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**Purpose** – This research assesses the effect of narrative transportation, portrayed action, and photographic style on the likelihood to comment on posted consumer photos.

**Design/methodology/approach** – Integrating visual semiotics and experiments, this research examines the influence of consumer photos on viewers' likelihood to comment on the visualised narrative. One pilot, three experimental, and a content analysis involve photos varying in their narrative perspective (selfie vs. elsie) and portrayed content (no product, no action, or directed action). We also test for the boundary condition of the role of the photographic style (snapshot, professional, and “parody” selfie) on the likelihood to comment on consumer photos.

**Findings** – Viewers are more likely to comment on photos displaying action. When these photos are selfies, the effect is exacerbated. The experience of narrative transportation—a feeling of entering a world evoked by the narrative—underlies this effect. However, if a snapshot style is used (primed or manipulated)—namely, the photographic style appears genuine, unconstructed, and natural—the superior effect of selfies disappears because of greater perceived silliness of the visualised narrative.

**Practical implications** – Managers should try to motivate consumers to take selfies portraying action if their aim is to encourage eWOM.

**Social implications** – Organisations can effectively use consumer photos portraying consumption for educational purpose (e.g. eating healthfully, reducing alcohol use).

**Originality/value** – This research links consumer photos and eWOM and extends the marketing literature on visual narratives, which is mainly focused on company- rather than user-generated content.

**Keywords** Narrative transportation, Selfie, Snapshot, eWOM

**Paper type** Research paper

## Introduction

The selfie seems to have touched every corner of the world. Consumers share information, opinions, and personal stories with others by taking and posting photos of themselves (i.e. selfies) on social media sites while engaged in product consumption. Users of the online photo-sharing service Instagram, for example, take and share photos of themselves with a Starbucks' product more than 10,000 times a day (Gupta, 2013). These selfies are considered more trustworthy than company-generated pictures (Dishman, 2013), and they generate electronic word-of-mouth (eWOM) on consumption decisions (Abrantes *et al.*, 2013). eWOM enables customers to share their opinions on goods and services with other consumers (Hennig-Thurau *et al.*, 2004). Social online activities, such as commenting on the posted content, convert the depicted product or service into sales (Berger, 2014). Top consumer brands (e.g. Burberry, West Elm) recognise the importance of consumer storytelling through images but have limited understanding of how visualised stories trigger eWOM (Dishman, 2013). Therefore, it is crucial for practitioners to characterise consumers' visual storytelling through consumer photos, thus shedding light on the interplay between visual story elements (i.e. the portrayed content and narrative perspective) and the effect on eWOM.

Thus far, although exceptions exist (Gannon and Prothero, 2016; Pounders *et al.*, 2016), scholars have paid scant attention to the influence of consumer photos. Marketing research in the domain of personal photography has mainly highlighted its representational role, namely the depiction of consumer life stories for consumer identity formation and maintenance (Holt, 1995). However, in contrast with company-generated pictures (e.g. print ads), user-generated photos are not constructed with an overtly persuasive aim in mind. Nonetheless, consumer photos, being reflections of peers' experiences, may have a

substantial effect on viewers not only in the way they present themselves but also in the way they consume products and communicate with peers (Belk, 2013).

We adopt an integrated research approach to fill this gap. Drawing insights from visual semiotics—the theory of signs and symbols that analyses how visual images communicate a message (Kress and van Leeuwen, 2006)—we characterise visual elements and their interplay in consumer photos. Next, we investigate our characterisation of visual elements in an experimental design. Following this integrated approach, we explain visual storytelling in consumer photos and therefore contribute to current theory on eWOM in three ways. First, we investigate the impact of portrayed content on consumer likelihood to comment on a photo. Specifically, we examine how portrayed actions trigger viewers' likelihood to comment on the visualised narrative. We show that viewers are more likely to comment when photos portray directed actions. Second, we examine the pivotal role of the narrative perspective for eWOM, by observing how character identification (i.e. the extent to which receivers understand the experience of the character by knowing and feeling the world in the same way; Escalas, 2004) influences consumer likelihood to comment on the photo. We analyse the impact of the selfie (i.e. self-taken photos) and elsie (i.e. a photo taken from an observer's perspective) on the relationship between portrayed actions and consumer likelihood to comment. We demonstrate that selfies portraying directed actions generate a higher likelihood to comment on visualised narratives. Third, we unveil a boundary condition by considering recent research on the snapshot style (Schroeder, 2012). Snapshot-like imagery is a contemporary photographic style that appears rushed, carelessly composed, taken almost by chance, unposed and natural (Schroeder, 2012). By analysing its moderating role on the relationship between consumer photos and likelihood to comment, we show that the cultivation of snapshot-like imagery harms the likelihood of commenting for selfies because of greater perceived silliness.

In sum, we ask and answer the following overall research question: Can visual semiotics help us understand the visualization of stories in consumer photos?

### **Conceptual development**

Consumer photos capturing peers' consumption experiences often encourage viewers to share their knowledge about and interest in the narrative portrayed in the photo, prompting eWOM (Trusov *et al.*, 2009). Viewers no longer act as passive receivers but are proactive promoters of conversations about the visualised narrative shared on social media sites. Commenting on consumer photos is a form of eWOM; it consists of consumer-generated messages posted on the Internet to express an opinion on a visualised narrative. Consumer opinions are critical in influencing decision-making processes (Bronner and Hoog, 2010), attitudes towards products (Marchand *et al.*, 2016), and sales (Chevalier and Mayzlin, 2006).

For effective eWOM, consumer photos need to embed a high degree of storytelling, which contributes to the richness of the visualisation (Mazzarol *et al.*, 2007). Storytelling aspects, such as the plot and the characters, play a crucial role in generating entertaining and conversable stories (McKee, 2003). Scholars in visual semiotics (Kress and van Leeuwen, 2006) maintain that for stories portrayed with images, the content and the narrative perspective provide necessary insight into the relationships between the storytelling aspects.

#### *Portrayed content in consumer photographs*

Consumer photographs may portray unfolding actions (also known as “narrative representations”, Kress and van Leeuwen 2006). Unlike portrait photographs (or “conceptual representations”), narrative representations generally present features of directionality, namely visual elements denoting actions towards something or someone. Photographs of someone eating a sandwich or a dog jumping to catch a ball are examples of narrative representations because of the impending transactional processes (e.g. movement) happening to and around the portrayed characters. These narrative representations influence other

consumers if they feel they entered the world evoked by the narrative (Van Laer *et al.*, 2014). Prior research shows that narrative transportation, or this feeling of entering the narrative world, depends on the perception of a causal relationship between portrayed characters and visual elements (Escalas, 2004).

Consumers use their imagination to connect visual elements in still images to perceive movement and understand narrative representations (Escalas, 2004; Senior *et al.*, 2000). Consumers thus generate vivid images of a story plot when narrative elements, such as directed actions, are portrayed (Green and Brock, 2000).

#### *The narrative perspective: selfie versus elsie*

In the context of posted consumer photos, the producer of consumer photos may be part of the visualised narrative. Selfies represent photos in which a producer's body parts (e.g. an arm, the face) are visible (Kedzior *et al.*, 2015). As such, selfies generally portray the producer as the main character, which should engender visualised narratives from the actor's perspective (also known as first-person stories). Conversely, "elsies" are more traditional photos in which the producer captures images of someone or something else, which thus engender visualised narratives from the observer's perspective (also known as third-person stories) (Van Laer and de Ruyter, 2010).

The perspective of the author or person telling the story plays an important role in character identification (Van Laer *et al.* 2013; Banerjee and Greene, 2012). In first-person stories, which are told from the actor's perspective, the story plot centres on the producer and his/her thoughts and personal experiences. In third-person stories, which are told from the observer's perspective, the story plot centres on represented participants, while the producer is a detached person who merely relates the story (Segal *et al.*, 1997). Previous studies on first- and third-person stories show contrasting findings. While some studies (e.g. Pourgivi *et al.*, 2003) show that first-person stories are more influential because of greater personified

experiences, other studies (e.g. Banerjee and Greene 2012) find no support for the superior identification with first-person narratives over third-person narratives.

### *The photographic style: snapshot versus “parody” selfie*

The photographic style may activate or prime concepts that help frame visual narratives and therefore exert an effect on eWOM. Social media sites (e.g. Facebook) have contributed to the widespread adoption of the “snapshot” style, a straightforward, generally unposed photograph of everyday life (Schroeder, 2012). A key aspect of the snapshot style is its “authentic” look, which derives from randomness and spontaneity through which visual elements are portrayed in photographs (Gannon and Prothero, 2016). Cultivation theorists (Lobinger and Brantner, 2015) would argue that frequent exposure to snapshot-like imagery leads viewers to interpret the portrayed action in visualised narratives as an authentic act. However, the popularity of the selfie and snapshot style has changed how viewers interpret and perceive photography—from a way to capture important life events to a means to share the everyday egocentric, common, and banal (Lobinger and Brantner, 2015). The photograph-as-selfie is changing from memorabilia to message. Despite the snapshot style being widely used by selfie-takers, evidence suggests that viewers have begun perceiving it as a silly way of conveying stories, especially when it depicts common activities of everyday life (Lobinger and Brantner, 2015).

Prior research shows that when consumers are in a frivolous context (e.g. a birthday party), they appreciate less aesthetic qualities of product packages because frivolity reduces aspects such as balance, harmony, and rationality (Raghubir and Greenleaf, 2006). In a consumer photo context, perceived silliness may be greater for snapshot selfies (than snapshot elses) because of the self-aggrandizing objectives of the selfie and the spur-of-the-moment of the snapshot photographic style, which, jointly, may negatively affect aesthetic



quality perceptions of the photo. Combining these two aspects gives viewers a feeling that what is captured in the photo may be of little value to them.

The snapshot style is a spontaneous and natural way of taking photographs (Schroeder, 2012). Snapshot selfies are genuine and unconstructed. Contrary to snapshot selfies, more constructed ways of taking selfies include adding graphic layers, or so-called selfie lenses. Selfie lenses are applied in real time using face detection software, which allows selfie-takers to watch live on screen how their poses affect the selfie. Similar to the professional style, selfie-takers spend a significant amount of time matching a certain pose to produce the best effect (e.g. open mouth for a rainbow-coloured waterfall to appear instead of one's tongue). In contrast with the snapshot style, selfies taken through such lenses are thoroughly thought-out. Selfie lenses allow consumers to play with their visual identities and nurture their parody selfie (Eagar and Dann, 2016) through deliberate contortion of facial features (Newton, 2016).

#### *Hypotheses development*

We suggest that eWOM on consumer photos depends on the portrayed action. Viewers may be more inclined to lose themselves in the visualised narrative with a directed than an undirected action. After being transported, viewers generally exhibit story-consistent responses and make it a topic of conversation (Ritson and Elliott, 1999). Thus, narrative transportation (Van Laer *et al.*, 2014) is stronger when there are representations of movement (Escalas, 2004). Transported consumers tend to evaluate a story plot as more desirable, thus forming positive attitudes towards the narrative (Green and Donahue, 2011) and a higher willingness to perform story-consistent actions (Dunlop *et al.*, 2010). In line with this, viewers exposed to a consumer photo portraying a directed action will be more likely to comment on the visualised narrative than on photos portraying an undirected or no action.

Thus:

*H1.* Viewers are more likely to comment on consumer photos portraying directed than undirected or no actions.

Selfies, as visualised first-person narratives, facilitate eWOM more than elsies because of greater personified experiences. Selfies function as a means of self-expression (Pounders *et al.* 2016) and are taken with a camera held at arm's length. Stylistic properties, such as background information and camera angle, are directed by the selfie-takers who must nestle themselves into the framework of the photo. Strong first-person narratives around the characters' personified experiences therefore characterise selfies. This should result in greater eWOM when the selfie displays directed actions. Conversely, elsies are characterised by a sense of openness to the viewer due to the absence of imaginary boundaries elicited by body constraints and self-expressive drivers. Producers act more as reporters of other represented participants' experiences rather than their own. This is similar to the ambiguity in the narrative interpretation of undirected or no action in selfies. Therefore, eWOM may occur less for selfies without directed action as well as for all elsies.

In other words, viewers exposed to consumer photos portraying first-person narratives will be more likely to comment on the visualised narrative than viewers exposed to third-person narratives. Therefore, the consumer photo (whether a selfie or an elsie) interacts with the portrayed content to determine the extent to which consumers are likely to comment on the visualised narrative. We expect a significant main effect of the portrayed content, a significant interaction effect between the portrayed content and narrative perspective, and a mediating effect of narrative transportation on the relationship between the portrayed content and the likelihood to comment. Thus:

*H2a.* The narrative perspective and portrayed action interact to determine viewers' likelihood to comment on consumer photos. Specifically, viewers are more likely to

comment on selfies portraying directed actions than consumer photos portraying undirected actions.

*H2b.* Narrative transportation mediates the effect of the portrayed action on viewers' likelihood to comment. Specifically, consumer photos portraying directed actions are more likely to have a stronger indirect effect than consumer photos portraying undirected actions.

When viewers think of selfies as snapshots rather than thoroughly thought-out and carefully composed, they are less likely to comment on the visualised narrative because of the silly look the snapshot style adds to the photo. Conversely, parody selfies, which are carefully thought-out, allow consumers to play with their visual identities and disclose their sense of humour by deliberate contortion of facial features (Eagar and Dann, 2016). In a similar vein, snapshot selfies are not centred on self-aggrandizing objectives but tell the story of someone other than the photographer. Thus, we expect the advantage of selfies over selfies in terms of eWOM to diminish when selfies (but not selfies) are snapshots (vs. more professional or parody selfies). A significant interaction effect between the narrative perspective and photographic style should thus materialise. Consumer photos portraying undirected actions are not considered; rather, directed actions trigger vivid imagery (Green and Brock, 2000) and translate into story-consistent responses (Dunlop *et al.*, 2010). We aim to show a boundary condition of this effect:

*H3a.* Viewers' likelihood to comment on selfies decreases when consumer photos are stylised as snapshots (vs. professional or parody selfies).

*H3b.* Perceived silliness of the visualised narrative mediates the effect between photographic style and likelihood to comment.

We test our research hypotheses in five studies: one pilot, three experimental studies, and a content analysis.

## **Pilot study**

### **Method**

Our aim in the pilot study is to demonstrate that viewers are more likely to comment on visualised narratives the closer the narrative representation is to a directed action (H1).

Participants were presented with three close-up photos of a young woman holding a bread roll in a within-subject design.

#### *Participants*

We recruited 109 participants from Amazon Mechanical Turk (MTurk) and asked them to take part in the study for compensation of US\$0.10. Nine participants did not complete the survey and were not included in the analysis, resulting in a final sample of 100 participants ( $M_{\text{age}}=35.31$ ,  $SD=12.15$ ; 60% female). Most participants (94%) had at least one social network account, which indicates MTurk participants represent a suitable sample for research on consumer photos and eWOM.

#### *Materials and procedure*

To operationalise the portrayed action directionality, we varied the distance of the bread roll from the woman's mouth; the closer the bread roll, the more obvious the direction of the action. We selected a bread roll as the product for the stimuli because it is a neutral (i.e. non-branded) and well-known product category. Figure 1 shows the stimuli used.

### **Insert Figure 1 here**

The display order of the photos was randomised. In a pre-test to the pilot study ( $N=39$ ), each photo was rated in terms of liking ("How much do you like this photograph?" 1="I do not like it at all", 7="I like it a lot"), perceived quality ("What is the quality of this picture?" 1="very bad quality", 7="very good quality"), and whether it was perceived as a selfie ("This photograph is a self-taken photograph"; 1="completely disagree", 4="I do not know," 7="completely agree"). Participants indicated that the three photos were not different

in terms of liking ( $F_{(2,38)}=2.58$ , NS) and perceived quality ( $F_{(2,38)}=1.16$ , NS). A one-sample t-test on the selfie item evaluated whether the means significantly differed from 4. The results show that participants did not know whether the three photos were selfies or elsies ( $t_{(13)}_{\text{Holding}}=-2.12$ , NS;  $t_{(11)}_{\text{PreparingToEat}}=-1.30$ , NS;  $t_{(12)}_{\text{Eating}}=-1.90$ , NS).

### *Measures*

After seeing the three photos, participants chose the photo they would most likely comment on. Finally, to assess the portrayed action manipulation, we adapted two items from Poor *et al.* (2013): “To what extent is the person in the photo intending to eat the bread?” (1=“no intention”, 7=“strong intention”) and “How close is the person in the photo in eating the bread?” (1=“not at all close”, 7=“very close”). Pearson correlations for the three photos were .54, .64 and .73 ( $p<.001$ ), respectively. We aggregated measures for further analyses.

### *Results*

#### *Manipulation check*

A one-way repeated measures ANOVA showed a significant effect of the perceived consumption intention across the three photos (Wilks’s  $\lambda=.27$ ,  $F_{(2,98)}=176.32$ ,  $p<.001$ ). Paired-sample t-tests revealed that perceived consumption intention significantly increased across the three conditions (i.e. preparing to eat vs. holding: mean difference=1.41,  $SE=.11$ ,  $p<.001$ ; eating vs. holding: mean difference=2.77,  $SE=.16$ ,  $p<.001$ ; eating vs. preparing to eat: mean difference=1.36,  $SE=.11$ ,  $p<.001$ ).

#### *Hypothesis test*

We conducted a related-samples Cochran’s test to evaluate differences for the three photos in terms of likelihood of commenting ( $\chi^2_{(2)}=46.16$ ,  $p<.001$ ). We conducted follow-up pairwise comparisons with Bonferroni correction using a McNemar test. The percentage of comment likelihood for the photo in which the woman is holding the bread (10%) was significantly lower than the comment likelihood for the photo showing the woman preparing to eat (26%)

(McNemar's  $\chi^2_{(1)}=6.25$ ,  $p<.05$ ) and eating the bread (64%) (McNemar's  $\chi^2_{(1)}=37.96$ ,  $p<.001$ ). The comment likelihood for the photo of the woman preparing to eat the bread (26%) was significantly lower than the comment likelihood for the photo of the woman eating the bread (64%) (McNemar's  $\chi^2_{(1)}=15.21$ ,  $p<.001$ ). These results suggest that viewers are more likely to comment on photos showing more directed actions, providing support for H1.

### *Discussion*

This pilot study demonstrates that viewers are more likely to comment on photos depicting more directed actions (H1). In Study 1, we focus on the moderating role of the narrative perspective (H2a). We also test the mediating role of narrative transportation as the psychological mechanism underlying the effects (H2b). Our focus is on consumer photos portraying actions directed to consumption. It could be argued that the photo portraying the woman holding the bread still depicts an action. If so, this would limit our theory to the directionality aspect of action instead of extending to actions per se. To test this potential limitation, we include a control (no product) condition in Study 1. If our theory is generalisable, this condition should not have a significantly lower comment likelihood than the undirected action of holding a product. We compare these two conditions with a clearly directed action.

## **Study 1**

### **Method**

We anticipate that the narrative perspective and portrayed consumer action interact to determine the extent to which viewers are transported into the visualised narrative, such that viewers experience the greatest narrative transportation when viewing directed-action selfies. Narrative transportation, in turn, positively affects viewers' likelihood to comment on the visualised narrative (H2). We use a different product to provide greater generalisability of our

findings. Participants were randomly assigned to one condition in a 2 (narrative perspective: selfie vs. elsie)  $\times$  3 (portrayed content: no product, no action, or directed action) between-subjects design.

### *Participants*

We recruited 514 participants from MTurk for compensation of US\$0.30–\$0.35 and asked them to take part in a web-based study. Sixteen participants did not complete the survey and were not included in the analysis, resulting in a final sample of 498 participants ( $M_{age}=31.03$ ,  $SD=9.59$ ; 40.2% female). Most of the participants (96.8%) had at least one social network account.

### *Materials and procedure*

Participants were told to imagine they were surfing on Facebook and saw a photo posted by one of their friends, Lisa. Participants in each condition were presented with portrait photos of a young woman. Participants in the no-action and directed-action condition saw photos in which Lisa held or drank a bottle of mineral water. We selected mineral water as the stimulus because it is a neutral and well-known product category. In the selfie condition, Lisa's face was placed around the centre of the frame, avoiding frontal poses in favour of a  $\frac{3}{4}$  left-rotated position (Bruno *et al.*, 2014) and the right arm holding the camera. In the elsie condition, photographic rules, such as the rule of thirds and the eye-centring principle, were followed. Both arms were clearly visible in the elsie. In both the selfie and elsie condition, Lisa's gaze was directed towards the camera and a neutral background was used. Figure 2 shows the selfie and elsie in the different study conditions.

**Insert Figure 2 here**

### *Measures*

After viewing the photo, participants rated their likelihood to comment on the photo (“How likely would you be to comment on the photo you just saw?” and “How likely would you be

to express your opinion on the photo you just saw?”  $r = .92$ ;  $p < .001$ ). To measure narrative transportation, we included 11 general items and four items specifically related to the visualised narrative (Green and Brock, 2000). We adapted the items’ formulations slightly to make them appropriate for responses to consumer photos ( $\alpha = .82$ ). Finally, we included manipulation checks for the narrative perspective and the portrayed action.

## **Results**

### *Manipulation checks*

Two items checked the narrative perspective manipulation, anchored by selfie/third person and self-taken photo/photo taken by someone else ( $r = .93$ ,  $p < .001$ ). A one-way ANOVA revealed a significant difference between the selfie and elsie condition ( $F_{(1,496)} = 43.23$ ,  $p < .001$ ). As expected, participants perceived the selfie as a self-taken photo ( $M = 3.24$ ,  $SD = 2.30$ ) and the elsie as a photo taken by a third person ( $M = 4.57$ ,  $SD = 2.21$ ).

To assess the directed action, we adapted two items from Poor *et al.* (2013): “To what extent did Lisa intend to perform an action while the photo was taken?” (1=“no intention”, 7=“strong intention”) and “How close was Lisa in fulfilling an action while the photo was taken?” (1=“not at all close”, 7=“very close”) ( $r = .76$ ,  $p < .001$ ). A one-way ANOVA revealed a significant difference among the no-product, no-action, and directed-action conditions ( $F_{(2,495)} = 22.20$ ,  $p < .001$ ). As expected, participants rated the directed-action condition as greater in consumption intent than the no-action condition (mean difference = 1.12,  $SD = .18$ ;  $p < .001$ ) and the no-product condition (mean difference = .94,  $SD = .17$ ;  $p < .001$ ). There was no significant difference between the no-product condition and the no-action condition (mean difference = .18,  $SD = .19$ ; NS).

### *Hypothesis test*

Using the likelihood to comment average measure, we conducted a two-way ANOVA with narrative perspective (selfie vs. elsie) and portrayed content (no product, no action, or



directed action) as between-subjects factors. The results revealed a non-significant main effect of the narrative perspective ( $F_{(1, 492)}=.22$ , NS) but a marginally significant effect of the portrayed content ( $F_{(2, 492)}=2.76$ ,  $p=.06$ ). The predicted narrative perspective  $\times$  portrayed content interaction was significant ( $F_{(2, 492)}=3.98$ ,  $p<.05$ ), indicating that the influence of the portrayed content on the likelihood to comment depended on the narrative perspective. Planned contrasts revealed that when the photograph was an elsie, the likelihood to comment did not differ among the three levels of the portrayed content ( $F_{(2, 492)}=.30$ , NS). Specifically, participants exposed to the no-product condition did not show a higher likelihood to comment than participants exposed to the no-action condition (mean difference=.01, SE=.33, NS) or participants exposed to the directed-action condition (mean difference=.24, SE=.33, NS). Participants exposed to the no-action condition did not show a higher likelihood to comment than participants exposed to the directed-action condition (mean difference =.22, SE=.36, NS). However, when the photograph was a selfie, viewer likelihood to comment significantly differed across the levels of the portrayed content ( $F_{(2, 492)}=6.82$ ,  $p<.01$ ). Specifically, participants exposed to the no-product condition showed a higher likelihood to comment than participants exposed to the no-action condition (mean difference=1.05, SE=.33,  $p<.01$ ). Unexpectedly, participants exposed to the no-product condition did not show a higher likelihood to comment than participants exposed to the directed-action condition (mean difference=-.01, SE=.33, NS). Consistent with H2a, participants exposed to the no-action condition showed a lower likelihood to comment than participants exposed to the directed-action condition (mean difference=1.06, SE=.33,  $p<.01$ ).

#### *Effect of the portrayed content on narrative transportation*

A one-way ANOVA revealed a significant effect of the portrayed content on narrative transportation ( $F_{(2, 497)}=5.59$ ,  $p<.01$ ). As predicted, planned contrasts showed no significant difference between the no-product and no-action condition ( $t_{(495)}=-1.48$ , NS), indicating that

participants are not more transported in the former ( $M=3.65$ ,  $SD=1.00$ ) than the latter ( $M=3.81$ ,  $SD=.95$ ) condition. However, there was a significant difference in transportation between the no-product and directed-action condition ( $t_{(495)}=-3.34$ ,  $p<.01$ ), indicating that participants are more transported in the latter ( $M=4.01$ ,  $SD=1.00$ ) than the former ( $M=3.65$ ,  $SD=1.00$ ) condition. There was also a marginally significant difference in transportation between the no-action and directed-action condition ( $t_{(495)}=-1.78$ ,  $p=.07$ ), indicating that participants are more transported in the latter ( $M=4.01$ ,  $SD=1.00$ ) than the former ( $M=3.81$ ,  $SD=.95$ ) condition.

### *Mediation*

To examine whether our mediating variable (narrative transportation) drives the relationship between our independent variable (portrayed action: 1=no product, 2=no action, 3=directed action) and our dependent variable (likelihood to comment) (H2b), we conducted a mediation analysis based on the approach and SPSS PROCESS macro (Hayes and Preacher, 2014) using Model 4 for multi-categorical variable analysis (10,000 bootstrap samples).

Specifically, we created dummy codes to represent comparisons between the no-action and no-product (D1) and directed-action and no-product (D2) conditions. The bootstrapping technique for conditional indirect effects indicated mediation, as the 95% confidence interval for narrative transportation excluded zero for the difference between the directed-action and no-product conditions (conditional indirect effect=.99, BootSE=.15; 95% CI: .20, .80), whereas the 95% confidence interval for narrative transportation included zero for the difference between the no-action and no-product conditions (conditional indirect effect=.22; BootSE=.15; 95% CI: -.08, .52), providing support for H2b.

### *Discussion*

The findings provide evidence for the moderating role of the narrative perspective. Selfies generate a higher likelihood to comment on the visualised narrative when directed actions are

portrayed in the photo. Viewers are more transported and thus have a higher likelihood to comment on the visualised narrative when exposed to consumer photos portraying a directed action rather than those portraying an undirected action.

The results show that directed actions have a positive effect on the likelihood to comment on the visualised narrative (see the pilot study) and selfies exert a positive effect on the link between directed actions and likelihood to comment on the visualised narrative (Study 1). In Study 2, we explore a boundary condition for this effect.

## **Study 2**

### **Method**

Our aim in this study is to find evidence of the moderating role of the photographic style (snapshot vs. professional) on the relationship between the narrative perspective (selfie vs. elsie) and the likelihood to comment on the photo (H3a). We focus on photos portraying directed actions because these are the most likely to be commented on according to our previous findings. We also check the generalisability of our findings for portrayed gender. Participants were randomly assigned to a 2 (narrative perspective: selfie vs. elsie)  $\times$  2 (priming: snapshot vs. professional) between-subjects design.

#### *Participants*

We recruited 116 students at a Dutch university in exchange for course credit and asked them to take part in the study. Eight participants did not complete the survey and were excluded from the analysis, resulting in a final sample of 108 participants ( $M_{\text{age}}=24.12$ ,  $SD=3.94$ ; 56.5% female). We recruited students from the Netherlands because we wanted to focus on beer consumption, which is particularly high among college students in Western European countries (Lorant *et al.*, 2013). Most of the participants in our sample (98.1%) had at least one social network account.

#### *Materials and procedure*

Participants were first told they would participate in two short, unrelated studies. They were randomly assigned to one condition. We decided to prime the photographic style for two reasons. First, because the snapshot style is multi-faceted, we were concerned that any manipulation would risk introducing confounding interaction effects. Second, snapshot features may be subtle and manifest solely at the subconscious level. The priming task was introduced as a survey about a Dutch photo gallery exhibition. Figure 3 shows the screenshots used for the priming of the photographic style.

### **Insert Figure 3 here**

Participants viewed six photos in each condition, all following the same style (either professional or snapshot) and chose which aspects they believed best described each photo (e.g. carelessly/carefully composed, natural/artificial). After the priming task, participants were introduced to the second part of the study. They were presented with a text asking them to imagine they were surfing their favourite social network site and saw a photograph of their friend, Marco. Participants next saw a photo of a young man drinking beer from a glass. Drinking alcohol is a consumption practice often portrayed in photos shared online. For example, a search on Iconosquare, an online tool for retrieving pictures shared on Instagram, produced 25,497,928 consumer photos when searching for #beer. To manipulate the narrative perspective, we adopted the same photographic rules as in Study 1.

#### *Measures*

After viewing the photo, participants indicated their likelihood to comment on the photo ( $r = .53$ ;  $p < .001$ ) using the same items as in Study 1. We also included a manipulation check for the narrative perspective.

### **Results**

#### *Manipulation checks*

The same two items as in Study 1 checked the narrative perspective manipulation ( $r=.86$ ,  $p<.001$ ). A one-way ANOVA revealed a significant difference between the selfie and elsie condition ( $F_{(1,106)}=34.75$ ,  $p<.001$ ). As expected, participants rated the selfie as a self-taken photo ( $M=2.31$ ,  $SD=1.81$ ) and the elsie as a photo taken by a third person ( $M=4.54$ ,  $SD=2.11$ ).

### *Hypothesis test*

Using the likelihood to comment average measure, we conducted a two-way ANOVA with the narrative perspective (selfie vs. elsie) and photographic style (snapshot vs. professional) as between-subjects factors. The results revealed a significant main effect for neither the narrative perspective ( $F_{(1,104)}=.01$ , NS) nor the photographic style ( $F_{(1, 104)}=.11$ , NS).

However, the predicted narrative perspective  $\times$  photographic style interaction was significant ( $F_{(1,104)}=5.01$ ,  $p<.05$ ), indicating that the influence of the narrative perspective on the likelihood to comment on the photo depended on the photographic style. Consistent with H3a, participants primed with the snapshot style were less likely to comment on the selfie ( $M=1.74$ ,  $SE=.90$ ) than the elsie ( $M=2.28$ ,  $SD=1.26$ ;  $F_{(1,104)}=2.75$ ,  $p=.05$ , one-sided).

Participants primed with the professional style were more likely to comment on the selfie ( $M=2.33$ ,  $SD=1.47$ ) than the elsie ( $M=1.84$ ,  $SD=.93$ ;  $F_{(1,104)}=2.75$ ,  $p=.07$ , one-sided).

### *Discussion*

The findings provide support for our hypothesis that the advantage in terms of viewer likelihood to comment on the visualised narrative for selfies over elsies disappears when they view a snapshot (vs. professional) photographic style (H3a). Viewers primed with the contemporary snapshot style are less likely to comment on a selfie portraying directed actions. The snapshot style thus seems to have a detrimental influence on selfies' eWOM effect. In Study 3, we show that this effect depends on the degree to which the snapshot style mixes perceived silliness with the egocentric motif of selfies.

The negative effect of snapshot selfies on likelihood to comment disappears when viewers perceive the photographic style as thoroughly thought-out. Unlike the professional style, which involves photography rules that mainly experts know and implement when taking photographs, selfies taken through lenses are popular among amateurs. Selfie lenses meet features of unnatural and constructed photographs, allowing consumers to play with their visual identities and nurture their parody selfie. In line with our reasoning, we expect parody selfies to exert a more positive effect on the likelihood to comment than snapshot selfies.

### **Study 3**

We predict that people are less likely to comment on snapshot selfies because of greater perceived silliness. By focusing on selfies only, we test this hypothesis and provide greater generalisability of our findings by using a type of action that, albeit directed, is not oriented to consumption (i.e. hand wave). Participants were randomly assigned to one of two between-subjects conditions (photographic style: snapshot vs. parody selfie).

### **Method**

#### *Participants*

We recruited 80 participants ( $M_{age}=36.09$ ,  $SD=12.00$ ; 42.5% female) from MTurk for compensation of US\$0.35 and asked them to take part in a web-based study. Most the participants in our sample (97.5%) had at least one social network account.

#### *Materials and procedure*

Participants were told to imagine they were surfing on Facebook and saw a photograph. Participants were then randomly assigned to one of two conditions (snapshot selfie vs. parody selfie). They were presented with a selfie taken by a young woman with a selfie stick. We opted for a selfie stick for two reasons. First, it is popular among selfie-takers; sales of the selfie-stick device have gone up 3,000% since 2014 (Goldberg, 2014). Second, it allows

taking selfies from a bird's-eye view—a different perspective that includes the surroundings. The photo was of a young woman standing in front of a neutral background and gazing directly into the camera. We manipulated the photographic style by using a blurred selfie of a young woman for the snapshot style. We used the same, albeit unblurred, selfie and a selfie lens, which added a magician's hat and bunny ears to the woman's face for the parody selfie. Figure 4 shows the two photographs used.

### **Insert Figure 4 here**

#### *Measures*

After viewing the selfie, participants rated the extent to which they perceived the photograph as silly. We included five items of the silly subscale (part of the Playfulness scale, Glynn and Webster, 1992) and measured them as semantic differentials (silly/sensible, childlike/mature, whimsical/practical, frivolous/productive, unpredictable/predictable;  $\alpha=.88$ ). Next, participants rated their likelihood to comment on the selfie using the same items as in Study 1 ( $r=.85$ ,  $p<.001$ ). We also included two items to control for liking ("How do you evaluate the photograph you just saw?" 1="very bad", 7="very good"; 1="very unfavourable", 7="very favourable";  $r=.86$ ,  $p<.001$ ) and perceived quality ("How do you evaluate the photograph you just saw?" 1="very bad quality", 7="very good quality"; 1="very bad resolution", 7="very good resolution";  $r=.78$ ,  $p<.001$ ) of the selfie. Finally, we included three items for the manipulation checks of the photographic style ("Please rate the extent to which the picture looks genuine/posed/constructed"; 1="not at all", 7="very much";  $r=.70$ ,  $p<.001$ ) as well as demographics.

#### **Results**

##### *Manipulation checks*

The results showed no difference in terms of liking ( $F_{(1,78)}=.19$ , NS) and perceived quality ( $F_{(1,78)}=.45$ , NS) of the selfies. An independent-sample t-test revealed a significant difference

between the snapshot and parody selfie for the photographic style manipulation ( $t_{(78)}=3.89$ ,  $p<.001$ ). As expected, participants perceived the snapshot selfie as showing more snapshot features ( $M=4.02$ ,  $SD=1.29$ ) than the parody selfie ( $M=5.13$ ,  $SD=1.20$ ).

### *Hypothesis test*

We find an effect of the photographic style on the likelihood to comment. Specifically, an independent-sample t-test revealed a significant effect for the photographic style ( $t_{(78)}=2.36$ ,  $p<.05$ ), indicating that the snapshot selfie ( $M=2.26$ ,  $SD=1.47$ ) is less likely to be commented on than the parody selfie ( $M=3.09$ ,  $SD=1.69$ ).

### *Mediation*

To examine whether our mediating variable (perceived silliness) drives the relationship between our independent variable (the photographic style: snapshot style=1, parody style=0) and our dependent variable (the likelihood to comment), we conducted a mediation analysis based on the approach and SPSS PROCESS macro (Preacher and Hayes, 2008) using Model 4 (10,000 bootstrap samples). The main effect of perceived silliness was positive ( $\beta=.49$ ,  $p<.01$ ), indicating that participants perceived the snapshot style as sillier than the parody style. The bootstrapping technique for conditional indirect effects indicated mediation, as the 95% confidence interval for perceived silliness excluded zero (conditional indirect effect=.62, BootSE=.19; 95% CI: .31, 1.04), providing support for H3b.

### *Discussion*

The findings provide further evidence for the negative effect of snapshot selfies on the likelihood to comment (H3a). Portraying an undirected action (i.e. a hand wave) and using a different type of manipulation for a carefully composed and artificial selfie (i.e. a selfie lens), we show that the negative effect of snapshot selfies on likelihood to comment persists. We also provide empirical evidence that greater perceived silliness mediates the relationship between snapshot selfies and likelihood to comment (H3b). In the next section, we provide



evidence that the snapshot style and selfies are independent constructs in an externally valid context.

## **Content analysis of consumer photos**

### *Data*

We retrieved 99 consumer photographs from the Coca-Cola Facebook profile. Massive online social activities happen on Coca-Cola's profile page (e.g. it currently gathers more than 79 million likes), making this brand suitable for research on consumer photos and eWOM. We only retrieved photos posted the same day, to avoid the influence of photo "age".

### *Key measures and coding*

Independent coders ( $N=60$ ,  $M_{age}=23.60$ ,  $SD=1.71$ , 65% female) classified the consumer photos on the relevant variables. To avoid fatigue, we gave each coder 20 photographs. Coders were blind to our hypotheses. First, we asked them to categorise the photographs in terms of the narrative perspective (selfie vs. elsie) and portrayed content ("This photograph portrays a consumption-related action", "This photograph portrays a non-consumption-related action", "Both consumption- and non-consumption-related actions are portrayed", "No actions are portrayed"). Second, coders evaluated the snapshot style ("Please rate the extent to which this photograph looks genuine" and "Please rate the extent to which this photograph looks constructed"; 1="not at all", 7="very much"). Coders generally agreed on which consumer photographs were more genuine or more constructed ( $\alpha=.61$  and  $.79$ , respectively). We conducted additional analyses on categories for which there was most consensus. Table I shows the proportions and descriptive statistics of the coding output.

### **Insert Table I here**

### *Results*

There is a negative correlation between the genuine and constructed measurement scales ( $r = -.314$ ,  $p < .01$ ), indicating that the more genuine a photograph is evaluated, the less constructed it is perceived to be.

Using a median split of the genuine score, we examined the association between the narrative perspective (selfie and elsie) and the not genuine/genuine scores (median = 4.63; not genuine scores:  $\leq 4.63$ ; genuine scores:  $> 4.63$ ). The results show that participants did not rate selfies as more genuine ( $\chi^2_{(1)\text{Genuine}} = .56$ , NS). We also used a median split for the constructed score (median = 5.30; unconstructed scores:  $\leq 5.30$ ; constructed scores:  $> 5.30$ ). The results show that participants did not perceive selfies as more unconstructed ( $\chi^2_{(1)} = .64$ , NS).

### *Discussion*

It is common belief that snapshots and selfies are the same and that there is no independence between these two concepts. However, snapshot aesthetics is related to the style adopted by the photo-taker, regardless of the photo being a selfie or elsie. Therefore, selfies do not always follow snapshot rules and elsies can be taken in the snapshot style. This statement is supported by our content analysis findings. If all selfies are snapshots, we would have observed that raters associate them with being more genuine and unconstructed. However, our findings support our argument that selfies are not more associated with snapshot properties than elsies. Specifically, snapshot aesthetics are related to the style adopted by the photographer, regardless of whether the photo is a selfie or an elsie.

### **General discussion**

Across four controlled studies, we show that consumer photos trigger the likelihood to comment on the visualised narrative. This effect depends on the action portrayed in the photo (Pilot study) and the moderating role of the narrative perspective (Study 1). Narrative transportation is the mechanism underlying this effect (Study 1). We also provide empirical support for the harming effect of the snapshot style when linked to selfies portraying directed

actions (Study 2) because of greater perceived silliness of the visualised narrative (Study 3). Finally, we provide external validity for our selfie and snapshot style constructs by analysing consumer photos on a real social media platform (Content analysis).

### *Theoretical implications*

This research contributes to eWOM, transportation theory, and research on photographic style. First, we extend research on eWOM by showing that visual elements, such as portrayed action, affect viewer likelihood to comment on the visualised narrative. Therefore, accounting for the depicted actions in photos further improves understanding of how visual story elements affect eWOM (Peters *et al.*, 2013). We provide evidence that viewers are more likely to comment on the visualised narrative when consumer photos portray directed actions rather than no action.

Second, we expand the generalisability of transportation theory. In contrast with research on visual modalities, including text (e.g. blog posts, van Laer and de Ruyter, 2010) and mixed auditory and visual stimuli (e.g. film, Green *et al.*, 2008), we focus on non-commercial user-generated photos and demonstrate that static images can trigger imagination of the story plot when directed actions are portrayed.

Third, we contribute to snapshot style research (Schroeder, 2012) by showing that when consumer photos portray actions directed to consumption in a snapshot-like style, the likelihood to comment on a selfie versus an elsie differs. Viewers are less likely to comment on the consumer photo when selfies follow the snapshot style. Specifically, when viewers think of selfies as snapshots rather than thoroughly thought-out (i.e. professional or parody selfies), they are less likely to comment because of the silly perception the snapshot style adds to the ego-centric motifs of the selfie. Perceived silliness is greater for snapshot selfies (than professional or parody selfies) because of the self-aggrandizing objectives of the selfie and the improvised style of the snapshot. Combining these two aspects delivers viewers a

feeling that what is portrayed in the selfie is of little value to them, thus decreasing the likelihood to comment.

More generally, we contribute to the marketing literature by challenging the belief that photos merely serve as memorable representations of consumers' personal life stories (Holt, 1995). Our research shows that consumer photos function as messages that trigger viewer response in terms of eWOM.

### *Practical implications*

Our findings provide practical implications in different areas. Companies should implement new product development strategies that facilitate consumption and selfie taking. For example, in its "Share a Coke campaign" Coca-Cola allowed customers to print their names on Coca-Cola cans, thus inducing consumers to snap and share selfies portraying directed actions. It is more important that selfies portray directed actions to transport viewers and encourage eWOM. Innovative accessories, such as selfie sticks and wearable drones, are able to incorporate camera phones without the limitations of handheld cameras. These accessories allow consumers to take photos without having to interrupt the action they are performing, giving photos a more professional look.

Managers should be mindful of the role of photographic style. The widespread use of the contemporary snapshot style seems to have detrimental effects on consumer likelihood to comment on selfies. The least silly selfie seems to be the one most likely to be commented on. Companies should thus restrain consumers from taking selfies that appear rushed or carelessly composed. Instead, they should encourage consumers to take less snapshot selfies and more professional or parody ones. As they are usually conceived as more valuable, thoroughly thought-out selfies give more importance to a commercial message about a brand, service, or product (Mazza *et al.*, 2014).

Companies should consider opportunities derived from metadata linked to posted selfies. Metadata within social media sites refers to information regarding location (i.e. geo-tagging), timing of the photo (i.e. temporal tagging), and the meaning conveyed by the photo (i.e. hash tagging). Mapping selfies may help managers optimise distribution by making products available at places and times photographs have been taken.

### *Societal implications*

Governments and non-governmental organisations should carefully consider the transversal impact of selfies and their content on consumer behaviour. The selfie portraying actions toward consumption represents a powerful way for consumers to communicate with and influence peers. A substantial body of research in consumer behaviour indicates that others' eating and drinking behaviour is harmful to the individual and society (Poor *et al.*, 2013). The way consumers make use of photography in everyday life prompts relevant questions of how organisations can use visual narratives in photographs for educational purposes (e.g. eating healthfully, reducing alcohol use). Our work suggests that viewers are more persuaded by the narrative in selfies when a directed action is taking place. This may have positive implications for healthful drinks, as shown with mineral water in Study 1, but for unhealthy beverages we recommend promoting the snapshot style, as shown in Study 2. The randomness with which narratives are portrayed in snapshot selfies gives the photograph a sense of silliness, meaning the selfie is of little value to viewers, making them less likely to comment on the visualised narrative. This finding can be used to decrease viewers' likelihood to engage in selfies portraying harmful behaviour. For example, to reduce the risk of car incidents due to alcohol consumption, the Manchester Police launched its summer drinking campaign #NoneForTheRoad. The snapshot selfie was of a young man about to drink a beer and had the message "Don't turn your selfie into a 'Cellfie'" (Kidd, 2014).

### *Limitations and future research*

Three limitations of our research are worth further investigation. First, the sentiment triggered by posted consumer photos may advance understanding of which type of eWOM selfies and selfies portraying actions generate. A field study using actual written comments and automated text analysis (e.g. Villarroel-Ordenes *et al.*, 2016) would be fruitful. Furthermore, analysing the effect of different types of eWOM on social media measure (e.g. conversion and click-through rate) may provide companies with insights into their social media advertising campaigns and branding tactics. Considering process variables other than perceived silliness may also advance understanding of how consumer photos generate eWOM. For example, perceived authenticity may play an important role. Our research touches on this aspect when introducing the snapshot aesthetics. We would expect that the more authentic a photo, the higher the likelihood to comment on it. Although we advise caution due to the small effects found in Study 2, our research shows that some snapshot selfies, which should evoke higher perceived authenticity, harm the likelihood to comment because of greater perceived silliness of the visualised narrative. In the content analysis we consider two characteristics of the snapshot style, that is how genuine and unconstructed the photograph is perceived to be. Future research could provide a more comprehensive definition and testing of the snapshot style, such that its multifaceted aspects are better understood.

Second, we focus on the specific case of photos taken and shared by the same person. However, online activities are more articulated than the specific case we consider, including liking and sharing. In addition, the relationship between the producer and the consumer may affect the likelihood to comment on photos. While we could argue that consumers in general interact more with acquaintances, having wider audiences, as in social networks, may have the opposite effect. For example, having too many Facebook “friends” may disrupt the sharing process because of social surveillance (Brandtzæg *et al.*, 2010).

Third, the images we used to operationalise our variables show the upper part of the body. Future research could provide insights into how photography rules change depending on the portrayed actions (Buchanan-Oliver *et al.*, 2010). Research might also examine “mirror” selfies, or photographs taken while the camera is aimed at a mirror, to understand how the scene is stage-managed when whole-body activities are involved, such as wearing a new outfit. For example, Heidi Klum’s New Balance campaign, in which consumers took and shared mirror selfies in their New Balance outfit, resulted in a 39% conversion rate increase (Olapic, 2014). However, the key drivers of this successful campaign are still unknown. One thing we do know: The way consumers are shaping photography practices on social media sites have opened new and exciting opportunities for marketing practice and research.

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