo/versions/0.0.0.9000. [↑](#footnote-ref-2)
2. About 11 percent of the visuals accompanying an Instagram post in our data were videos. Accordingly, we created a scraping tool to extract the first screenshot of an image that appears in each video. To account for the difference between images and videos, we dummy coded the post type variable (0 = video, 1 = image). [↑](#footnote-ref-3)
3. Available at: <https://pillow.readthedocs.io/en/stable/reference/Image.html>. [↑](#footnote-ref-4)
4. Note that analyzing the spoken language in Study 1, however, shows similar effects. Professionals transcribed the 742 Instagram videos in the Study 1 data set, and even in spoken language, posts with more sensory language received more engagement (*b* = .156; SE = .070; t = 2.22; *p* = .026; Table A4). [↑](#footnote-ref-5)
5. Approximately 60 percent of videos featured a speech. To account for the difference between a video with a speech and a video without, we dummy coded the speech presence variable (0 = no speech, 1 = speech). [↑](#footnote-ref-6)
6. Available at: https://github.com/JasperLS/Understanding\_Videos\_at\_Scale/blob/master/Understanding\_Videos\_at\_Scale.ipy. [↑](#footnote-ref-7)
7. Participants (N = 80) were shown one of the two stimuli and asked, “How sensory was the influencer’s language?” (1= not at all, 7 = very much). They were given a definition that read, “By sensory we mean a language that engages one or more senses (e.g., taste, sight, touch). For example, the word "rub" involves the senses more than "use", and "smooth" involves the senses more than "comfortable."” [↑](#footnote-ref-8)
8. When included by themselves, both actual use and authenticity individually mediate the effects (see Web Appendix). [↑](#footnote-ref-9)
9. Results also revealed moderated mediation with actual use and authenticity individually (see Web Appendix). [↑](#footnote-ref-10)
10. We identified 6,211 posts in our sample that include at least one sensory word or emoji. [↑](#footnote-ref-11)