# Does How and Who Matter in Encouraging Sustainable Behavior? : Focused on the Effect of Influencer Type and Content Modality

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**Introduction.** In recent years, the internet and social media have become major sources of information, even for sustainability. Consumers can easily access sustainability-related information presented by individuals, NGOs, and other consumer groups on the internet, including on social media channels (Kaplan & Haenlein, 2010; Saeed et al., 2019). With social media acting as an instance of mass media, previous studies have shown that social media usage is associated with consumers' purchasing behavior related to sustainable products (Saeed et al., 2019). However, still, less is known about what aspects of sustainability-related posts on social media may be more effective in encouraging consumers' sustainable behavior. Therefore, this study examines how the way sustainability-related content may affect consumers' sustainable behavior. Specifically, this study focuses on who (influencer type) and how (the modality of the content) of the sustainability-related content.

**Literature Review and Hypotheses.** One of the most influential factors of consumer behavior is social influence by peers or public figures (Johnstone & Lindh, 2017), which on social media are often referred to as "influencers". Previous studies on influencer marketing has reported the importance of network size in affecting users' responses (Kay et al., 2020; de Vierman et al., 2017). Depending on the network size, influencers can be categorized into micro-influencer or macro-influencer. A micro-influencer has anywhere from 10,000 to 1million followers while a mega-influencer has 1 million followers or more with a likely engagement of over 1 million (Boerman, 2020). The influence of influencers, whether it be from the micro or mega level, has the power to persuade consumers into developing certain attitudes and values (Flache et al., 2017). Although mega influencers have a larger number of followers compared to micro-influencers, previous studies have suggested that micro-influencers will have a more positive effect on a consumer's sustainable purchasing behavior compared to mega influencers due to the idea that they are more approachable and authentic, therefore more trustworthy (Park et al., 2021). When it comes to making long-term purchases that are not just trend-driven, micro-influencers who build trust and closer relationships with their audience may be able to benefit more (Park et al., 2021). Therefore, this study posits **H1.** Micro-influencer (vs. macro-influencer) will be perceived as more (a) authentic and (b) trustworthy**. H2.** Users viewing a micro-influencer's content (vs. macro-influencer's) will be more inclined to a) engage in sustainable practices and b) purchase more sustainably.

Within different social media platforms, content may be presented in different modalities, such as written text, moving video, or still pictures, which can have varying influences on consumers (Keller, 2001). For example, visual modality as compared to textual modality is concluded to be more effective at

receiving attention and interaction on social media platforms (Taecharungroj, 2017). However, this visual content can also be presented either as images or videos, which is likely to affect how users interpret the given message (Ashley & Tuten, 2015). Given that green apparel marketing on consumer behavior is more value-based as opposed to utilitarian-based, it may be more effective to combine functional/textual components within each of the visual components to be more impactful (Areni, 2003). Therefore, the following hypotheses are posited. **H3.** Users viewing video content (vs. image) will be more inclined to a) engage in sustainable practices and b) purchase more sustainably. Going further, the effect of content modality may be less prominent for micro-influencers that already exhibit higher authenticity and trust, and more prominent for macro-influencers. Thus, this study proposes **H4**. Influencer type and content modality interact to affect users' responses.

However, this effect may depend on an individual's level of involvement in sustainable practices. Eco-consciousness is defined as an individuals' interest in pro-environmental behaviors (Zelezny & Schultz, 2000). Those who are more eco-conscious are likely to pay attention to dynamic format of content that stimulates more immersive processing/experience. Therefore, the following hypothesis is posited: **H5.** Eco-consciousness moderates the relationships between content modality and users' responses.

**Methods**. A 2 (influencer type: micro x macro) x 2 (content modality: video x image) between-subject, online experiment was conducted. Four mock-up Instagram posts were created for the study. Each condition was randomly assigned to the participants. The influencer type was manipulated by the number of followers presented in a mock-up account profile (10 thousand vs. 6M) and the content modality was manipulated by how the information was presented, either in an image, static format or in a video, dynamic format. All other components, such as influencer name, hashtags, profile picture, etc. were kept consistent throughout the four conditions. All instruments were adopted from previous studies to ensure the validity and reliability of the measures. Measurement items were measured on a 7-point Likert scale and all measurements demonstrated acceptable internal reliability (Cronbach's alpha >.07). Adults living in the US (N=177) with the experience of using social media platforms were recruited from Amazon mTurk (Age: 32.36, 58% female, 84.7% Caucasian). After agreeing to the consent form, participants first viewed the assigned mock-up Instagram post, then were asked to answer sets of questions.

**Results and Discussion** Manipulation of influencer type ($t_{1,174}$=-2.72, $p$<0.01) and content modality ($t_{1,174}$=13.30, p<0.001) were successful. As proposed, a MANOVA revealed that influencer type had a main effect on users' responses ($F_{6,163}$=2.77 $p$<0.05; *Wilk's Lambda*=0.91). A follow-up ANOVA revealed that influencer type had a significant effect on the intention to engage in sustainable practices ($F_{1,175}$=6.83, $p$<0.05) and intention to purchase sustainable products ($F_{1,175}$=3.95, $p$<0.05). While authenticity was not statistically significant, a marginal effect of influencer type on Influencer trust was found as well ($F_{1,175}$=3.27, $p$=0.07). Specifically, the micro-influencer's post was more effective in promoting sustainable practices compared to the macro influencer's post, supporting H1b, H2, and H3.

On the other hand, content modality was not significant in predicting users' sustainable behavior ($p$>0.05) and no 2-way interaction effect of influencer type and content modality was found (p>0.05), rejecting H3 and H4. However, a 2-way interaction effect of content modality and eco-consciousness significantly predicted users' sustainable behavior ($F_{6,163}$=3.11 $p$<0.01; *Wilk's Lambda*=0.90), supporting H5. A follow-up ANOVA revealed that content modality and eco-consciousness significantly influenced perceived influencer authenticity ($F_{1,175}$=4.57, $p$<0.05). While those with high eco-consciousness (vs. low eco-consciousness) generally exhibited more positive responses toward the influencer, those with high eco-consciousness found the influencer to be more authentic when viewing the video content (vs. image) ($M_{image}$=6.01 $M_{video}$=6.23) whereas those with low eco-consciousness did so when viewing image content (vs. video content) ($M_{image}$=5.24, $M_{video}$=4.89). The results confirmed that influencer type significantly impacts the persuasion process regarding sustainability. Micro-influencers were generally more effective in persuading consumers than macro-influencers in the sustainability context. Additionally, results showed involvement level may be closely tied to the effectiveness of content modality, with high eco-conscious consumers more favorable toward the video content and low eco-conscious consumers more favorable toward image content. Future studies can examine whether consumers' age or type of message may influence the relationships.

**References**

Areni, C. S. (2003). The effects of structural and grammatical variables on persuasion: An elaboration likelihood model perspective. *Psychology & Marketing, 20*(4), 349-375.

Ashley, C., & Tuten, T. (2015). Creative strategies in social media marketing: An exploratory study of branded social content and consumer engagement. *Psychology & Marketing, 32*(1), 15-27.

Boerman, S. C. (2020). The effects of the standardized Instagram disclosure for micro-and meso-influencers. *Computers in Human Behavior, 103*, 199-207.

De Veirman, M., Cauberghe, V., and Hudders, L. (2017). Marketing through Instagram influencers: the impact of number of followers and product divergence on brand attitude, *International Journal of Advertising, 36* (5), 798-828.

Flache, A., Mäs, M., Feliciani, T., Chattoe-Brown, E., Deffuant, G., Huet, S., & Lorenz, J. (2017). Models of social influence: Towards the next frontiers. *Journal of Artificial Societies and Social Simulation, 20*(4). doi:10.18564/jasss.3521

Johnstone, L., & Lindh, C. (2017). The sustainability-age dilemma: A theory of (un)planned behaviour via influencers. *Journal of Consumer Behaviour, 17*(1). doi:10.1002/cb.1693

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business horizons, 53*(1), 59-68.

Kay, S., Mulcahy, R., & Parkinson, J. (2020). When less is more: the impact of macro and micro social media influencers' disclosure. *Journal of Marketing Management, 36(*3-4), 248-278.

Keller, K. L. (2001). Mastering the marketing communications mix: Micro and macro perspectives on integrated marketing communication programs. *Journal of Marketing Management, 17*(7-8), 819-847.

Park, J., Lee, J. M., Xiong, V. Y., Septianto, F., & Seo, Y. (2021). David and Goliath: When and Why Micro-Influencers Are More Persuasive Than Mega-Influencers. *Journal of Advertising, 50*(5), 584-602.

Saeed, M. A., Farooq, A., Kersten, W., & Ben Abdelaziz, S. I. (2019). Sustainable product purchase: does information about product sustainability on social media affect purchase behavior?. *Asian Journal of Sustainability and Social Responsibility, 4*(1), 1-18.

Taecharungroj, V. (2017). Starbucks' marketing communications strategy on Twitter. *Journal of Marketing Communications, 23*(6), 552-571.

Zelezny, L.C. and Schultz, P. (2000). Psychology of promoting environmentalism: promoting environmentalism. *Journal of Social Issues, 56*(3), 365-371.