



# The Vampire Effect: The Role of Humour and Involvement Level in Advertisement Recall and Recognition

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## ABSTRACT

The effect of humour on brand and product recall and recognition in advertising, and the consumer's level of involvement, were studied by examining the "vampire effect," wherein factors, such as humour, draw attention away from an advertising message. A descriptive, cross-sectional quantitative online survey using convenience and snowball sampling recruited 443 participants, who assessed the humorousness of six advertisements, were asked to recall the advertisements without prompts, and then to identify those recognized from a list of brand names. The study showed that humour in an advertisement negatively influenced brand recall and recognition and also reduced product recall and recognition. In both cases, respondents were less able to remember the products and brands in the humorous advertisements. Furthermore, people with low involvement in the advertised product category were more affected by the vampire effect and so were less likely to remember the product or brand. Finally, recommendations are provided for when humour in advertising is appropriate and when not. The study is important because, although there is much research on effectiveness of advertisements, especially recall and recognition, there is relatively little research on the vampire effect, and almost nothing on the vampire effect of humour in advertising.

**Keywords:** Vampire Effect, Humour, Involvement, Advertising, Recall, Recognition

**JEL Classification:** M370.

## 1. INTRODUCTION

Due to the proliferation of new brands (e.g. Österreichisches Patentamt, 2021) consumers are now inundated with advertising messages, making it critical for companies to stand out. Accordingly, by employing diverse and uniquely appealing advertising methods, companies strive to distinguish themselves from their competitors and achieve greater awareness among recipients. On an average day, individuals are confronted with more than 6,000 advertisements and encounter over 25,000 new products within a year (Koneska et al., 2017, p.116). Humour is a powerful force, and an increasing number of companies are turning to humour as an attention-grabbing tool in their advertisements to generate increased recognition for their brand and product (Koneska et al., 2017, p.116). In the 1980s, about 24.4% of prime-time television and 9.9% of print advertising

was humorous (Weinberger and Gulas, 1992), whereas the use of humour became an increasingly common practice in advertising (Eisend, 2009) to the extent that, by 2017, 30% of all advertisements were humorous (Koneska et al., 2017).

Humour is something that exists when people find something funny or causes them to laugh (Koneska et al., 2017), but half a century ago, Kelly and Solomon (1975, p. 32) explained that humour, just like beauty, is subjective and lies within the individual's perception. Therefore, what people define as funny can differ from one individual to another, being influenced by factors such as locality, ethics, state of mind and gender (Koneska et al., 2017).

Considering the growth in humorous advertising, it is worth knowing whether 'overshadowing' effects occur. Whether the

humour in advertisements attempts to arouse viewers or to help the company remain in the viewer’s mind, the risk of the humour overshadowing the brand or product is real, thus causing the so-called “vampire effect” (Koneska et al., 2017, p. 117). Although humorous advertising positively influences the viewer’s mood and increases sympathy for a brand, there remains a risk of distraction. In addition, humour’s effects on processes involving comprehension and memory appear to be less clear and have been little investigated (van Kuilenburg et al., 2015). When the vampire effect occurs, attention-grabbing components of an advertisement, such as celebrities, humorous situations or erotic depictions, can attract a considerable portion of the viewer’s attention, thereby weakening brand and product perception (Tropp, 2019). Although numerous studies have focused on the effectiveness of advertising, little emphasis has been placed on the vampire effect, and even less on the role of humour in the vampire effect.

Furthermore, involvement, which refers to an individual’s personal interest in or engagement with a brand or product, can also significantly influence the remembering of a brand or product. Involvement plays a crucial role in shaping consumer behaviour, especially in terms of information processing and attitude formation (Foscht et al., 2015). When a person is highly involved, such as when making a significant purchase or when a brand is highly valued in their life, they tend to develop a deeper attachment and engagement with the brand or product. Consequently, this results in deeper information processing, ultimately leading to improved brand or product recall. Conversely, when involvement is low, individuals are less inclined to focus extensively on the information and retain it permanently. In such cases, memory may be more superficial and fade more quickly (Trommsdorff et al., 2008).

This paper reports on an empirical study to examine whether the vampire effect caused by humour can indeed influence brand and product recall and recognition. Recall pertains to the capacity to retrieve information from memory without the aid of explicit cues or stimuli. In other words, this refers to the ability to consciously reproduce or recognize something only from memory without the information being presented directly. Recognition, on the other hand, refers to the capability to recognize a piece of information or an event when it is presented again. As such, this describes the ability to recognize something as already known or experienced when confronted with appropriate stimuli or cues as discussed

by Bagozzi and Silk (1983) in their seminal work on recall and recognition. Because of the importance of involvement on advertising, the study also examined how brand and product recall changes with low or high viewer involvement in the advertised product category. In other words, how much the strength of the vampire effect, caused by humour, changes depending on the level of the viewer’s involvement in the advertised product category. To this end, the following three research questions were set:

*“How does the vampire effect caused by humour influence brand recall and recognition?”*

*“How does the vampire effect caused by humour influence product recall and recognition?”*

*“How does the strength of the vampire effect caused by humour change between low involvement and high involvement categories?”*

## 2. LITERATURE REVIEW

### 2.1. Advertising

Advertising is defined as “paid communication from an identified sponsor that uses media to persuade an audience” by Rodgers and Thorson (2019, p. 35), or as the influence of behavioural attitudes by means of communications disseminated via various media by Schulz (2021). Such media include television, radio, newspapers, magazines, the internet, social media, brochures, advertising flyers, or promotional items, which are paid to deliver these promotional and persuasive messages to their audiences.

Through advertising, a company seeks to influence consumer behaviour when buying and consuming economic goods (Kroeber-Riel and Gröppel-Klein, 2019, p. 3). In addition, advertising should also increase the level of knowledge of, and have an effect on, the consumer. In addition to the information function, advertising generates awareness and promotes the company’s market positioning compared to competing products and brands. Products, services, companies, people, and brands, as well as ideas, are all advertised (Siegert and Brecheis, 2010). However, not all advertisements share the same goals. Advertisements have different tasks and objectives to fulfil depending on, for example, the type of product or the company’s position in the market. As such, advertising can be classified into three distinct categories: informative, persuasive, and reminding (Kotler and Armstrong, 2015). Table 1 illustrates the three advertising objectives.

**Table 1: Advertising objectives**

Informative advertising	
Communication customer value	Suggesting new uses for a product
Building a brand and company image	Informing the market of a price change
Telling the market about a new product	Describing available services and support
Explaining how a product works	Correcting false impressions
Persuasive Advertising	
Building brand preferences	Persuading customers to purchase now
Encouraging switching to a brand	Creating customer engagement
Changing customer perceptions of product value	Building a brand community
Reminder Advertising	
Maintaining customer relationships	Reminding customers where to buy product
Reminding customers that the product may be needed in the near future	Keeping the brand in a customer’s mind during off-seasons

Source: Kotler and Armstrong, 2015, p. 451

## 2.2. The Vampire Effect

When an advertising stimulus, such as a celebrity endorsement, attracts the attention of the consumer, the consumer may remember the celebrity, but may not notice, or forget, the advertised brand or product (Erfgen et al., 2015). This is known as the vampire effect, which occurs when attention-grabbing components of an advertisement, such as celebrity endorsement, humorous situations or erotic depictions, attract a considerable portion of the consumer's attention, and therefore weakens product and brand perceptions, thus decreasing the advertising's effectiveness (Tropp, 2019). The vampire effect describes the unintentional consequence, where the advertising attracts full attention through its content, but the advertised product is barely or not at all perceived. As a result, the viewer of the advertisement remembers the advertisement, but does not remember the advertised product or brand (Tropp, 2019).

## 2.3. Humour

Humour is a universal phenomenon that most people experience repeatedly during the course of a typical day and in all kinds of social contexts. It is context-specific and therefore complicated, ambiguous and inconsistent. Humour is perceived differently by every individual (Koneska et al., 2017) because the perception of humour can be influenced by the depth of the individual's sense of humour, state of mind or cultural background (Alfano et al., 2022; Wehn, 2003). Humour has been found to differ significantly among different cultures (Jiang et al., 2019), particularly the kind of humour that requires greater cognitive effort, which is embedded in language and culture, or that relies on a common language or common set of culturally conditioned constructs to function, for example puns (McKeown, 2017). Humour provides a communicative message to generate arousal, smiling or laughter, through incongruity, feelings of superiority, feeling relieved, or even a combination of these (McBride and Ball, 2022). Simply put, humour can be seen as something that occurs when people find something funny or amusing (Cambridge Dictionary, 2023; Koneska et al., 2017).

## 2.4. Humour in Advertising

In advertising, humour has, for at least half a century, been associated with irony, joking, wordplay or exaggeration (Kelly and Solomon, 1975). However, humorous advertising also remains difficult to delimit, since the transitions to non-humorous advertising are fluid. Humour can appear in various forms, such as irony, wit, and sarcasm, but in principle, it refers to a stylistic means of communication that is shaped by joke techniques such as exaggeration (Nufer and Hirschburger, 2008). Various humour typologies have been categorised as discussed by Babinszki and Balázs (2023) – for example, Catanescu and Tom's seven types of humour (comparison, personification, exaggeration, pun, sarcasm, silliness and surprise) and Buijzen and Valkenburg's content-based typology of slapstick, clownish humour, surprise, misunderstanding, irony, satire, and parody.

Silliness is the most popular type of humour employed by advertisers in television commercials, whereas sarcasm predominates as the most frequently used form of humour in print advertising (Taecharungroj and Nueangjamnong, 2015).

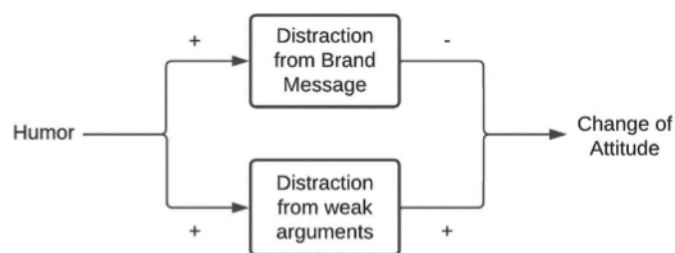
The humorous content within an advertisement can be persuasive, enhance the connection with the message, and generate a positive mood among viewers. As an advertising tool, humour is designed to put people in a good mood, attract consumers' attention and produce a positive effect. In reality, however, results are not always so predictable. As such, humour is not a guarantee of success - the vampire effect represents one potential risk, while the overuse of humour could reduce its impact (Djambaska et al., 2015), especially since advertisements can possess different communication goals (Taecharungroj and Nueangjamnong, 2015). All these factors lead to different effects of humour in advertising and due to its sensitive nature, the use of humour in advertising necessitates considerable attention and caution. If humour in an advertisement does not pay off, it could seriously damage the image of the product or brand (Djambaska et al., 2015).

It is becoming more difficult not only to make people listen to the advertising message, but also to ensure they actually understand it correctly (Gobe, 2010). Often, the message that listeners understand differs from the message the creators intended. For instance, the consumer may understand that the advertisement is funny, but not why it is related to the brand or product. Therefore, it is crucial for the advertisers to ensure that the humour used is relevant to the brand (Núñez-Barriopedro, 2019; Eisend, 2022; Powrel and Swapna, 2023).

Information processing theory claims that humour only produces positive effects on brand awareness. Humour captures the potential customer's attention, thereby enhancing their inclination to comprehend the conveyed message. This can lead to acceptance of the message and a change in attitude toward the brand if the content of the message convinces the customer (Sterthal and Craig, 1973). However, as illustrated in Figure 1, the so-called "distraction effect", another term for the vampire effect, shows that humour can distract from the actual content of an advertisement, which leads to the actual message being processed less intensively, possibly not being understood at all, or even being forgotten quickly (Langner et al., 2018). The fear is that consumers will perceive and remember the humour of a message, while the advertised product or brand is not remembered.

As seen in Figure 1, distraction can also produce a positive effect, if the message is distracted by weak arguments and if the recipient had a negative attitude toward the brand before seeing the advertisement. Counterarguments against the brand are reduced by the distraction, and as a result, the overall attitude toward the message can even become more positive (Strick et al., 2013).

Figure 1: Distraction effect



Source: Langner et al., 2018, p. 346

In summary, this means that humour can attract the consumer's attention and strengthen brand awareness. Conversely, though, humour could also negatively influence one's perception of a brand or product and trigger the vampire effect. Based on the above literature, the following hypotheses were set:

H<sub>1</sub>: There is a difference in brand recall and recognition between the humorous and non-humorous advertisements.

H<sub>2</sub>: There is a difference in product recall and recognition between the humorous and non-humorous advertisements.

## 2.5. Involvement

Zaichkowsky (1985, p. 942), who first explained product involvement, defined involvement as a person's perception of the object's relevance based on their inherent needs, values, and interests, whereas Kloss (2007) stated that involvement occurs when the consumer feels that a product or brand has something to do with the consumer and his or her personality. Involvement thus characterizes the commitment with which consumers attend to an offer.

In general, involvement refers to the commitment or intensity of information processing which a consumer expends on a potential purchase. A distinction can be made between two impact processes on an involvement continuum: high involvement and low involvement at the extremes of the continuum. The extent of involvement, and thus the division into high or low involvement, depends on the complexity of the decision processes, the risks associated with the decision, the characteristics of the information source, and the recipient's attention and motivation to engage with the object (Foscht et al., 2015).

For each consumer, this information processing can vary in intensity for different brands and products. A highly involved individual can be characterized by their selective and deliberate information processing, as well as their conscious and intensive engagement with the presented information. This process demands a substantial amount of time and effort (Bongard, 2003). Highly involved consumers search for and process more information compared to those who are less involved. Furthermore, due to their stronger cognitive processing of information, highly involved consumers have to place higher demands on the quality of information, arguments and the credibility of the source in order to form attitudes compared to low-involved consumers (Foscht et al., 2015). Thus, this deeper processing of information by highly involved consumers leads to better recall of the brand or product by such consumers.

In addition, quality and reputation constitute important points for convincing highly involved consumers, influencing their attitudes toward products or brands, and ultimately encouraging them to buy or intend to buy (Trommsdorff et al., 2008). On the other hand, a low-involvement person in a certain product category does not actively and specifically seek out information. Instead, such a person is characterized by low attention and a low level of interest (Bongard, 2003). In such cases, memory of the product and brand may be more superficial and fade more quickly (Trommsdorff et al., 2008). Based on this understanding of involvement, the following hypothesis was set:

H<sub>3</sub>: The vampire effect is stronger for people with low involvement than for high involvement in the respective product category.

## 2.6. Appropriateness of Humour in Advertisements

Although humour is a subjective phenomenon that can be perceived differently by each individual, there are certain factors that can help decide whether to use or avoid humour in advertisements. For instance, certain product categories or topics considered sensitive by society should refrain from having jokes, satire, or other forms of humour incorporating in their advertising. In addition, not all products necessarily benefit from the inclusion of humour in their advertisements. In fact, there are even certain product categories where the use of humour in their advertisements should be completely avoided.

The "product colour matrix" (PCM) emphasizes the variations among products that must be considered when developing advertising (Weinberger et al., 1995). The matrix provides decision-making metaphors for how consumers act toward products in each category (Weinberger et al., 1995). As illustrated in Table 2, the PCM distinguishes products into lower risk and higher risk products, as well as products with high utility (functional products) and high emotional value (expressive products). This matrix helps to identify which product categories benefit from humorous advertising versus those in which the use of humour is out of place (Weinberger et al., 1995). The four categories in the matrix are explained in greater detail in Table 2. In addition, information is provided regarding the products for which humorous advertising is and is not advisable.

### 2.6.1. White goods

White goods comprise high risk products that serve a functional purpose. These products typically involve high costs but are considered essential or necessary for most individuals to possess

**Table 2: The product colour matrix (PCM)**

Riskiness of using humor	Functional tools	Expressive toys
Higher risk	Cell 1 "White Goods" Bigger Tools Examples: Motor cars, insurance, furniture, large appliances, car tyres	Cell 2 "Red Goods" Bigger Toys Examples: Fashion items, sports cars, motorcycles, party dresses, luxury items, jewellery
Lower risk	Cell 3 "Blue Goods" Little Tools Examples: Detergents, household cleaners, kitchen supplies, staple foods, beauty products, over-the-counter medicines, motor oil and petrol	Cell 4 "Yellow Goods" Little Treats Examples: Snack foods, beer, alcohol, desserts, chewing gum, candy, soft drinks, tobacco products

Source: Adapted from Weinberger et al., 1995, p. 47

(Spotts et al., 1997, p. 20). Because of the high price and long useful life of white goods, they are purchased less frequently, and buyers take more time to compare models, prices, and sellers. However, the consumer bears little emotional attachment to the purchased product and experiences no pleasure in the purchasing process (Spotts et al., 1997).

Weinberger et al. (1995) advises against employing humour in advertisements for white goods as such use would negatively influence the audience's comprehension of the brand. When a customer buys a product with a high price, they also expect a certain level of seriousness. For example, when a customer concludes an insurance contract, seriousness and professionalism are required. Humorous advertising could potentially generate the impression among consumers that they are not engaging with a serious and reliable business.

### 2.6.2. Red goods

The second cell of the PCM consists of 'red' goods. These are high risk products, representing the individual's personality or success, serving the purpose of self-expression and being consumed for sensory gratification rather than for purely functional reasons (Weinberger et al., 1995). A red good can result in a high and long-lasting emotional benefit for the consumer but also bears both a financial and an emotional risk. In most cases, products in this category are not essential but are desired by many people.

Red goods are not associated with humorous advertising, as humour can negatively influence the consumers' ability to associate the advertisement with the brand (Weinberger et al., 1995).

### 2.6.3. Blue goods

Blue goods represent low-risk, functional, routine purchases that can be consumed and aid in tasks such as cleaning, cooking, and personal care. Blue goods are low risk, meaning consumers tend to process less information prior to purchase. However, due to their functional nature, consumers have some interest in relevant information (Weinberger et al., 1995).

For advertising of blue goods, focusing on the core benefits of the product is most appropriate. According to Eisend (2009) humour in advertising for blue goods may be effective, but there is no guarantee of its success. Therefore, humorous advertising of blue goods is neither recommended nor discouraged.

### 2.6.4. Yellow goods

Yellow goods refer to little treats that are considered daily rewards. These products are purchased routinely, helping the buyer feel good, but with low financial risk (Weinberger et al., 1995).

Yellow goods have the highest probability of success when using humour in advertisements (Spotts et al., 1997). Humorous advertisements for yellow goods positively influence both attention and comprehension of the brand (Weinberger et al., 1995).

## 2. CONCLUSION

The foregoing literature review has reviewed previous research into, and explained the application and the risks of, humour in

advertisements. One of the risks clearly identified is the vampire effect, but it is noted that relatively little research into the vampire effect of humour in advertisements has been published. Furthermore, the effect of the consumer's level of involvement with the product category on the vampire effect of humour on a brand's advertising effectiveness has not been extensively researched. As a result, this gap in the knowledge led to the development of the three hypotheses which were tested via the methodology which is explained in the next section.

## 3. METHOD AND DATA

A descriptive, cross sectional quantitative survey, based on an emailed questionnaire to the researchers' email contacts was used. Since there has been little research involving the influence of both humour and involvement on the vampire effect in advertising, this study is considered as exploratory.

### 3.1. Respondents

The respondents were selected by initially approaching the authors' circle of friends and acquaintances in their online contact lists and then asking them to forward the survey to their contacts. Thus, the sampling method was a combination of convenience and snowball sampling. Since the respondents decided themselves whether to participate or not, it was effectively a self-selected sample. Such self-selection sampling could result in selection bias or non-response error (Bless et al., 2013). Since this study is essentially exploratory and did not attempt to be proportionally representative or generalizable, the achieved sample can be accepted as a reflection of the opinions across the demographic categories. Thus, possible sampling bias or error is a less important problem.

A usable sample of 443 was achieved, which exceeds Sekaran and Bougie's (2013) suggested sample size of 384 and allowed for any unusable or incomplete responses. The calculation of 384 is based on a t distribution with an allowed error of 0.1 for a 7-point Likert type scale, an assumed variance of 1 and a 95% level of significance.

### 3.2. Data Collection

#### 3.2.1. Instrument derivation

In order to develop the measurement instrument for this empirical study, an analysis and elaboration of relevant literature were first conducted so as to obtain an overview of the research situation. To make theoretical concepts measurable, they are operationalized as indicated in Table 3, which presents the survey items and their measured values (Döring, 2022).

#### 3.2.2. Instrument administration

An online survey was conducted using the website <https://soscisurvey.de>. All survey participants saw six different advertisements, with each advertisement being visible for 6 s, which is slightly longer than the average viewing time for traditional print advertisements (Erfgen et al., 2015). Following each advertisement, and with the help of four different questions, the participants were asked how humorous they found the advertisement on a scale of 1 to 7. The six advertisements were subjectively selected with both humorous and non-humorous being included (Appendix 1), based on an exploratory pretest with 21

**Table 3: Operationalization of data collection instrument**

Survey item	Measured values
Statements after each of 6 advertisements: 1. The advertisement made me laugh. 2. The advertisement made me smile. 3. The advertisement amused me. 4. The advertisement was funny.	1=Strongly Disagree to 7=Strongly Agree
Distraction tests Open question: Can you remember the brands advertised?	1=Cannot remember, 2=JBL, 3=Chupa Chups, 4=WMF, 5=Odol-Med3, 6=Durex, 7=Miele
Open question: Can you remember the products advertised?	1=Cannot remember, 2=Headphones, 3=Lollipop, 4=Knife, 5=Toothpaste, 6=Condom, 7=Dishwasher
Aided question: Can you remember the brands advertised?	1=Cannot remember, 2=JBL, 3=Chupa Chups, 4=Elmex, 5=WMF, 6=Odol-Med3, 7=Burger King, 8=Durex, 9=Miele, 10=Snickers
Aided question: Can you remember the products advertised?	1=Cannot remember, 2=Headphones, 3=Lollipop, 4=Cars, 5=Kitchen knife, 6=Toothpaste, 7=Chocolate, 8=Condoms, 9=Dishwasher, 10=Adhesive
Assessment of respective product category: 1. Important – unimportant, 2. Irrelevant – relevant, 3. Means a lot to me - means nothing to me. 4. Unexciting – exciting 5. Dull – neat, 6. Matters to me - does not matter to me, 7. Fun - not fun, 8. Appealing – unappealing, 9. Boring – interesting 10. Of no concern to me - of concern to me	1= Strongly Disagree to 7= Strongly Agree
Demographic questions What is your gender? How old are you?	1=Female, 2=Male, 3=Other/diverse 1=Younger than 18, 2=18-24 years, 3=25-34 years, 4=35-44 years, 5=45-55 years, 6=56-65 years, 7=66+ years
What is your nationality? What is your highest education?	1=Austria, 2=Germany, 3=Italy, 4=Switzerland, 5=Other 1=No higher education, 2=Lower secondary, 3=Apprenticeship, 4=A-Levels, 5=Bachelor degree, 6=Master's degree, 7 = Diploma, 8=Doctor, 9=None of the above

participants. The participants then had to complete three logic tests (solving simple number sequences and word riddles) which served as a distraction and had no further relevance for the study. After the distraction tests, the participants were asked open, unaided questions as to what brands and products they remembered from the advertisements they had seen – this measured unaided recall. Thereafter, participants were asked to select, from a list of names, any brands and products that they thought they remembered from the viewed advertisements – this measured aided recognition. The list of names also included brands and products that did not appear in the advertisements at all in order to reduce the effect of guessing.

As recall and recognition are influenced not only by the humorous aspect, but also by the participant's level of involvement, their level of involvement in the relevant product categories was then measured by McQuarrie and Munson's (1992) ten item "revised personal involvement inventory" (RPII) scale, a frequently applied and tested method of high validity and reliability. The items' sequencing was randomised so that not all adjectives indicating high involvement were on the same side (Bearden et al., 2011).

## 4. RESEARCH RESULTS

In this section, the demographic profile of the participants is first presented, followed by a detailed exploration of the brand and product recall data and the brand and product recognition data. Thereafter, the study's three hypotheses are tested.

### 4.1. Profile of Participants

After checking and cleaning the returned responses, the final useable sample size amounted to N=443. The demographic profile of these respondents is presented in detail in Table 4.

The sample was roughly two thirds female and two thirds below 44 years of age – this was probably influenced by the use of social media for data collection and by the selection acquaintances via convenience sampling and the use of the snowball sampling method. The vast majority of the sample were from Austria and were relatively well educated. With this demographic spread in the sample it can be concluded that it is sufficiently representative and knowledgeable to have had access to advertisements and provide opinions about products and brands.

### 4.2. Validity and Reliability of the Instrument

To assess the factor structure of the research constructs and thus the validity of the data collection instrument, an exploratory factor analysis using Principal Component Analysis as the extraction method was conducted. A Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's test of sphericity were carried out to ensure the factorability of the data. The KMO (0.922) indicated a highly suitable dataset for factor analysis, with 0.6 as the minimum appropriate level and values closer to 1 being more suitable for factor analysis (Dawson, 2017). The Bartlett test was also highly significant (0.001) These results confirmed that the sample size was sufficient for EFA, and that the data were factorable. Thus, the EFA,

using Principal Component Analysis as extraction method, based on an Eigen value >1 and using Varimax with Kaiser Normalization as the rotation method produced the results as shown in Table 5. The total variance explained was 71.66%.

The loadings show a clear association of the four items to measure humour as one factor and a clear association of the ten items to measure involvement as the second factor. Cronbach's Coefficient Alpha was used to assess reliability, with a coefficient of 0.7 or higher being considered reliable (Sekaran and Bougie, 2013). Alpha values of 0.957 for humour (N = 4) and 0.938 for involvement (N = 10) were obtained, Therefore, the results show both high reliability and validity for the measuring of the two constructs.

### 4.3. Brand Recall and Recognition

After being exposed to the advertisements and answering the three distraction questions, the participants, were asked which advertised brands they could remember (recall) and then asked to select, from a list of several possible advertisements, the brands they remembered (recognition). Brands that were not included in the previously shown advertisements were included in the list.

As seen in Table 6, the rates for brand recognition were higher than for brand recall, meaning that, with the given answer choices, participants could more easily remember the advertised brands. The incorrect, non-advertised brands were rarely selected. Only Elmex, of the non-advertised brands, was selected by 47 participants (10.6%). The other non-advertised, distracting brands were below 10%. The best recall was for the Durex advertisement. Here, 342 participants (77.2%) could recall the brand, and 421 (95%) recognized it. The lowest brand recall occurred for Odol-Med3 with 112 participants (25.3%) recalling it, while the lowest brand recognition occurred for JBL with 218 participants (49.2%) recognising this brand.

### 4.4. Product Recall and Recognition

Following brand recall and recognition testing, the recall and recognition of the advertised products were assessed via questions of a similar sequence and structure to those used for the brand testing, except that the questions focused on the advertised products instead of the brands.

As seen in Table 7, it was easier for the participants to remember the products with the help of predefined answer options – the product names. Product recognition was thus higher than product

**Table 4: Demographic profile of respondents**

Gender	Frequency	Percent	Location	Frequency	Percent
Female	273	61.6	Austria	349	78.8
Male	160	36.1	Germany	75	16.9
Diverse	7	0.7	Switzerland	4	0.9
Not specified	3	0.7	Other	14	3.2
Total	439	99.1	Total	442	99.8
Not answered	4	0.9	Not answered	1	0.2
Age	Frequency	Percent	Education	Frequency	Percent
Younger than 18	6	1.4	No higher education	5	1.1
18-24 years	93	21	Lower secondary school	15	3.4
25-34 years	147	33.2	Apprenticeship certificate	80	18.1
35-44 years	54	12.2	A-Levels	128	28.9
45-55 years	75	16.9	Bachelor's degree	79	17.8
56-65 years	58	13.1	Master's/Doctor degree	64	14.4
66+	10	2.3	Diploma	55	12.4
			None of the above	17	3.8

**Table 5: Exploratory factor analysis**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.922
Bartlett's Test of Sphericity	Approx. $\chi^2=5292,98$	Df=91 Sig=0.000
Rotated Component Matrix	Involvement	Humour
The advert made me laugh.	-0.158	0.899
The advert made me smile/smirk.	-0.081	0.944
The advert amused me.	-0.071	0.950
The advert was funny.	-0.076	0.952
Product category XYZ is unimportant/important to me	0.800	-0.056
Product category XYZ is boring/interesting	0.791	-0.112
Product category XYZ means nothing to me/means a lot to me	0.853	-0.103
Product category XYZ is not exciting/is exciting	0.770	-0.028
Product category XYZ is dull/is great	0.843	-0.072
Product category XYZ is indifferent/is not indifferent to me	0.783	-0.093
Product category XYZ is not associated with fun/is associated with fun	0.666	-0.033
Product category XYZ is charmless/is charming	0.786	-0.125
Product category XYZ is irrelevant/is relevant	0.847	-0.082
Product category XYZ is insignificant/significant to me	0.844	-0.142

\*Rotation converged in 3 iterations

recall. The best product recall and recognition performance was found for condoms. Here, 338 participants (76.3%) were able to recall the product, and 413 (93.2%) recognized it correctly. The lowest performance occurred for headphones, achieving a product recall of only 97 (21.9%) and recognition of 218 (49.2%).

**4.5. Perceived Humorousness of Advertisements**

To conduct the subsequent statistical testing of the hypotheses as to whether humour creates a vampire effect, it was necessary to first analyse which advertisements were perceived as humorous and which were considered less humorous by the respondents. For this purpose, the questions regarding perceived humour were combined into an average score. The higher this score, the funnier the advertisement was perceived by the participants. Table 8 shows the respective descriptive statistics of the subjective humour assessment according to each advertisement.

On average, the WMF advertisement was perceived as the funniest (M = 4.41) while the Miele advertisement presented the lowest values in the subjective assessment of humour (M = 2.55). A paired sample t-test revealed a highly significant difference (P < 0.001, 95% confidence interval 8.837–1.062) between the two advertisements, with a large effect size (Cohens d = 0.95). In order to examine the possible vampire effect and the assumptions of the

**Table 6: Frequencies of brand recall and recognition**

Brand	Recall (%)	Recognition (%)
JBL	120 (27.1)	218 (49.2)
Chupa Chups	178 (40.2)	335 (75.6)
Odol-Med 3	112 (25.3)	345 (77.9)
WMF	165 (37.2)	281 (63.4)
Miele	310 (70.0)	389 (87.8)
Durex	342 (77.2)	421 (95.0)
Non-advertised brands		
Elmex	-	47 (10.6)
Snickers	-	8 (1.8)
Burger King	-	14 (3.6)

**Table 7: Frequencies of product recall and recognition**

Product	Recall (%)	Recognition (%)
Headphones	97 (21.9)	218 (49.2)
Lollipop	245 (55.3)	387 (87.4)
Toothpaste	335 (75.6)	407 (91.9)
Knife	211 (47.6)	362 (81.7)
Dishwasher	290 (65.5)	393 (88.7)
Condoms	338 (76.3)	413 (93.2)
Non-advertised products		
Cars	-	9 (2.0)
Chocolate	-	7 (1.6)
Adhesive	-	11 (2.5)

**Table 8: Average score of perceived humour**

Brand	n	Min	Max	Mean	Standard Deviation
WMF	443	1.00	7.00	4.4069	1.66909
Chupa Chups	443	1.00	7.00	3.7319	1.77047
JBL	443	1.00	7.00	3.5869	1.81553
Durex	443	1.00	7.00	3.0265	1.69049
Odol Med	443	1.00	7.00	2.7460	1.40825
Miele	443	1.00	7.00	2.5547	1.36567

hypotheses, these two advertisements were used to further compare humorous (WMF) and non-humorous (Miele) advertisements.

**4.6. Testing of Hypotheses 1 and 2**

According to the hypotheses, the dependent variables are the recall and recognition of the brands and products. In the present data, these were binary coded with 0 = not remembered and 1 = remembered. Therefore, McNemar’s Chi-square tests were conducted to compare recall and recognition between the humorous and non-humorous advertisements. To test the hypotheses, recall and recognition performance were compared between the WMF (humorous) advertisement and the Miele (non-humorous) advertisement. The results of all four tests, i.e. recall product and brand and recognition product and brand, were highly significant (p < 0.001).

**4.6.1. Recall**

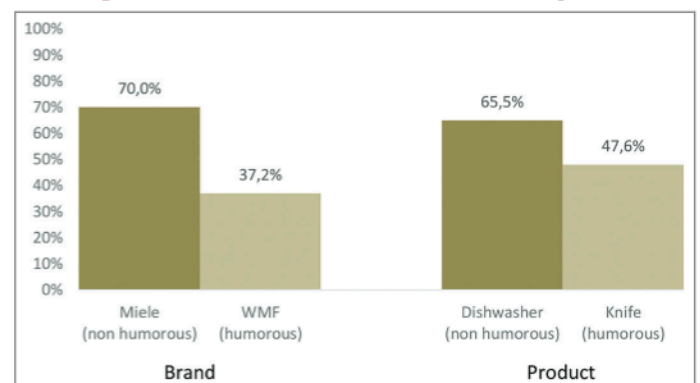
The brand recall demonstrated highly significant ( $\chi^2 < 0.001$ ) better performance for Miele’s advertisement (70%) than for WMF’s advertisement (37%). Furthermore, the product recall was also highly significantly ( $\chi^2 < 0.001$ ) better for the dishwasher (65%) than it was for the kitchen knife (48%). Based on these results, Miele’s advertising achieved both a higher brand and product recall compared to WMF’s advertising. Figure 2 illustrates the difference between the recall of these brands and products.

**4.6.2. Recognition**

For brand recognition, performance was significantly ( $\chi^2 < 0.001$ ) stronger for the Miele advertisement (88%) than for the WMF advertisement (63%). The product recognition was also highly significantly ( $\chi^2 < 0.001$ ) better for the dishwasher (89%) than for the kitchen knife (82%). Based on these results, it is clear that Miele’s advertising achieved both a higher brand and product recognition than WMF’s advertising. Figure 3 illustrates the difference between the recognition of brands and products.

Regarding both the brand and the product, these results indicate that the vampire effect was observed in both recall and recognition. In each case, the advertising that was considered less humorous led to better recall and recognition performance. A highly significant difference was also found in brand recall and recognition between the humorous and non-humorous advertisements as well as in product recall and recognition. Therefore, both hypotheses 1 and 2 can be confirmed, i.e. that there is a difference in brand recall and recognition between the humorous and non-humorous

**Figure 2: Difference between recall of brand and product**



advertisements, while the associated null hypotheses can be rejected, i.e. there is no difference in brand recall and recognition between the humorous and non-humorous advertisements.

### 4.7. Testing of Hypothesis 3

The third hypothesis concerned the vampire effect being stronger with participants reporting low involvement with the advertised brand and product than those reporting high involvement.

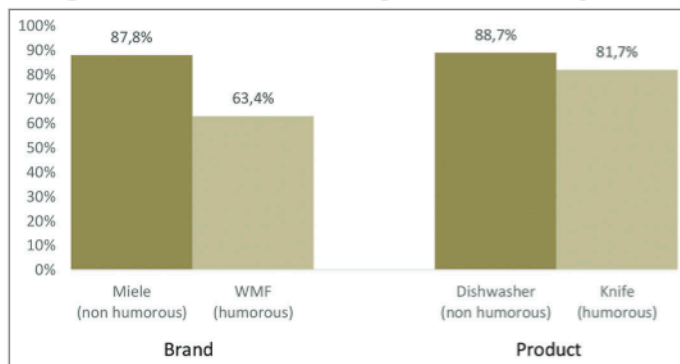
Since the calculation of involvement is based on several items for the different product categories and corresponds to a metric variable as an averaged variable, this was dichotomized by a median split. Accordingly, all study participants who demonstrated average involvement in the respective product category above the median, including the median, were classified as high involvement, and all those with values below this were defined as low involvement.

To test the hypothesis, the recall of the brand WMF and the product category kitchen knife by the low involvement group was compared with the corresponding recalls by the high involvement group, using Chi-square tests. In this context, involvement refers to the participants involvement with the specific product category “kitchen accessories.” The same test was then done for the recognition of the brand WMF, comparing the low and high involvement groups.

Next, the same four tests were conducted for the brand Miele and the category dishwasher with the involvement now referring to the product category “household appliances.”

Table 9 shows the percentage of recall and recognition for all crosstabulations with the specific high and low involvement groups and the significance levels from the Pearson Chi-square tests.

**Figure 3:** Difference between recognition of brand and product



Recall and recognition were higher in all cases for the high involvement group than for the low involvement group. This applies to both the humorous and the non-humorous brand and product. This implies that the vampire effect caused by humour is stronger for the low involvement group than for the high involvement group. Hypotheses 3 is thus confirmed. The only anomaly in these findings is the product recognition for both humorous and non-humorous categories. Although the high involvement groups’ recognitions are higher than the low involvement ones, i.e. the vampire effect is stronger for low than for high involvement people, the results are not statistically significant (kitchen knife P = 0.25, dishwasher P = 0.14). This can be explained by the nature of involvement, because generally the influence of involvement is lower when somebody just has to select a given product category than when they are required to remember it without any prompting, which is obviously stronger than the influence of the vampire effect of humour.

## 5. DISCUSSION OF RESULTS

Although humour may not be a decisive stimulus, it can create a favourable setting for advertising and can potentially result in increased customer purchase intentions. However, advertising remains a complex area, and it is not possible to state definitively whether humour produces positive or negative effects in advertising (Djambaska et al., 2015). Rather, this depends on the communication goal, the target audience, what is being advertised, and what type of humour is being used. Accordingly, whether humour in advertising presents more of an opportunity or a risk depends on various factors, such as the product and the context in which the humour is utilized. On the one hand, humour can certainly increase awareness and popularity, while on the other hand, the potential risks, such as triggering the vampire effect, should not be underestimated. Attention to, and distraction from, the actual advertising message are closely linked, and misunderstandings can easily arise (Gobe, 2010).

This study answered the research questions “How does the vampire effect caused by humour influence brand recall and recognition” and “How does the vampire effect caused by humour influence product recall and recognition?” A clear difference between brand recall and recognition between the humorous and non-humorous advertising was demonstrated. Both brand recall and recognition were lower with the humorous advertising, which supports both Koneska et al.’s (2017) vampire effect and Langner et al.’s (2018) distraction effect. In other words, fewer participants were able

**Table 9: Recall and recognition for high and low involvement groups**

Perception of advert	Recall/recognition Brand/product	Involvement (%)		Overall (%)	Sig. (p)
		Low	High		
Humorous	WMF recall	30.1	44.7	37.2	<0.001
	WMF recognition	55.3	71.9	63.4	<0.001
	Kitchen knife recall	41.6	53.9	47.6	0.009
	Kitchen knife recognition	79.6	83.9	81.7	0.250
Non- humorous	Miele recall	65.8	74.5	70.0	0.045
	Miele recognition	84.4	91.5	87.8	0.023
	Dishwasher recall	61.0	70.3	65.5	0.041
	Dishwasher recognition	86.6	91.0	88.7	0.139

to remember the brand after seeing the humorous advertising, thus demonstrating the vampire effect in the same way as found by Erfgen et al. (2015) with regard to the use of celebrities in advertisements. Our finding also supports Tropp's (2019) view of advertising effectiveness as being decreased by the unintentional consequences of the vampire effect, that is, although the advertising attracts attention, the advertised brand is hardly perceived and not remembered. Thus, our findings support the first hypothesis ( $H_1$ : *There is a difference in brand recall and recognition between the humorous and non-humorous advertisements*), which can therefore be accepted.

The same conclusions held true for our findings about product recall and recognition as those, discussed above, of Erfgen et al. (2015) and Tropp (2019). There were also significantly fewer participants who were able to remember the product in retrospect after viewing the humorous advertisement. Thus, the unintended consequences of the vampire effect also reduce the advertisement's effectiveness in ensuring that the consumer recalls and recognises the advertised product. Thus, our findings also support the second hypothesis ( $H_2$ : *There is a difference in product recall and recognition between the humorous and non-humorous advertisements*), which is also therefore accepted.

The vampire effect thus influences brand recall and brand recognition, as well as product recall and product recognition. In both cases, the subjects were less able to remember the brand and product in the case of the humorous advertising. Thus, the vampire effect caused by humour has been demonstrated and shows an influence similar to the vampire effect caused by other advertising techniques, such as the use of celebrities, which have been reported in the past (e.g. Evans, 1988; Erfgen et al., 2015).

With regard to the third research question, "*How does the strength of the vampire effect caused by humour change between low involvement and high involvement groups?*", was also satisfactorily answered. The strength of the vampire effect caused by humour differs between low and high involvement categories. It was determined that participants characterized by low involvement within a certain product category are more affected by the vampire effect. As such, they are more likely to not remember the product or brand. The analyses were conducted with the most humorous advertising WMF and the least humorous Miele. It was observed that people with high involvement were better able to remember the advertised brands and products as suggested by Foscht et al. (2015). By contrast, people with low involvement in kitchen equipment were less able to remember the advertised brands, WMF and Miele, and the products, kitchen knife and dishwasher, which supports Trommsdorff et al. (2008) who showed that memory was more superficial and faded quickly when involvement was low. Thus, our findings confirm that the strength of the vampire effect can change depending on the viewer's level of involvement. This finding supports the third hypothesis ( $H_3$ : *The vampire effect is stronger for people with low involvement than for high involvement in the respective product category*), which is also therefore accepted.

## 6. IMPLICATIONS FOR PRACTITIONERS

When categorizing the products from the humorous advertisement (WMF) and the non-humorous advertisement (Miele) into the PCM, Miele's dishwasher belongs to the white goods category, while WMF's knife is classified as a blue good (Weinberger et al., 1995). The designation of Miele's dishwasher as a white good is due to its high price, higher-risk nature, and functional purpose. Since humour is not advisable for this type of product, the advertisers did not use humour in Miele's advertisement, which may explain why the Miele dishwasher was well-remembered compared to the WMF kitchen knife. The WMF knife belongs to the category of blue goods. These are typically small products serving functional purposes like cooking, and consumers usually have some interest in relevant information related to them. Eisend (2009) suggests that humour in advertising for blue goods may be effective, but there is no guarantee for its success. This study has shown that, in this case, humour was not effective and, as a result, the product as well as the brand were not as well-remembered as in the case of the non-humorous advertisement.

These findings have highlighted the significance of the vampire effect, emphasizing that it should not be underestimated as it poses a considerable risk for companies advertising their brands and products. While humour in advertising can lead to increased attention, its effectiveness is limited if consumers fail to associate it with the advertised product or brand. Therefore, it is crucial to be selective in using humour, carefully choosing the product categories where it can genuinely enhance the message. Clearly, humour can and will be used in categories for which it is not intended, but risks such as the vampire effect should be considered from the outset.

## 7. LIMITATIONS AND FURTHER RESEARCH

Reliance on an online survey with the researchers' acquaintances could result in selection bias. Therefore, future research should focus on more clearly defined target populations. For example, is humour perceived differently across different age, education or income categories for different socio-demographic groups, for example, Generation Y or Z.

A second limitation was the semi-subjective nature of the selection of the advertisements. Would different advertisements yield a different result? Therefore, further replication research using different advertisements is suggested.

The use of the online survey methodology limited the extent of measurement and analysis that could be done. An experimental approach would be very worthwhile to, for example, use face or smile recognition software to measure the subject's reactions to advertisements. Thus, people who react to an advertisement by laughing could be compared to non-laughing people, and the perception of the message could be studied accordingly.

This study was delimited to only the vampire effect, involvement and brand and product recall and recognition as variables. There are undoubtedly other factors, such as distractions, repetition or negative associations with the advertised brand or product, which could also significantly influence recall and recognition. Therefore, more multi-variable research should be conducted to identify what other factors influence recall and recognition of humorous advertisements.

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**Appendix**

**Appendix 1: Advertisements used in the survey**

<p><b>JBL ad</b></p> <p>Source(<a href="https://digitalsynopsis.com/advertising/noise-cancelling-headphones-jbl/">https://digitalsynopsis.com/advertising/noise-cancelling-headphones-jbl/</a>) (01.05.2023) RED</p>	<p><b>Chupa Chups ad</b></p> <p>Source(<a href="https://medium.com/illumination/chupa-chups-lollipop-its-sugar-free-4392caf17777">https://medium.com/illumination/chupa-chups-lollipop-its-sugar-free-4392caf17777</a>) YELLOW</p>
<p><b>Odol-med3 ad</b></p> <p>Source(<a href="https://www.trnd.com/de/projekte/odol-med3-brilliant-white/blog/ansprechpartner-blog-post">https://www.trnd.com/de/projekte/odol-med3-brilliant-white/blog/ansprechpartner-blog-post</a>)</p>	<p><b>WMF ad</b></p> <p>Source(<a href="https://www.telos-training.com/aktuelles/profi-werbung-lehrsat-1-vernuegen-schuetzt-vor-konkurrenz/werbung-witzig-wmf-messer-karotte-2287/">https://www.telos-training.com/aktuelles/profi-werbung-lehrsat-1-vernuegen-schuetzt-vor-konkurrenz/werbung-witzig-wmf-messer-karotte-2287/</a>)</p>
<p><b>Miele ad</b></p> <p>Source(<a href="https://www.horizont.net/agentur-er/nachrichten/lifebeyondori-nary-ddb-erfindet-fuer-miele-die-geschirrspueler-werbung-neu-170702">https://www.horizont.net/agentur-er/nachrichten/lifebeyondori-nary-ddb-erfindet-fuer-miele-die-geschirrspueler-werbung-neu-170702</a>)</p>	<p><b>Durex ad</b></p> <p>Source(<a href="https://www.adsoftheworld.com/campaigns/clap-board">https://www.adsoftheworld.com/campaigns/clap-board</a>)</p>