

The Influence of Spokesperson's Visual Cues on the Advertising Effect of Scented Products

Fei Wang^{1,*}, Wanlin Du¹ and Fan Wu¹

¹School of Journalism and Communication, Xiamen University, Xiamen, China

e-mail: feiwang@xmu.edu.cn

*Corresponding author

Keyword: Spokesperson; Visual Cues; Eye-Tracking; Scented Products

Abstract: By combining tracking and analysis techniques of the eye tracker and scale statistics, this article explores how spokesperson's visual cues (eyes-closed/open) influences consumer's advertising attention, product information memory, odor perception and audience's attitude in the advertisement where the odor of product is the main selling point. It is found that compared with the eyes-open condition, the spokesperson's eyes-closed endorsement cannot effectively enhance the audience's attitude towards products, advertising and purchase intention, but it can promote the audience's positive perception of the use experience of advertising products, and can better stimulate audience's olfactory perception of advertising products. At the same time, although the state of eyes cannot affect the audience's attention to product information, but when the spokesperson closes the eyes, the audience's attention to the advertising spokesperson can be strengthened, and the recognition rate of the product information can be improved as well, so that the audience memory is more accurate, and the eyes-open endorsement will hinder the subject's advertising memory.

1. Introduction

"The eye is the window of the soul." The gaze of eyes has many functions like, conveying information, regulating interaction, expressing intimacy, training social control, and promoting service and mission objectives [1]. Scholars in various fields have conducted many studies focusing on human eyes.

In advertising, there are also many researches on the gaze and eye contact of spokesperson. The spokesperson speaks with eyes, conveying appropriate emotions and abundant information, which is thought to be very important in advertising. However, in real life, in addition to the endorsement with eyes open, there are still some with eyes closed, which are often used to highlight certain sensory characteristics of the product, such as the enjoyment of earphones in hearing, of wines in smelling, of food in tasting. Therefore, in odor marketing, eyes closed are also regarded as a kind of "sniffing action". For products with "odor" as the main selling point, "sniffing cues" is helpful to stimulate audience to imagine the smell of products and strengthen the audience's feelings about the smell of the product, and even increase audience's attitude and willingness to pay (WTP) towards the product [2].

Therefore, we mainly study the "sense of smell" in sensory feelings, focusing on the "eyes" of the spokesperson in the advertisement, combining the odor marketing with the eye tracking technology, and explore not only whether it will affect audience's advertising attention and memory when eyes-closed spokesperson endorse products with olfactory characteristics, but also whether such action will inspire audience's olfactory imagination, affecting audience's sensory perception as well as the attitude. we hope that exploring the influence of the spokesperson's visual cues and product's odor on advertising effectiveness can provide some meaningful research and practical references for advertising scholars and practitioners.

2. Literature Review and Hypotheses

2.1. Olfactory Experience in Advertising

The topic of sensory marketing has been studied quite a lot in the field of marketing and communication, among which odor-based one can generally be divided into two categories. One concentrates on perceived odors, proving the influence on consumer's emotion and memory [6,7]. Actually, odor marketing is applied in many cases, for example, readers can experience the smell of a new product through the perfume advertisement by using the scratch-and-sniff technique when turning over the page [8].

However, compared with visual and auditory sense, the form of expressing olfactory sense in ads is more difficult, which, most of the time, can't be perceived directly in real advertising performance. Therefore, another research pays more attention on imagined odors, that is, olfactory imagery. Stevenson and Case define olfactory imagery as "the process by which people experience the olfactory experience when the appropriate stimulus (true scent) is absent"[9], which is, the process of perceiving the smell when people can't smell it in reality, it's another way of olfactory perception.

Various studies have shown that olfactory imagery may have influence on advertising, product attitude and WTP. Some claimed that olfactory imagery can enhance attraction and WTP by reconstructing consumers' experiences and memories. Others mentioned the positive role sniffing cues played on sensory marketing, suggesting to add such cues in the advertisement with scented products.

Generally, cross-modality processes is applied to trigger audience's olfactory experience [6]. For example, showing scented pictures or ad copies to consumers to trigger the sense of smell through visual modality [10]. In previous studies, researchers usually used other stimuli in advertising to trigger and enhance the consumer's olfactory imagery. There are about two methods. One is guided by an ad copy [11], another is giving an order to imagine directly [3,11].

Although spokesperson's closed-eye endorsement has been used in advertising currently, there has not been any research on the olfactory imagination triggered by the spokesperson's closed eyes. Further research is needed on the question whether the spokesperson's closed eye can trigger the olfactory imagery of the scented product and highlight the olfactory characteristics of it or can it improve the attitude and WTP?

Based on previous studies, some assumptions are put forward. Firstly, closed-eyes movement carries obvious sniffing cues which will highlight the odor attribute of products. Secondly, the audience may imitate in action and emotion because of the empathy of spokespersons themselves when there are closed. Meanwhile, for those products with obvious odor attribute, the introduction of sniffing cues in advertising may have positive effects on advertising attitude, product attitude and WTP. Therefore,

H1: It will inspire audiences' olfactory imagery and enhance their olfactory perception when eyes-closed (vs. open) spokesperson endorses products with olfactory attributes.

H2: It will make audiences' attitudes towards product and advertising more positive and motivate their WTP when eyes-closed (vs. open) spokesperson endorses products with olfactory attributes.

H3: It will have no influence on audiences' attitude and WTP when eyes-closed (vs. open) spokesperson endorses products without olfactory attributes.

2.2. Eyes, Views and Focuses

Eyes are seemed to be an important channel for our processing of visual information. At the same time, in our daily communication process, especially in non-verbal communication, the eyes can be used to express personal emotions, convey personal thoughts, and be the body of information. Direct gaze should be regarded as a more significant characteristic, compared with averted gaze, in some visual searching tasks to help find the target, as stare-in-the-crowd effect which was studied before. Though people's eyes can catch other's attentions, but some research found that staring the

eyes of others may consume our cognitive reserves. Furthermore, recent studies also found that staring may interfere our working memory [5].

In addition, direct-viewing eyes can quickly attract the attentions from others [3], but at the same time, look directly for too long can make people uncomfortable and even want to escape [4], and some studies have found that direct viewing can hinder cognitive processing and memorization of information[5].However, audience may try to escape the anxiety and discomfort caused by direct vision instead of staring at the spokesperson because of staring interference and escape, which means that more time would be spent on the other parts of the advertisement such as products and processing of information. On the contrary, when eyes-closed spokesperson endorses, the audience may pay less attention to the face of the spokesperson, but may focus on the advertising products firstly. Therefore,

H4: The state of spokesperson's eyes (open or closed) has an influence on the audiences' searching for advertising information.

H4a: Audiences will search for ad product information more slowly when spokesperson is eyes open (vs. closed).

H4b: The time (or number) of gaze audiences spend less on the area of spokesperson' face, more on the area of product information when spokesperson is eyes open (vs. closed).

H5: The state of spokesperson's eyes (open or closed) will interfere audiences' memory of advertising information.

3. Study

3.1. Participants and Design

One hundred forty-four students from Xiamen University (80 men,64 women) participated in the study. They were randomly assigned to the conditions of a 2 (spokesperson's eye state: open vs. close) \times 2 (product odor attribute: yes vs. no) between-participants mixed design with two factors. Each group were shown with an advertisement image: the yes group is a men's fragrance advertisement, and the no group is a men's ring advertisement. For the eye movement experiment, the standard of sampling rate is 85%, we got 128 valid data in total and 16 invalids excluded. For the questionnaire, only one of them were invalid. The dependent variables are composed of advertising attention, product attitude, advertising attitude, WTP, recognition, and activation.

3.2. Materials and Procedure

A Tobii T60 eye tracker (60 HZ), four black-and-white-print ads with same foreign amateur male spokesperson generated by unified decolorization processing, three guide pictures and one final picture were prepared.

The experiment consisted of two parts. The participants first watched the advertisement (eye tracker measurement) and then completed the questionnaire. Both parts were completed in the laboratory, and each one was independently tested. For the part of eye tracker measurement, participants were told to sit in front of the eye tracker, and the eyes are about 64cm away from the screen. During the whole viewing process, they could freely control the viewing time of each picture, and use the space bar to turn the page. The order in which the participants viewed the pictures is as shown in Figure 1 (take the closed-eye odor group as an example). After watching the advertisement, the experimenter guided the participants to fill in the questionnaire, some gifts were given for their time.

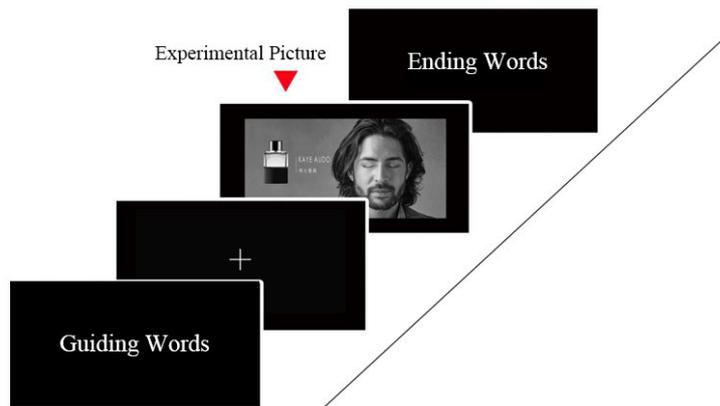


Figure 1. Eye movement viewing order

3.3. Measurement

We broke the advertisement into three AOI (Area of Interest): product, spokesperson and copywriter, and then selected five eye movement indicators (e.g. gazing time of the first staring point) for quantitative analysis. We assessed the dependent variables mentioned above by the use of 7 point Likert scale with certain questions. For example, advertising attitude which consists of both emotion (the first four) and cognition (the last three), we used a 7 point Likert scale with seven questions, “In general, I think the ad is fun”, “I think my overall attitude towards this advertisement is positive”, “In general, I like the products shown in the ad”, “In general, I think the ad is good”, “I think this ad can highlight the value of the product”, “I think this ad can highlight the characteristics of the product” and “I think this ad can create a good image for this product”. In view of the possibility that whether spokesperson’s eyes are opened or closed may affect the emotions of the subjects, we use the activation dimension of the 12 PAD sentiment scales in Chinese for measurement, 9-points ratings on 4 items.

4. Results

4.1. Eye Movement Indexes

It can be seen from the hotspot map that the main gaze areas of the participants are the advertising copy and the spokesperson's facial center, and the attention paid to the advertising product will be lower than the one to the advertising copy. What’s more, the statistics of gaze latency (eyes-closed vs. eyes-opened) has shown that the sequence of viewing advertisements was the same: spokesperson AOI-advertising copy AOI-advertising picture AOI ($M_{sp}=0.049s$, $M_{ac}=0.669s$, $M_{ap}=2.715s$ vs. $M_{sp}=0.047s$, $M_{ac}=0.967s$, $M_{ap}=2.543$).

Based on five indexes of AOI, both fragrance ad and ring ad were studied. In terms of the fragrance ad, five indexes of advertising product AOI are insignificant, but the main effect of spokesperson’s eyes state is sometimes significant marginally among those indexes in different AOIs, as gazing time of the first fixation point ($M_{close}=0.177s$ vs. $M_{open}=0.836s$, $F=3.282$, $p=.075<.10$) and total number of gaze ($M_{close}=12.531$ vs. $M_{open}=9.226$, $F=3.228$, $p=.077<.10$) in advertising copy AOI, total number of gaze ($M_{close}=4.692s$ vs. $M_{open}=3.150s$, $F=3.195$, $p=.079<.10$) in spokesperson AOI. Moreover, the ring ad has similar results as total number of gaze ($M_{close}=3.679s$ vs. $M_{open}=2.819s$, $F=3.203$, $p=.078<.10$) in spokesperson AOI while five indexes of both advertising product and copy AOI are insignificant. Besides, if we analyze the whole data with ANOVA without distinguishing the smell, then it can be seen that some indexes are also significant marginally as the number of fixation points before entering for the first time ($M_{close}=2.469times$ vs. $M_{open}=4.058times$, $F=3.037$, $p=.084<.10$) in advertising copy AOI, total number of gaze ($M_{close}=4.185s$ vs. $M_{open}=2.985s$, $F=5.900$, $p=.017<.05$) in spokesperson AOI.

4.2. Questionnaire Data

We analyze the data mainly from four aspects-product experience, activation, olfactory perception and recognition.

First, an ANOVA was performed and we found significant spokesperson's eyes state \times product odor attribute (with/without) interaction ($M_{\text{close-without}}=3.829$ 、 $M_{\text{close-with}}=4.879$ 、 $M_{\text{open-without}}=4.194$ 、 $M_{\text{open-with}}=4.282$, $F=4.377$, $p=.038<.05$), as shown in Figure 2. And we also found the effect of spokesperson's eyes state is significant marginally in terms of fragrance ad ($M_{\text{close}}=4.879$ vs. $M_{\text{open}}=4.282$, $p=.068<.1$) while product with/without odor has a significant effect when spokesperson is eyes closed ($M_{\text{with}}=4.879$ vs. $M_{\text{open}}=3.829$, $p=.002<.05$).

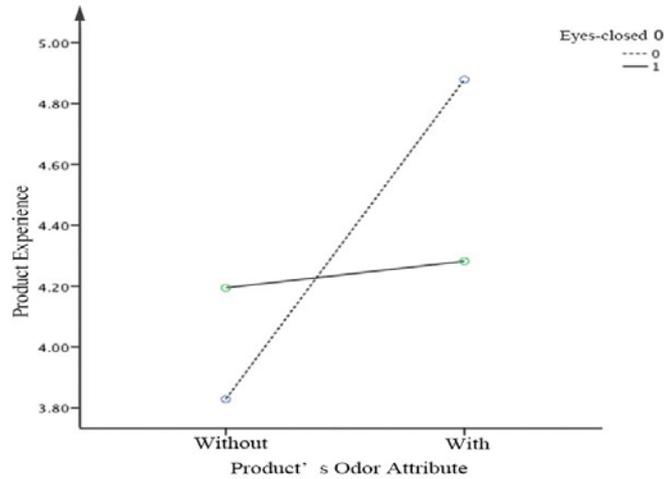


Figure 2. Mean product experience evaluation and eyes state and product's odor attribute

Second, for the activation of participants' emotion, the main effect of the spokesperson's eye state is not significant. However, the effect turns out to be significant in "calm-stimulus" dimension within the activation ($M_{\text{close}}=2.779$ vs. $M_{\text{open}}=3.320$, $F=3.987$, $p=.048<.05$).

Moreover, as for olfactory perception, the effect of spokesperson's eyes state has a marginal significance ($M_{\text{close}}=3.853$ vs. $M_{\text{open}}=3.436$, $F=3.387$, $p=.076<.01$) while product's odor has insignificant effect. The interaction of them is not significant, as in Figure 3.

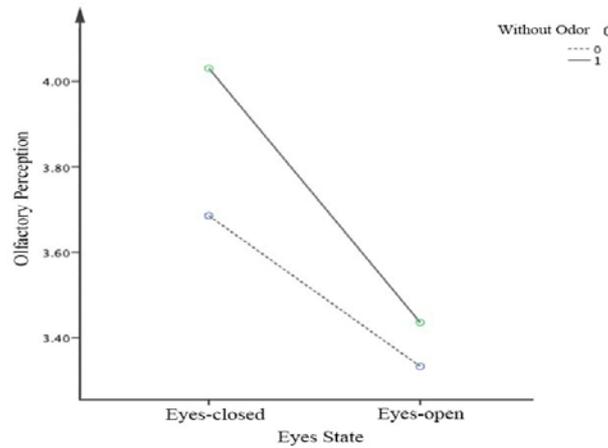


Figure 3. Mean olfactory perception and eyes state and product's odor attribute.

Finally, the main effect of the spokesperson's eyes state is significant no matter in name recognition (closed-eyes recognition accuracy=69.12% vs. open-eyes recognition accuracy=46.67%, $p=.007<.05$) or picture recognition (closed-eyes recognition accuracy =89.71% vs. open-eyes recognition accuracy =65.33%, $p=.001<.05$).

5. General Discussion

To begin with, when it comes to advertising attention, in the case of spokesperson's eyes state, there was no significant difference in the speed of paying attention to the advertising products and advertising copies from the perspective of fixation incubation period. Therefore, H1a was not proved for spokesperson's eyes open not hindering participants from searching product information. It is also worth noting that the experimental results, to a certain extent, support the first half of H1b's hypothesis that is, the spokesperson's open-or-closed eyes affect the audience's concern for the spokesperson: the audience pay more attention to spokesperson when their eyes closed, which is contrary to the situation when their eyes open- the total gaze time of the spokesperson AOI increases.

Combined with analysis results of the questionnaire and eye movement data, participants' attention payed to product information in ad had no difference whenever spokesperson's eyes open or closed, but the results of recognition were different. It verified the study of the interference of looking at each other on working memory to some extent, and supported H2 as well. Moreover, eyes closed may ascend participants' olfactory perception effectively, meanwhile, closed-eyes endorsement may stimulate such perception for those with obvious odor attributes, supporting H3 to a certain degree. Last but not the least, judging from questionnaire data, closed-eyes spokesperson (vs. open-eyes) did not have a significant impact on product attitude, advertising attitude and WTP, and therefore H4 wasn't proved. However, it is more meaningful that, in terms of the cognitive aspect of product attitude, that is, the evaluation of "product use experience", there are interactions between two factors (spokesperson's eyes state \times product odor attribute). That means participants were inclined to think those products with odor endorsed by eyes-closed spokesperson may have better use experience when there was no difference between advertising attitude, WTP and product preference.

Above all, this study suffers several limitations and also provides some opportunities for further scented advertising research. Firstly, the product and spokesperson were chosen as male, further research should take the impact of gender as a variable into account. Secondly, our samples were limited to the college students at Xiamen with unbalanced subject background, most of them were from humanities and social sciences. Last but not the least, only the product with significant olfactory characteristic was selected in this experience, the exploration of other sensory characteristics was still waiting to be put forward. In the field of olfactory imagery, this paper fills the gap of the literature that "the spokesperson triggers the olfactory imagery", further research may continue to delve into this topic, such as whether the spokesperson's posture, expression, etc. can also trigger the audience's olfactory imagery.

Acknowledgments

This work was supported partly by the Fundamental Research Funds for the Central Universities (20720181084)

References

- [1] Kleinke C L. Gaze and Eye Contact: A Research Review[J]. *Psychological Bulletin*, 1986, 100(1):78-100.
- [2] Lin M-H (Jenny), Cross S N N, Laczniaak R N, etal. The sniffing effect: olfactory sensitivity and olfactory imagery in advertising[J]. *Journal of Advertising*, 2018, 47(2):97-111.
- [3] Senju A, Hasegawa T. Direct gaze captures visuospatial attention[J]. *Visual Cognition*, 2005, 12(1):127-144.
- [4] Kendon A, Cook M. The consistency of gaze patterns in social interaction. *British Journal of Psychology*, 1969, 60(4):481-494.
- [5] Wang J J, Apperly Ian A. Just one look: Direct gaze briefly disrupts visual working

- memory[J]. *Psychonomic Bulletin & Review*, 2017, 24:393–3.
- [6] May O L, Morrin M, Krishna A. Exploring the super additive effects of scent and pictures on verbal recall: an extension of dual coding theory[J]. *Journal of Consumer Psychology*, 2010, 20:317–326.
- [7] May O L, Morrin M, Scenting movie theatre commercials: The impact of scent and pictures on brand evaluations and ad recall[J]. *Journal of Consumer Behaviour, Journal of Consumer Psychology*, 2012, 11: 264–272.
- [8] Stampler, Laura. Domino’s Brazil Is Making DVDs That Smell Like Pizza[J]. *Business Insider*, 2013.
- [9] Stevenson R J, Case T I. Olfactory imagery: A review[J], *Psychonomic Bulletin & Review*, 2005, 12 (2):244-264.
- [10] González J, Barros-Loscertales A, Meseguer V. Reading cinnamon activates olfactory brain region[J]. *NeuroImage*, 2006, 32 (2):906–12.
- [11] Krishna A, Morrin M, Sayin E. Smellizing cookies and salivating: A focus on olfactory imagery[J]. *Journal of Consumer Research*, 2014, 41(1):18–34.