Advances in Social Sciences Research Journal – Vol.2, No.10
Publication Date: Oct. 25, 2015
DoI:10.14738/assrj.210.1531.
Mullern, T., Irinca, A., Morawietz, A., & Pajarskaite, M. (2015). Celebreties & Music as Brand Recall Cues – an Experimental Study of TV Commercials. *Advances in Social Sciences Research Journal,* 2*(10)* 174-190.

Celebrities and Music as Brand Recall Cues - an Experimental Study of TV Commercials

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Abstract

This article reports on an aided brand recall experiment testing the effect of celebrities compared to popular music in TV advertisements. The effect of three cues, celebrity, music, and celebrity + music, was analysed and crosschecked with the moderating effect of familiarity with the cues. The results show a stronger effect of the celebrity cue compared to music. Familiarity with the celebrity leads to higher recall than non-familiarity, whereas the results for familiarity with the music are inconsistent with stronger recall for non-familiar music for some of the cues. The results enrichen the understanding of how celebrities and music can be used as advertising cues.

Key words: TV commercials; brand recall; celebrities; music; familiarity

INTRODUCTION

Brand recall is an important concept in advertising studies, and it is generally argued that there are cues in advertising that influence the level of brand recall in consumers (1-3). There is support for the view that some advertising cues hold a more prominent position based on their popularity, reach and impact on consumer behaviour. The celebrity endorsement literature suggests that using a well-known person in a commercial can have a powerful influence on brand recall (4, 5). A second powerful cue is the use of popular music that not only sets a mood and enhances brand recall, but also acts as an important cultural marker and identifier for consumer groups when linked with brands (6). Both music and celebrities are used in advertising in order to create a strong recall of the brand when facing a category need, and also to create positive brand attitudes or associations (7, 8).

In comparison to other executional elements as storyline, colour palette and prominence of the brand, they have to be paid for and are expensive to be used within a commercial. However, they have a major advantage distinguishing them from other cues and make them relevant to study and compare. They can function as retrieval cues and enforce aided brand recall. They appear outside the campaign as they are connected to popular culture and brand recall may be triggered when seeing the celebrity or hearing the music. In addition, they can be used as a planned and intended retrieval cue in another setting as part of the campaign.

Interestingly enough, little is known about the relative effectiveness of the two advertising cues. So far, research combining music in advertising literature together with celebrity endorsement literature dealt only with the music influence on the perception of the brand endorser (9), but no research has compared the two cues in terms of their combined effect on the consumer.

This article reports on an experiment testing the effectiveness of celebrities compared with popular music, as advertising cues, in the context of audio-visual forms of advertising (more specifically in TV commercials). The dependent variable in the experiment is brand recall and the manipulated cues are popular music, celebrities and the combination of the two. The experiment is designed to isolate the effect of each of them as retrieval cues, comparing their relative effectiveness on brand recall.

The experiment evaluates the relative effectiveness of each of the three cues and how it varies depending on the familiarity with the music and with the celebrity, based on the assumption that familiarity with the celebrity and/or with the music has an impact on the brand recall for the three cues. In the experiment the results were also controlled for the following additional moderating factors: attention and previous exposure to the ad, usage and interest in the product, age and gender.

Based on the above the purpose of the article is to analyse the effects of celebrities and popular music as both independent and combined advertising retrieval cues in aided brand recall and to describe the moderating effects of music and celebrity familiarity.

More specifically the article will address the following research questions:

- **How do celebrities, music, and the combination of the two as retrieval cues affect brand recall?**
- **What is the moderating effect of familiarity with one or both of the retrieval cues?**

BRAND RECALL

When advertising effectiveness is measured in terms of learning or memory, recall and recognition are two commonly used dependent variables (10, 11). Although the concepts were launched a long time ago, there is still an ongoing debate on the understanding of them (12).

This article uses the definition of Bagozzi and Silk (13) who regard recall as the mental reproduction of some previously learned or experienced target item whereas recognition is described as the awareness of having previously been exposed to that stimuli. In recall settings, respondents have to retrieve the advertised product/brand from memory after having been exposed to a contextual cue. Recognition, however, means that the targeted product or brand is provided while the contextual circumstances of the previous exposure shall be retrieved (13). The main difference between recall and recognition is that for recall, the participants should be able to identify the absent stimulus, while for recognition, the stimulus which was formerly presented, should be recognized by the participants as being seen or heard before (14). Recognition and recall are sometimes perceived as being the same, since recognition can be considered as a very aided form of recall (15). With the inherent time lag between exposure to an ad and the actual purchase occasion, it is generally argued that recall is the more important measure of the two, since it requires a deeper mental activity and therefore enable people to remember the add message (12), although this is disputed by some authors (11).

Grover and Vriens (16) define brand recall as the actual retrieval of a brand element from memory when exposed to a related probe or cue. An important distinction is between unaided recall or cued-recall (17) and aided recall which includes various types of cues to help consumers to recall (18). Aided recall makes it easier to do controlled experiments where the researcher can manipulate cues and control for different contextual factors. This also makes aided recall popular among advertisers (19).

Recall is the variable chosen over recognition in tracking advertising studies (20) due to the fact that recognition has been criticized to show higher values than recall even in tests where the exposure for the recall used more repetitions of exposure to the ad or longer ad messages (10) and because recognition scores seem to not decline over time, although they could be sensitive to memory loss (21).

Celebrity Endorsers and Brand Recall

Public figures, spanning from movie stars to music personalities and big names in sports, have long been employed as part of a brand's marketing mix (5, 22). McCracken (23, p. 310) defines a celebrity endorser as "any individual who enjoys public recognition on behalf of a consumer's good by appearing with it in an advertisement". The growing literature on celebrity endorsement has shown that the use of celebrities for advertising purposes is a both common and effective practice (24). Research supports the view that there is a direct link between the use of a celebrity and brand recall, assuming that the celebrity is part of the individual cognitive schemata (25). It can therefore be assumed that the familiarity with the celebrity is a crucial factor.

Llarge sums are invested into celebrity endorsers as they are believed to increase the effectiveness of advertisements (26). This is especially as they are known to break through advertising clutter as well as having the ability to keep the attention of consumers (27).

Existing experimental research indicates that using celebrities in advertising can enhance attention and recall. Consumers are more likely to remember a product or brand if the ads feature a celebrity (28). More specifically, it was found that celebrity endorsements can increase the degree of attention, appeal and brand recall (29). Moreover, they are said to support brand name recognition (30), enhance message recall (31) and trigger quick memorability, recall and recognition (2). Hence they influence advertising effectiveness, brand recognition and brand recall (32).

Literature also suggests that a matching between the celebrity and the brand/product features can lead to higher recall (22, 23, 33, 34).

However, some authors are sceptical, pointing out that these positive effects assigned to celebrities are usually just conventional wisdom, based on general belief rather than research (28). Additionally, even though advertisements with celebrities stand out and cut through the advertising noise, Evans (35) claims that there is always a risk that the celebrity may overshadow the brand instead of supporting it. This phenomenon, also referred to as the "vampire effect" is often overlooked, but highly important. Celebrity overexposure can cause severe damage to the campaign, stealing the spotlight from the brand and decrease its value substantially. It has to be ensured that the product is the main star, not the endorser (36).

The general belief among marketers is that advertisements in which celebrities are endorsed provide a higher degree of attention and eventually message recall than those using non-

celebrities (28) which is also supported by the current literature on celebrity endorsements. Less, however, is known about the effectiveness of using celebrities relative to other cues, as e.g. music in terms of brand recall.

Music and Brand Recall

In addition to celebrity endorsements, music in advertising has recently started to get more attention. Music is one of the elements which is most frequently used in advertising materials, with some studies indicating that television advertisements using music exceed 90% (37). It is also said to be one of the most prominent and creative elements (38, 39). One might have his/her eyes closed or look away while being exposed to an image (or video), while music is a cue which cannot be easily ignored. Acoustic stimuli are more forced, as there is no comparable way to elude sounds (except purposefully shutting ears).

The idea of a matching between a cue (in this case music) and a more precise effect (brand recall) is very much alive in the music in advertising literature (40). A music piece can be associated with a brand rather quickly – such connection can be created with as little as a single exposure (9).

There are studies examining which particular components of music pieces can lead to higher recall (of either brand or the ad itself). They show that various components can facilitate ad message processing, for instance, musical and voice fit (41), musical fit with ad message (42), specifically created music (43), tempo (44), familiarity (45), and both tempo and familiarity (46). In the same way, recall appears to be enhanced when the music and the message are congruent, as opposed to the condition when music is only used as an attention getting instrument (20, 39).

The results when it comes to music in advertising from a recall perspective are however inconclusive. Some studies did not identify any measurable music effect on recall scores (47) and some even found a negative effect (48-51). There are authors (50, 52-54) who have discussed the phenomenon of music diverting the listener's attention from the message and as such negatively affecting brand recall.

METHOD

Experimental Design

In order to analyse how celebrities and music work together to strengthen brand recall in TV-commercials, three retrieval cues: music, celebrity and endorser + music, were tested across 30 different TV advertisements. The experiment results in a 3 (cues: music, celebrity, celebrity + music) X 3 (commercial sets of 10 TV advertisements each) factorial design. In an experiment setting, aided recall makes it possible to test the effects of different cues in a more controlled way. The aided recall test isolates each of the three cues in order to compare their relative effectiveness as retrieval cues, and the focus of such a test is on checking the respondents' ability to connect a cue with a specific brand. In a non-aided recall test it is impossible to isolate the effects of each of the cues, and the focus in such a test would be on the commercial as a whole, rather than specific cues appearing in it.

In the period March-November 2013, 126 students were recruited as experiment participants. A convenience sample was used and the group had an average age of 23.4 years, and was rather equally split between male and female participants. The majority of students were Swedish (25%) or German (18%) while the other participants were coming from countries as

e.g. The Netherlands, Lithuania, Romania, China, Russia and Mexico. The choice of university students is debated and it is sometimes argued it should be avoided due to the low external validity when students are used as proxies for average customers (55). With this study's focus on celebrities and popular music we, on the contrary, argue that a student sample matches the profile of ordinary, young, consumers well. A university student in his/her early twenties is in many ways a good respondent for the consumer profile companies are aiming at in their use of celebrities and popular music. Similar arguments are used by Hunter (56) in his study of celebrity endorsement.

Each experiment group consisted of 14 individuals. The participants were randomly assigned to one of the groups. They were first exposed to one set of commercials and afterwards presented with one of the cues (music, celebrity or celebrity + music). Each cue was presented to three experiment groups in the second part of the experiment, with a total of 42 participants for each cue.

Each experiment session lasted for approximately 30 minutes: 10 minutes for presenting the experiment procedure, 10 minutes for showing the 10 ads and completing the questionnaire and 10 minutes for presenting the cues and completing the recall task. For each commercial, participants were exposed to 20 seconds of one of the cues (either music, screenshot of the celebrity or screenshot + music) for each of the 10 ads. The cues were presented in a different order as the commercials, but the same order was kept for both commercials and cues between the experiments based on the same set of commercials.

All in all, the sample consisted of 1.260 observations of 126 individuals, each individual being exposed to a set of 10 TV commercials and one of the three cues afterwards.

The participants were presented with a video stimulus, which combines both visual and auditory elements. In total, 30 ads were used. The ads selected were TV commercials developed for multinational brands in order to match the international profile of the sample. Moreover, the ads were selected in order to cover a wide range of products and be available online at a good quality. The airing of the commercial (country or year) was not considered, but the participants had to state for each commercial whether they had previously been exposed to it, in order to be aware of potential biases.

Procedure

At the beginning of the experiment, the participants were briefly introduced to the procedure of the experiment, and instructed on how to fill out the form given without mentioning the fact that cues would be provided and a recall test run, which might have increased the participants' focus during the experiment. The fact that the participants' focus was bigger in this type of experiment than under normal conditions of watching TV commercials embedded in a TV program has been considered. However, the participants were only exposed once to each commercial during the experiment, compared to a higher frequency in a real-life setting. The reduced number of exposures thus attenuates to some extent the forced exposure conditions, so the current research results can be expected to be similar to those after a high number of exposures to the same stimulus.

The fact that some of the commercials present longer exposure to the product and the brand was also considered as having an impact on the recall of one brand over another, but the decision to not interfere in any way with these differences was taken in favour of the advertisers' decision making and in order to keep the natural conditions of watching the

commercials. The alternative would have been to present the name of the brand on-screen before the commercial was shown.

MEASURES AND SCALES

The current research used the recall concept as a dependent variable and tested the change in recall when manipulating the three cues – music, celebrity and celebrity + music. Thus, brand recall stood for the dependent variable, while the celebrity and music cues were independent variables.

The data was recorded using a survey instrument that included four interval scales measuring the attention paid to the commercial, the familiarity with the celebrity, the music and the brand. Questions related to the previous exposure to the commercial, and a 1-6 Likert scale measuring the attention when watching a TV commercial and demographic questions were used. For the recall tests, a value of 1 was attributed to the correct answers, and a value of 0 to the incorrect or missing ones.

The familiarity with the celebrity was measured in the study on a 1-6 Likert scale, showing in the results a mean value of 4.34 and the standard deviation is 1.94. The familiarity with the music was measured in the study on a 1-6 Likert scale, showing in the results a mean value of 2.88 and a standard deviation of 1.82. In general, observations show a higher familiarity with the celebrity than with music (see Table 1).

Table 1: Familiarity Means And Distribution

	Standard deviation	Mean value	Pearson correlation	Sig. (2-tailed)	N
Familiarity with the Celebrity	1,94	4,3	.172	< .001	1260
Familiarity with the Music	1,82	2,9			

The Pearson correlation shows there is a low positive correlation between the familiarity with the music and the familiarity with the celebrity. The R-squared in the Pearson Correlation (.1722) shows that about 3% of the variance in the familiarity the celebrity is explained by the familiarity with the music.

In order to see the moderating effect that familiarity with the celebrity and/or music have on the brand recall of TV advertisements based on different cues, two groups were created within the sample. Those participants with values of 1-4 (4.3 mean value) were considered as not familiar with the celebrity while the values 5 and 6 were considered as familiar with the celebrity. Hence, familiarity with the music was shown by values from 3-6 (2.9 mean value) and values below that were considered as not familiar with the music (see Table 2). The recall of those samples that were familiar with one of the cues were compared with each other and to the ones which were considered as not familiar.

Table 2: Familiarity Boundaries

	Likert	
	not familiar	familiar
Celebrity	1-4	5-6
Music	1-2	3-6

RESULTS

Brand Recall for Each Recall Cue

In Table 3 below the brand recall for each cue is summarized, and the differences between the cues are measured for significance, based on ANOVA and T-test analysis, allowing the comparison of the mean scores on the continuous variables. These techniques will give an indication of whether the difference between groups is 'statistically significant', or not likely to have occurred by chance

Table 3

ANOVA. Scheffe coef, sig = .043

Celebrity	Music	Celebrity + Music
62% (420)	43% (420)	71% (420)

ANOVA. Scheffe coef. Sig = <.001 ANOVA. Scheffe. Coef. Sig = <.001

Brand Recall For Each Recall Cue (Number Of Observations)

Brand recall shows different values based on the type of cue provided for the TV advertisement. The level of recall for the music cue is 43%, for the celebrity cue is 62% and for both cues shown together - music + celebrity - it is 71%. The Scheffe coefficient in the ANOVA test shows values lower than .05, indicating a significant difference in brand recall between the three groups. It can thus be said that a celebrity cue has greater effect on brand recall than a music cue, and that combining both cues generates higher brand recall than each of the cues taken individually.

Brand Recall based on Familiarity with Celebrities and Music

The next step is to see if the overall brand recall (not sorted in the three cues) varies depending on the familiarity with celebrity and music. In Table 4 the brand recall is measured for the four combinations of familiarity. Independent sample t-tests were conducted in order to see whether there is a statistically significant difference between groups when the celebrity is familiar vs. when the celebrity is not familiar, as well as for when the music is familiar vs. when the music is not familiar.

Table 4: Brand Recall For Combined Familiarities (Number Of Observations)

	Celebrity is not familiar	Celebrity is familiar
Music is not familiar	47%(295)	68%(355)
Music is familiar	48%(206)	65%(404)

At first, only the cases when the music is not familiar were selected, with 650 (295+355) observations in this group. An independent sample t-test considered brand recall as the test variable and the familiarity with the celebrity as the grouping variable, with 1 for values of low familiarity and 2 for values with high familiarity. The t-test shows that within the group of observations that are not familiar with the music, there is a 47% brand recall when the celebrity is not familiar and a 68% recall when the celebrity is familiar. The sig. (2-tailed) has

the value < .001, showing that the difference in brand recall between the two groups (celebrity is familiar vs. celebrity is not familiar), is statistically significant.

Secondly, only the cases when the music is familiar were selected and by the same procedure as above, the t-test on 610 (206+404) observations shows the sig. (2-tailed) value < .001, indicating a statistically significant difference between the two groups: when the celebrity is not familiar (48% brand recall) and when the celebrity is familiar (65% brand recall).

For a third analysis, only the cases when the celebrity is not familiar were selected in order to perform an independent sample t-test. A total number of 501 (295+206) observations belong to this group, and the independent sample t-test shows a 47% brand recall when the music is not familiar and a 48% recall when the music is familiar, with no statistically significant difference between the two groups (sig. 2-tailed = .980)

In the fourth case, only the observations when the celebrity is familiar was considered, a total of 759 (355+404) cases. The t-test shows again no statistically significant difference between groups, with a sig. (2-tailed) value of .424 (between 68% recall when the music is not familiar and 65% brand recall when the music is familiar).

The analysis above indicate that the familiarity with the celebrity has a higher influence on brand recall than the familiarity with the music, showing a high influence in either of the cases when the music is familiar and when the music is not familiar. On the other hand, familiarity with the music seems to have no substantial effect on brand recall neither when the celebrity is familiar nor when the celebrity is not familiar.

Brand Recall for Each Recall Cue Based on Separate Familiarities

The next step is to check which effect each of the different types of familiarity has for the brand recall for the three cues. The results are shown in Table 5 below.

Table 5: Brand Recall For Each Recall Cue Based On Separate Familiarities (Number Of Observations)

	Celebrity	Music	Celebrity + Music
Celebrity is not Familiar	47(170)	36(182)	62(149)
Celebrity is familiar	73(250)	48(238)	75(271)
Significance	.000(47 vs. 73)	.013(36 vs. 48)	.006(62 vs. 75)
Music is not familiar	66 (231)	41(223)	70(196)
Music is familiar	58(189)	46(197)	71(224)
Significance	.110(66 to 58)	.315(42 vs. 46)	.732(70 vs. 71)

The same t-test analysis as for brand recall in each group was applied between groups in order to compare the brand recall variance on each cue. Differences are again significant only for the group that is not familiar with the celebrity vs. the group that is familiar with the celebrity (significance, sig. 2-tailed < .05), whilst when comparing the group that is familiar with the music vs. the group which is not familiar with the music, sig 2-tailed in the t-test shows values > .05, signalling no statistically significant difference. As before, independent of which cue was presented, familiarity with the music made no statistically significant difference on brand recall, while familiarity with the celebrity has an influence no matter what cue was presented (sig < .05) in all three cases. The highest difference in brand recall for the group that is not

familiar with the celebrity vs. the group which is familiar with the celebrity is when the screenshot/celebrity cue was presented (47% vs. 73%). For the celebrity cue being familiar with the music even scored lower than not familiar with music (58% vs. 66%), even though the difference is not statistically significant.

Brand Recall for Each Recall Cue Based on Combined Familiarities

The final step in the presentation of the findings is to crosscheck for the combined effects of familiarity with celebrity and music. From the previous step it can be concluded that there is a statistically significant difference in recall for all three cues between familiar with celebrity and not familiar with celebrity. The difference between familiar and not familiar with music is not statistically significant. Is there a difference in recall for the cues when looking at the combined familiarities? When, for instance, the celebrity is familiar, does the familiarity with the music make a difference? And when the music is familiar, does the familiarity with the celebrity make a difference, and so forth? In Table 6 below, the findings from this extended analysis are summarized.

Table 6: Brand Recall For Each Recall Cue Based On Combined Familiarities (Number Of Observations)

	Celebrity		Music		Celebrity + Music	
	Music is not familiar	Music is familiar	Music is not familiar	Music is familiar	Music is not familiar	Music is familiar
Celebrity is not familiar	51%(112)	38%(58)	37%(107)	35%(75)	57%(76)	68%(73)
Celebrity is familiar	80%(119)	67%(131)	44%(116)	52%(122)	78%(120)	73%(151)
Celebrity is not familiar	<.001(51 vs. 80)	<.001(38 vs. 67)	.320(37 vs. 44)	.014(35 vs. 52)	.002(57 vs. 78)	.501(68 vs 73)
Celebrity is familiar	Celebrity is not familiar	Celebrity is familiar	Celebrity is not familiar	Celebrity is familiar	Celebrity is not familiar	Celebrity is familiar
Celebrity is not familiar	51%(112)	80%(119)	37%(107)	44%(116)	57%(76)	78%(120)
Celebrity is familiar	38%(58)	67%(131)	37%(75)	52%(122)	68%(73)	73%(151)
Sig. 2 Tailed	.107(51 vs. 38)	.023(80 vs. 67)	.709(37 vs. 35)	.192(44 vs. 52)	.135(57 vs. 68)	.2980%37%6 (78 vs. 73)

When applying t-test analysis for brand recall between groups on each cue, and cross-checking for music and celebrity familiarity, several results appear.

The differences in brand recall are only significant in five out of 12 situations when looking at the brand recall for each cue in combination with familiarity with the celebrity and/or the music. Four of those cases show a significant difference when comparing the familiarity to the non-familiarity with the celebrity, with a significant difference in brand recall. For the remaining two cases the familiarity with the celebrity plays a less important role in the difference in brand recall, but even though the difference is not statistically significant it still

points in the same direction (familiarity with the celebrity giving higher recall than not familiar).

Only one of the six cases is significant when comparing the familiarity to the non-familiarity with the music. The brand recall difference between the two groups only shows a statically significant difference for the case when the celebrity cue is presented and the celebrity is familiar (sig. 2-tailed = .023). Moreover, in this case, the brand recall shows a statistically significant higher value (80%) when the music is not familiar vs. 67% when the music is familiar.

For the celebrity cue, as expected, brand recall is significantly higher when the celebrity is familiar. Against previous expectations this difference is even bigger when the music is not familiar. If the celebrity is not familiar, there is no significant difference in recall (but pointing in the same direction as above, with brand recall being higher when music is not familiar).

For the music cue a significant difference in recall could only be shown when the music is familiar. In those cases the recall was higher when the celebrity was also familiar (52%), compared to non-familiarity with the celebrity (35%). The same goes for the situation when the music is not familiar, with higher recall for familiar with celebrity (44%) compared to not familiar with celebrity (37%), although this difference is not statistically significant.

For the combined cues, the difference in brand recall was only significant when the music was not familiar. In those cases familiarity with the celebrity (78%) led to higher recall than non-familiarity (57%). When the music is familiar there is still a difference in the same direction (68% recall when celebrity is not familiar, and 73% when celebrity is familiar), although not statistically significant.

Independent from familiarity with the music, familiarity with the celebrity resulted in higher recall than when the celebrity was not familiar for all cues, however only statistically relevant in four out of six cases.

Familiarity with the music however led to more contradictory results. Familiarity with the music resulted in lower recall when combined with a familiar celebrity (statistically significant) as well as in two more not significant cases. The other three cases led to higher recall, however not statistically significant.

Additional Moderating Factors

The recall was also tested against four additional moderating factors: attention paid to the commercial, previous exposure to the commercial, usage of the product in the household, and interest in the product. The t-test shows a statistically significant relationship between the recalled brands and the attention paid to the commercial. Recalled brands score higher (.3) in the attention paid to the commercial than unrecalled brands. The t-test also shows a significant difference between the recalled brands vs. unrecalled brands in terms of the previous exposure to the commercial. The previous exposure to the commercial was measured in the current research using a yes/no answer to the question 'Have you seen the commercial before'. The results show 17% of commercials seen before for the recalled brands vs. 9% of commercial seen before for the un-recalled brands, with a significant difference between groups within the t-test. It can thus be concluded that multiple exposures to commercials increased brand recall. The recalled brands showed a 32% usage of the product in the household, vs. the unrecalled

brands only 26%. The t-test between the recalled/unrecalled brands showed a significant difference on this value. It can thus be said that recalled brands were more likely to have been used within the household vs. the unrecalled brands.

Alternatively, when the products are being used in the household, the recall increases by 8% vs. when not being used (64% vs. 56%), with a significant result in the independent sample t-test. This shows that the brands which are used in the household are more likely to be recalled than the brands which are not. No significant difference in terms of the interest in the product was found between the recalled brands and the interest in the product.

Predicting Brand Recall

After seeing which of the variables make a difference in the values of the brand recall, a binary logistic regression was conducted in order to see what factors predict the brand recall (see Table 7). The brand recall was the dichotomous dependent variable of the analysis, while 8 other variables were used as predictors: commercial seen before, attention paid to the commercial, interest in the product, and usage of the product in the household, familiarity with the music and familiarity with the celebrity. The regression analysis also controlled for gender and age. The binary logistic regression gives an indication of the importance of each predictor variable or the interaction among the predictor variables.

The Omnibus Test of Model Coefficients shows a chi-square coefficient of 77.2 with 8 degrees of freedom, while the Hosmer and Lemeshow test has a chi-square of 7.89, with a sig.=.444 (>.05 supporting the model).

Between 6% and 8% of brand recall is explained by the set of variables (Cox and Snell R Square = .059, Nagelkerke R Square = .080)

The variables that contribute significantly to the predictive ability of the model are: commercial seen before, attention paid to the commercial and familiarity with the celebrity. The interest in the product, familiarity with the music, gender and age did not contribute significantly to the model.

Table 7: Binary Regression Of Moderating Factors

	B	S.E.	Wald	Df	Sig.	Exp. (B)	95% CI for Exp(B)	
							Lower	Upper
Familirity with the celebrity	.181	.032	32.121	1	<.001	1.198	1.126	1.276
Familiarity with the music	.002	.034	.002	1	.964	1.002	.937	1.071
Commercial seen before	.583	.187	9.748	1	.002	1.792	1.242	2.584
Attention paid to the commercial	.116	.048	5.936	1	.015	1.123	1.023	1.234
Interest in the product	-.004	.036	.010	1	.919	.996	.929	1.069
Usage of the product in the house hold	.180	.134	1.807	1	.179	1.197	.921	1.557
Gender	-.149	.124	1.449	1	.229	.862	.677	1.098
Age	.004	.020	.048	1	.826	1.004	.965	1.045
Constant	-1.107	.519	4.550	1	.033	.330		

For the three variables that have a significant influence in the model the B value is positive, showing a positive relation between the brand recall and the predictive variable, e.g. an increase in the attention paid to the commercial will result in higher brand recall.

The odds of a person recalling the brand are 1.79 higher for someone who has seen the commercial before, 1.19 times higher for somebody who is familiar with the celebrity and 1.12 times higher for somebody who paid attention to the commercial. The familiarity with the music proves to not contribute significantly in predicting brand recall.

DISCUSSION

The above findings clearly show that certain individual predispositions and factors related to the advertisement mediate the brand recall of TV advertisements when exposed to one of the cues. In particular, the familiarity with the music and the endorsed celebrity as well as the ad retrieval cues will be discussed since those variables can be controlled by advertisers, through the specific choice of music and celebrities in ads as well as later on implemented cues supporting the recall.

Generally, brand recall based on each cue has been found to be significantly different when neglecting familiarity with the celebrity or music and other moderating factors. The combined visual and audio cue was, as expected, yielding the highest recall (71%) compared to only the visual image of the celebrity (62%) and a lot weaker recall for the audio/music cue (43%). The higher recall values for the celebrity cue compared to the music cue may among other reasons be due to the so called phenomenon of "visual dominance" which can be defined as a preferred processing of visual stimuli compared to e.g., haptic, kinaesthetic or auditory cues (57-59). It can be explained by the fact that the visual system provides the most reliable information about the identity of an object within a natural environment (60). In the experiment, this phenomenon may have led to a predominance of the visual cue (celebrity) in the recognition memory as well as a higher recognition rate for the audio cue (music) (61, 62). If both cues are combined, the recall would be even higher as the audio will add to the recognition memory from the visual cue and hence increase the recall of the brand compared to when only a single cue is presented.

Only looking at brand recall related to familiarity with the endorsed celebrity and/or music and neglecting the recall cues, the brand recall is significantly higher for ads with a familiar celebrity compared to a non-familiar celebrity, independent from the familiarity with the music. This is in line with Menon, Boone, and Rogers (28) who found that consumers are more likely to remember a product or brand if the ads feature a celebrity. Even when the respondent is not exposed to the celebrity cue they are still able to recall the brand when they are familiar with the celebrity in the commercial to a much larger extent compared to when they are not familiar with the celebrity. This effect seems to transcend the memory effect of only hearing the music cue. On the other hand, no considerable difference between the brand recall comparing familiar to non-familiar music had been found. This is further supported by the binary logistic regression presented which showed the familiarity with the celebrity to have a strong effect on brand recall.

When looking at the brand recall for each cue in combination with familiarity with the celebrity and/or the music, the differences in brand recall are only significant in five out of 12 situations. Four of those cases show a significant difference when comparing the familiarity to the non-

familiarity with the celebrity, and only one case is significant when comparing the familiarity to the non-familiarity with the music.

For the celebrity cue, brand recall was found to be significantly higher when the celebrity is familiar. This result was expected considering research on facial recognition which states that familiar faces/people (such as a well-known celebrity) are easier to remember and recall, including the situation/ad they had appeared in. Research on human cognitive functions suggests that people have a strong capacity to remember and recognize images, and especially human faces, and that this function is stronger when the face is familiar. The model of face recognition developed by Bruce and Young (1986) suggests that there are different cognitive processes involved in processing familiar 63 unfamiliar faces. This would explain why familiar with celebrity yields higher recall scores than not familiar with celebrity, for all the three cues and regardless if music is familiar or not.

Against previous expectations this effect is even stronger when the music is not familiar. A possible explanation for this may be that familiar music was distracting the focus from the celebrity. For the celebrity cue, the combination of a familiar celebrity and familiar music gave a statistically significant lower recall than the combination of familiar celebrity and non-familiar music. So when only the picture of the celebrity was shown, those cases where the celebrity only was familiar led to stronger recall. If the celebrity is not familiar, there is no significant difference in recall. Research on music in advertising has suggested a distraction factor which could partly help to understand this result. Edell (64) explains that each sensory mode may have an effect on the processing of an ad by a) directly evoking cognitive and affective reactions or b) indirectly affecting the processing of other sensory modes. For example a person watching a TV commercial may really like the song (a direct, positive, affective reaction) but the music may distract that person from processing the text of the audio track (indirect effect). This example given by Edell and Keller (65) may be adapted to the case at hand and open up for an explanation for the higher recall values when the celebrity was familiar and the music was not familiar compared to familiar music. Hence, if the participant who watches the TV ad is familiar with the music, this may potentially evoke a stronger direct reaction as liking or recalling other memories related to the song which at the same time indirectly affects the processing of the visual stimuli (celebrity) or in other words distract from the celebrity. As it has been argued before, an unfamiliar celebrity results in a weaker recall since familiar faces are recalled more easily which will stay the same independent from music familiarity. In addition, Olsen (66) showed that TV ads with music gave lower recall than ads with silence, suggesting that silence can increase the attention paid to the ad. Oakes and North (54) studied the effects of fast and slow tempo music on brand recall in TV commercials, and found that fast tempo music gave lower recall than slow tempo.

For the music cue, a significant difference in recall could only be shown when the music was familiar. In those cases, the recall was higher when the celebrity was also familiar (52%) compared to non-familiarity with the celebrity (35%). Literature suggests that people make sense of their environment by connecting different impressions as visual and audio input and build a story in their mind (source). If one of the input factors is more familiar, it may have a stronger memory effect since it is also connected to stored data in the mind and receives greater value. Hence, familiar music appearing in an ad may be connected to a familiar celebrity and together they then lead to increased/stronger brand recall.

For the combined cues, the difference in brand recall was only significant when the music was not familiar. In those cases familiarity with the celebrity (78%) led to significantly higher recall

than non-familiarity (57%). Celebrity familiarity clearly leads to higher recall which was however only found to be significant when the music was not familiar. Interestingly, the combination of a familiar celebrity and familiar music led to lower recall (however not statistically significant) than the combination of a familiar celebrity and an unfamiliar song. This finding conflicts with previous expectations of brand recall being highest when the celebrity and music in the ad were familiar. Since there was no significant difference in recall between familiarity and non-familiarity with the music, it can be assumed, supported by the findings of Johnson and Zatorre (61) and Cohen, Horowitz, and Wolfe (62) that the visual cue seems to have a stronger effect on recall than the audio cue.

MANAGERIAL IMPLICATIONS

The results discussed are based on the experiment where the conditions of aided recall were tested for three different cues. In the experiment the effects of familiarity and other moderating factors were isolated for each of the cues. A relevant question is what kind of useful information aided recall based on our experiment carry for advertisers, outside the experiment situation?

If aiming at highest brand recall, the highest effects will most likely appear when incorporating both, a well-known celebrity and popular music and then trying to aid brand recall through a combination of the audio and visual retrieval cue from the original ad. However, since this is rather hard to fulfil in a real setting, the results suggest to opt for a celebrity within the TV commercial and supported with a printed campaign (billboards, posters, magazines etc.) featuring the endorsed celebrity. This may stimulate higher recall rather than a possible radio ad or music played in-store with a popular song from the commercial.

Moreover, the effectiveness of integrating a well-known celebrity is considerably higher than that of a well-known popular song when looking at brand recall. Hence, neglecting all other factors as price, image, fit etc., it seems to be more effective to invest in a well-known celebrity than a popular song to enhance brand recall. However, the strength of recall also depends a lot on the selected cue that will be used to aid the recall after the exposure to the ad. The additional form of advertising used as part of a media campaign to support the recall of the brand, both, in-store and outside should be considered. If printed advertisements/images of the endorsed celebrity will be used to stimulate brand recall it seems to be advisable to not pair the celebrity in the TV ad with a well-known song since that combination has been shown to result in significantly lower brand recall. Those printed images of the celebrity could be for example in magazines, on posters or billboards, or directly at the point of sale as a part of the package design of the product or a display stand.

Furthermore, the results of this study point at an interesting asymmetry between celebrities and music when looking at the moderating role of familiarity (see Table 6). Brand recall is always higher when the celebrity is familiar compared to not familiar (and statistically significant in four out of six cases). When looking at familiarity with music a different picture emerges, with higher recall figures for not being familiar with music compared to being familiar. This pattern can be seen in four out of six situations (even though only statistically significant in one situation (for the celebrity cue and music is familiar).

FUTURE RESEARCH

Further research is needed to explain the finding that non-familiarity with the music results in higher recall that being familiar with the music in an advertisement. Moreover, it would be

interesting to experiment with different test groups (e.g. student vs. non-student) and in a real-life setting.

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