

EYE-TRACKING EXPERIMENT REGARDING CELEBRITY ENDORSEMENT IN ADVERTISING

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Abstract

The fast and changing trend in media has challenged advertisers to develop new and innovative forms of advertising in order to be able to attract the consumers' attention. Celebrity endorsement is one form to attract the attention of the consumers towards the advertising. Celebrities have an increased attraction potential and besides consumers have the tendency to imitate their behavior. Therefore if the star wears or consumes a certain product, this will have an impact on the consumers. In order to be successful, there should exist a match between the personality and the lifestyle of the celebrity and that of the advertised product. Despite this, the celebrity might have an overshadowing effect on the advertised product. In this paper, we analyze with the help of an eye-tracking experiment, which are the elements with the highest attraction potential in an advertising with endorsed celebrity. The results of the experiment for a perfume advertisement, with a male film industry celebrity, show that the consumers have first watched the logo of the product and that they have spent more time watching the celebrity.

Keywords

Eye-tracking, celebrity endorsement, advertising, neuromarketing

JEL Classification

M10, M31

Introduction

In a world with an intense and dynamic competition, one of the biggest challenges of advertising is to be remembered and to have an impact on consumers. In this sense, celebrity endorsement has appeared to be a real opportunity to promote products, as famous people have an increased attraction potential and a power to influence consumers. Most of the researches about celebrity endorsement have focused on the match between the celebrity and the advertised product. In order to promote in a credible way, the celebrity has to share the same values, the same attitudes and have the same behavior as the advertised product. Besides the celebrity can increase the perceived value of the product (Puja, 2007) and it also associates it with a certain social position. All these aspects seem to matter for consumers and therefore have a positive impact on the sales of the advertised product. Recent research has shown that there is also the possibility that celebrities should distract the attention of the consumers from the advertised product. In this article, there have been presented the results of an eye-tracking experiment having as objective the determination of the attention catcher

in a perfume advertising endorsing a male film industry celebrity. The analysis focuses on the attractiveness of the different elements of the advertising.

Literature Review

In the past years companies have faced more frequently the challenge to catch the attention of consumers by the advertising they have designed. A strategy in this sense has been the endorsement of celebrities in advertising. Celebrities are famous people, who have gained the public recognition (McCracken, 1989), by activating in the film, music, television, sports or other industries that are interesting to the large public. The performance and success of the celebrities in their activity has increased the popularity of their name and have therefore a higher power to attract the attention of the consumers (Hoffst ate, 2007). Moreover, in many cases the consumers have the tendency to imitate their behavior. Moreover the celebrities have a high media exposures, which can also have an effect on the advertised products.

In order to increase the efficiency of celebrity endorsement in advertising, several researches have been carried out about the elements which contribute to its performance. Some researchers have shown that celebrity endorsement has an important influence on the attitudes of the consumers and also on their purchase intentions (McCormick, 2016; Zamudio, 2016). The effect of advertising is higher if there is a higher identification between the celebrity and the advertised product (Albert et al., 2017). For instance the credibility of a celebrity is transferred to the brand, by increasing its credibility and by developing a favorable brand attitude (Wang et al., 2017; Nistoreanu et al. 2017). Consuming the products endorsed by celebrities makes the consumers believe that they are closer to the stars and that they share their beauty and glamour. In the nowadays society consumers buy certain products not only to fulfill a certain need, but also to gain social status. Wearing or using celebrity endorsed products, can increase the social status of the consumers by being associated with that of the celebrity. Wearing a certain brand is especially important for the young generation (Popa & Pelau, 2016). Besides all the glamour associated with famous personalities, there are also researchers who believe that the celebrities can have an overshadowing effect in advertising. They have the power to attract the attention of the consumers and consumers have the tendency to focus their attention towards the celebrity and neglect hereby the advertised product (Erfgen, et al., 2015). In this article, we examine with the help of an eye-tracking experiment the attention of the consumer towards different elements in an advertisement with celebrity endorsement.

Methodology of Research

In order to analyze the attention of the consumer, we have organized an eye-tracking experiment. Eye-tracking is a methodology that helps researchers to analyze and understand the visual attention of an individual. With the help of this method one can determine where a user looks at an advertisement, how long he keeps his eye on a certain point and one can follow the path of his eyes. With the help of such research, we can understand the whole experience of a user, while he is viewing a commercial (Rosca, 2017). So we can notice what the user cannot describe, because it is unconscious for him. Eye-tracking allows the researchers to observe the position of the eye and to understand where the user is actually looking. These modern tools rely on a method called corneal reflection. The eyes are illuminated so that their reflection can be discovered and tracked. The eye tracking tool can analyze the movement of the eyes and the three attributes location, duration and movement can be accurately determined (Rosca, 2017).

In our experiment, we have chosen one commercial for a renowned perfume brand. The advertisement contained an internationally recognized male celebrity from the film industry. The sample of the experiment contained 24 participants (15 female participants, 9 male

participants, with ages between 20-30 years). The participants had to watch the commercial for 10 seconds on the same screen, while the eye tracking data have been registered by the eye tracking tool. In order to be able to analyze the results we have defined the following five Areas of Interest (AOIs) from the print as presented in table no. 1. The AOI are subareas from an advertisement, which can be selected in order to measure specific indicators for them. For example, if there are people in the advertisement, you can separate the body from the face using AOI and then measure the KPIs for the selected zones.

Table no. 1. Description of variables

Variable	Description of variable
AOI 001	Face of male film industry celebrity
AOI 002	Hands of male film industry celebrity
AOI 003	Price of the product
AOI 004	Product
AOI 005	Brand of the product

Source: Own determination of variables

The defined areas are the following: the face of the male film industry celebrity (AOI 001), the hands of the male film industry celebrity (AOI 002), the price of the product (AOI 003), the product (AOI 004) and the brand of the product (AOI 005). For each of the five defined area, the key performance indicators have been calculated and analyzed.

Research Results

In order to measure the impact of the commercial with endorsed celebrities on the consumer, we have calculated, with the help of the eye-tracking tool several Key Performance Indicators (KPIs) like sequence, entry time, hit ratio as it can be observed in table no. 2. These KPIs give us valuable statistical information about the advertisement after watching it such as the elements of a picture viewed by the participant, the number of participants in the experiment, who have looked at a certain element, the order of watching the elements of the advertisement.

Table no. 2. Key Performance Indicators for the Eye-Tracking Analysis

Variable	Sequ- ence	Entry time (ms)	Average fixation (ms)	First Fixation (ms)	Dwell time (ms)	Dwell time (%)	Hit ratio (%)
AOI 001	2	2234.6	520.2	404.1	1291.4	16.6%	100%
AOI 002	4	2648.2	304.7	233.4	1469.3	18.9%	75%
AOI 003	5	2801.3	551.2	561.1	1320.7	17.0%	87%
AOI 004	3	2536.3	268.8	228.8	1257.7	16.2%	100%
AOI 005	1	388.9	259.7	204.2	2404.0	31.0%	100%

Source: Own research results

The sequence shows the order in which a certain AOI from the advertising was observed by the participants. It is calculated based on the average of the entry times in milliseconds (ms) of all the participants, from the moment the commercial is seen by the consumer. As it can be observed in table no. 2, in the case of our advertising, the majority of participants saw AOI 005 for the first time. So the most attractive element in the advertisement is the brand of the product and the Logo. It has an average entry time of 388.9 ms. The second most attractive element in the image is the face of the famous actor (AOI 001), with an average entry time of 2234.6 ms. The third position is occupied by AOI 004, representing the product itself, the perfume in our case. It has an average entry time of 2536.3 ms. As we can observe from table 2, AOI 002 and AOI 003 were less attractive by having an average entry

time of 2648.2 ms and 2801.3 ms, which are represented by the hands of the male celebrity, full of accessories and tattoos and the price of the product. So the Logo and the face of the famous endorser beats the product and its price.

The average fixation is called the ratio between the sum of the total fixation durations on a certain AOI and the sum of the total number of fixations in that AOI. For our perfume advertisement we have extracted the following average fixations: AOI 001 – 520.2 ms, AOI 304.7 ms, AOI 003 – 551.2 ms, AOI 004 – 268.8 ms and AOI 005 – 259.7 ms. The highest fixations has been generated by AOI 003, the price of the product. This means that the participants looked a lot to the price of the product, as they cannot ignore it.

The first fixation reflects how much time the participants of the research have spent at a certain point in an AOI with their eyes. The average time for the first fixation has had the longest value of 561.1 ms for for AOI 003, the price of the product. It is followed by the face of the worldwide known celebrity with 404.1 ms. For this KPI, the average time for the first fixation of the celebrities' hands have been less successful, by having an average first fixation time of only 233.4 ms. This result has been obtained, despite of the fact that his hands were full of accessories and interesting tattoos. The product itself has an average first fixation of 228.8 ms. On the last place we have this time the brand of the product, the logo with a value of 204.2 ms. The consumers have watched the price of the product and the celebrity endorser for a longer period of time and the product and its brand for a shorter time. We can also observe that the brand has the lowest first fixation, even if this was sequence number 1. So it was first observed by the participants, but not for a long time. Afterwards they have moved quickly their look to another AOI.

The dwell time shows the total time watching a certain area of interest, so a certain element in the advertisement in milliseconds. For our perfume advertising with the international famous male celebrity, we obtained the following percentages: AOI 001 -16.6%, AOI 002 – 18.9%, AOI 003 – 17.0%, AOI 004 – 16.2% and for AOI 005 – 31%. So we can observe that in this commercial, the participants spent most of their time, watching the brand of the product and the Logo (AOI 005). This element was the most attractive one for them. It was followed by the hands of the famous actor (AOI 002). They were very attractive because of his many accessories and tattoos, containing a lot of details which have captured the attention of the participants. The price of the product (AOI 003) was next. It has been also catchy for the participants with a dwell tome of 1320.7 ms. The shortest time had been for the celebrity (AOI 001) and for the product (AOI 004). This means actually that both elements have been immediately recognized by the consumers and they have not spent so much time watching them.

The hit ratio is the percentage which tells researchers how many participants from their total number have viewed at least once a certain area of interest from the advertising. The number of participants, who have watched the analyzed elements in the advertisements at least once is a very important indicator for the researchers. In the top hit rations for our commercial have been the face of the male celebrity (AOI 001) the product (AOI 004) and the brand (AOI 005). These 3 items are the key elements from our commercial and were not passed unnoticed by any of the 24 participants of the research, everyone looked at them at least once. For the price of the product (AOI 003) we had a hit ration of 87.5%. Not everybody looked at the price in this advertisement. The hands of the celebrity are on the last place and have the lowest hit ratio score with a percentage of only 75%, so only 18/24 participants have looked at his hands, even if they were full of accessories and tattoos.

The results of the discriminant analysis for the entry times, shows that there is a significantly different reaction towards the logo in comparison to the other elements of the advertisement, as it can be observed in table no. 3. The logo is the first watched element (388.9 ms) in the advertising, being followed by the face of celebrity ($F_{AOI001}=10.71$, $p_{AOI001}=0.002<0.01$), by the product ($F_{AOI004}=31.95$, $p_{AOI004}=0.000<0.01$), by the hand of the

celebrity ($F_{AOI002} = 10.71$, $p_{AOI002}=0.000<0.01$) and by the price ($F_{AOI003} = 30.08$, $p_{AOI001}=0.000<0.01$). It is interesting to remark that the discriminant analysis for the other elements didn't show significant result, proving that there is no pattern of watching the selected advertising.

Table no. 3. F values of the discriminant analysis for the advertising objects based on entry times in relation to the logo of the advertised product

Item in advertising	Mean (ms)	Standard deviaton (ms)	F-value	Wilks' λ
AOI 001 – Face of celebrity	2234.6	2747.9	10.71***	0.811
AOI 002 – Hand of celebrity	2648.2	2681.6	16.84***	0.732
AOI 003 – Price	2801.2	2135.4	30.08***	0.605
AOI 004 – Product	2536.3	1839.1	31.95***	0.590
AOI 005 – Logo	388.9	285.2	--	--

N= 24 participants in the experiment; ***p < 0.01, **p < 0.05, *p < 0.1

In the case of the dwell times, the discriminant analysis results also show a significant difference between the reactions of the consumers to the logo in comparison to the other elements. The logo has been element which the consumers watched for the longest time (2403.9 ms). It was followed by the hands of the celebrity ($F_{AOI002}=5.03$, $p_{AOI001}=0.030<0.05$), by the price ($F_{AOI003}=7.231$, $p_{AOI003}=0.010<0.05$), by the face of the celebrity ($F_{AOI001}=11.11$, $p_{AOI001}=0.002<0.01$) and by the product ($F_{AOI004} =11.07$, $p_{AOI004}=0.002<0.01$). It can be observed that the lowest significance has been obtained for the dwell times for the hand of celebrities. This means that there are participants at the eye-tracking experiment, who have watched for a longer time the hands of the male film industry celebrity because of its details. Therefore in some cases there has been a distraction effect caused by the celebrity and its accessories.

Table no. 4. F values of the discriminant analysis for the advertising objects based on dwell times in relation to the logo of the advertised product

Item in advertising	Mean	Standard deviaton	F-value	Wilks' λ
AOI 001 – Face of celebrity	1291.4	666.7	11.11***	0.805
AOI 002 – Hand of celebrity	1469.3	1391.9	5.03**	0.901
AOI 003 – Price	1320.6	1291.0	7.231***	0.864
AOI 004 – Product	1257.7	786.3	11.07***	0.806
AOI 005 – Logo	2403.9	1492.7	--	--

N= 24 participants in the experiment; ***p < 0.01, **p < 0.05, *p < 0.1

Conclusions

The results of the research show that the consumers have watched the logo first and for the longest time. Despite this, the results of the discriminant analysis have shown that the hand of the celebrity containing a lot of details have distracted the attention of the consumers. The celebrity itself has caught the attention easier in comparison to the product and the price. Moreover if we take the cumulated time, when the consumers have watched the celebrity (AOI001 and AOI002), it is definitely longer than the time watching the brand. The results presented in this paper refer only to one advertising, but it confirms that the consumers have the tendency to watch for a longer time the celebrities. For this reason, it is important to analyze which are the attention catcher in an advertising and design them according to these results. Celebrities have an important role in catching the attention and influencing the

consumers, as several researches show. This presence of the celebrities in advertising could be improved and therefore it is important to analyze how they should be endorsed in advertising so that they should not overshadow the promoted product.

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