

Before-After Advertising

Investigating the difference in effects of using direct vs. indirect before-after advertisements.

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Abstract

Before-after images (BA-images) are often used in advertising, yet very little research has been conducted concerning BA-advertisements. This study investigates the differences between direct and indirect before-after advertisements (BA-advertisements), by conducting an experiment. The results from this study give insight in how ad type influences understandability, aesthetic pleasure, typicality, novelty, resistance towards the advertisement, brand image and purchase intention. While indirect ads scored higher on novelty and led to lower resistance towards the advertisement, direct ads scored higher on understandability, typicality and purchase intention. No significant effects on aesthetic pleasure and brand image were found.

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1. Introduction

Consumers often feel the need to keep looking for ways to better themselves. Companies are trying to sell their products to these consumers, and to that end often adapt their advertising to this need by showing how the advertised product can address and solve consumers' problems. For example, shampoo ads often highlight how their product can transform dry, damaged hair into smooth, healthy hair. According to Marlowe et al. (1989) 71.2% of ads show a problem for which they offer a solution.

An effective method to illustrate a subject's transformation from a problematic state to a problem-free one is by using before-and-after images (BA-images). Therefore, BA-images are often used in advertisements. These advertisements usually show a subject in two states: before and after. In the before state, the subject usually has a problem or shortcoming. In the after state the same subject is shown, except the problem or shortcoming is now fixed with the arguable message that it is the advertised product that is responsible. This way, advertising companies can show how their product or service can solve certain issues. For example, in figure 1 the subject in the before state has crooked teeth. In the after state, the teeth are perfectly straight, suggesting that Six Month Smiles can solve the problem of crooked teeth.

Figure 1

Before-after advertisement by an orthodontic company.



Over the past decades, there has been a growing trend of the average consumer encountering an increasing number of ads (Koetsier, 2021). This rising level of advertising competition is making it harder for advertisers to gain and retain consumers' attention, leading to a decline in ad recall and recognition (Jeong et al., 2011). One way to overcome this 'ad clutter' and stand out amongst other advertisements, is by creating more original ads

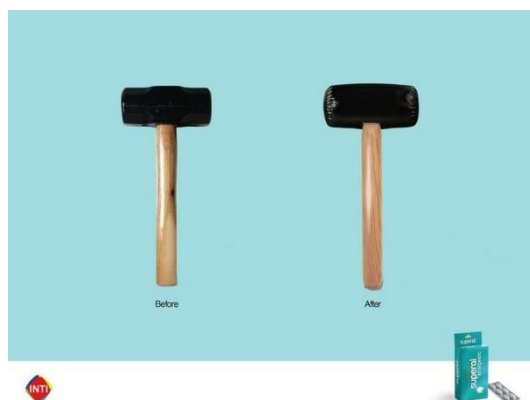
(Pieters et al., 2002). Creative advertisements achieve this by being unique and different from other ads (Chen et al., 2016). This distinctiveness, defined as *novelty* by Berghman & Hekkert (2017), sets them apart from other stimuli in their category.

A trick advertisers use to make their BA-ads stand out among the rest, is by not showing the change caused by the advertised product directly. To understand the message of these *indirect BA-ads*, as they will be called here, an extra cognitive step is needed. For example, figure 2a is an ad for acetaminophen, which can reduce the pain caused by a headache. However, instead of illustrating a person with a headache in the before image and someone without a headache in the after image, a normal hammer is depicted in the before image, and a balloon hammer is depicted in the after image. Acetaminophen can not cause a hammer to change to a balloon hammer, so the consumer must infer the message. In this case, before taking the pill, the subject feels like they are being hit on the head with a hard hammer. After taking the pill, the pain is reduced, making the subject feel like they are getting hit on the head with a soft hammer. Another example is shown in figure 2b, an ad for Weight Watchers, a company that creates weight loss programs. This ad depicts a change from being overweight to healthy. Here, the receiver must infer that people who ‘before’ are so big they can only fit through a wide door, will be able to fit through a smaller door ‘after’ the program, meaning they lost weight.

Figure 2

Indirect before-after advertisements.

a.



b.



Cutler et al. (2000) found that 3% of all magazine advertisements used a before-after appeal. As BA-ads are frequently used, it is important for the companies using them to know how to utilize them most effectively. This study aims to help marketers gain a better understanding of the effects different types of advertisements can have, allowing them to create more impactful and engaging campaigns.

Even though BA-images are used often in advertising, research on them is quite limited. Prior studies on before-after advertising primarily focus on the differences between before-after advertisements and other types of advertisements. Therefore, this study will concentrate on the differences between two different types of BA-advertisements: direct (like the one shown in Figure 1) and indirect BA-ads (as in Figures 2a and 2b). To expand the knowledge of BA-ads, this study will investigate the effects of using indirect BA-ads on several dependent variables.

Firstly, the degree to which people understand the advertisement will be measured. Secondly, participants will be asked how typical or novel they perceive the advertisement to be. Typicality will measure the extent to which the participants think the stimuli represent a typical example of an advertisement, whereas novelty will measure the perceived variance in elements between a typical advertisement and the stimuli. Furthermore, the effects on aesthetic pleasure will be researched. Aesthetic pleasure is defined by Dutton (2009) as: “the pleasure people derive from processing the object for its own sake, as a source of immediate experiential pleasure in itself, and not essentially for its utility in producing something else that is either useful or pleasurable.” Finally, the effect of using indirect referencing in BA-advertisements on resistance towards the advertisement, brand image and purchase intention will be studied. This leads us to the research question: To what extent does the presence of indirect references in before-after advertisements impact understandability, aesthetic pleasure, typicality, novelty, resistance towards the advertisement, brand image and purchase intention among Dutch adults?

2. Theoretical framework

2.1 BA-advertising

Before-after images (BA-images) are images which allow illustrators to showcase how a certain person or product has changed. BA-images showcase this change by showing a picture of a person or object prior to change (1), the topic which caused the change, through either text or another image (2) and finally a picture of the person or object after the change (3). A typical BA-image can be found in figure 3 below. This image consists of two panels and a topic. The first panel is the one on the left, showing a man with a hump in his nose. This is called the *before* state. The second panel shows the same man after the topic (plastic surgery) happened, but now the hump in the man’s nose is absent. This is called the *after* state. Since the man in the two images is the same person, the two images suggests a change

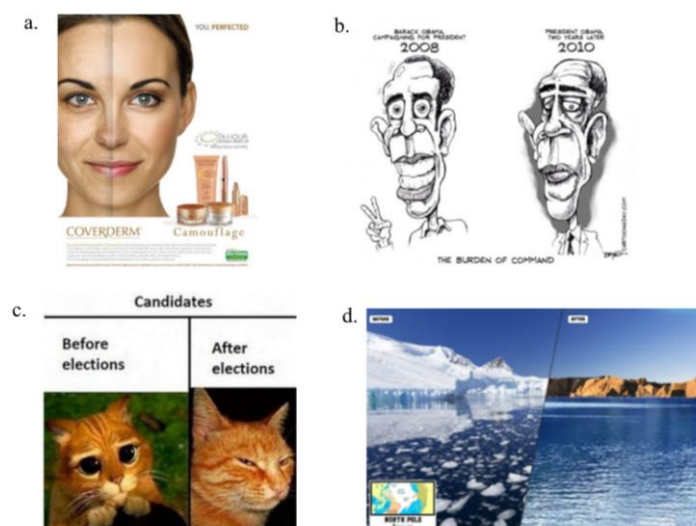
that must have occurred in the man's outer appearance, rather than two distinct men who happen to differ from each other in some respect. By connecting the event of change with the message's topic, the receiver understands that it is the advertised plastic surgery company that removed the hump in the man's nose – i.e. that has caused the change.

Figure 3



These kinds of BA-images can be found in many contexts. BA-images are often shared and found online where people use them to share changes in things or people which they find interesting, funny, positive or worrying. They are also used in magazines, newspapers and television, and especially in advertising. Figures 4a to 4d show examples of these various uses. The advertisement in Figure 4a suggests that the topic (make-up) can change the look of a person's skin from rough to smooth. Figure 4b illustrates its use in an editorial cartoon, which communicates that message that the topic (presidency) changes a person from looking energetic and healthy to looking tired. Other uses for BA-images include memes (figure 4c) and non-profit messages (figure 4d).

Figure 4



Though BA-images are found in all kinds of genres and fields, this study will only focus on the use of BA-images in advertising. Advertisements often present a problem a person might have, which can be solved by the advertised product or service. According to Marlowe et al. (1989), 71.2% of all advertisements present a problem that needs solving. BA-advertisements are effective in showing how a certain product or service can fulfill a consumers' needs by showing a person or object before applying the advertised product and showing the same person or object, but after the use of the advertised product. This way, advertisements can show a person going from a state where they have a problem, to them going to a state where they are problem-free, thanks to the advertised product (Chang, 2016). For example, in figure 5, a hair transplant company promotes their service by using a person with a problem in the before state (balding), and then showing this same person with his problem fixed thanks to their service. This way the company claims their service can fix people's problem of balding.

Figure 5



Chang (2016) investigated the difference between before appeals, after appeals and before-after appeals in advertising. This study found that including both a before and an after appeal in an ad firstly improved perceived product performance. So when a product was advertised in a BA-advertisement, consumers perceived it as more capable than when the same product was advertised only using a before or an after appeal. Furthermore, his study suggested increased purchase intention for advertisements using before-after appeals as compared to advertisements only using a before or an after appeal.

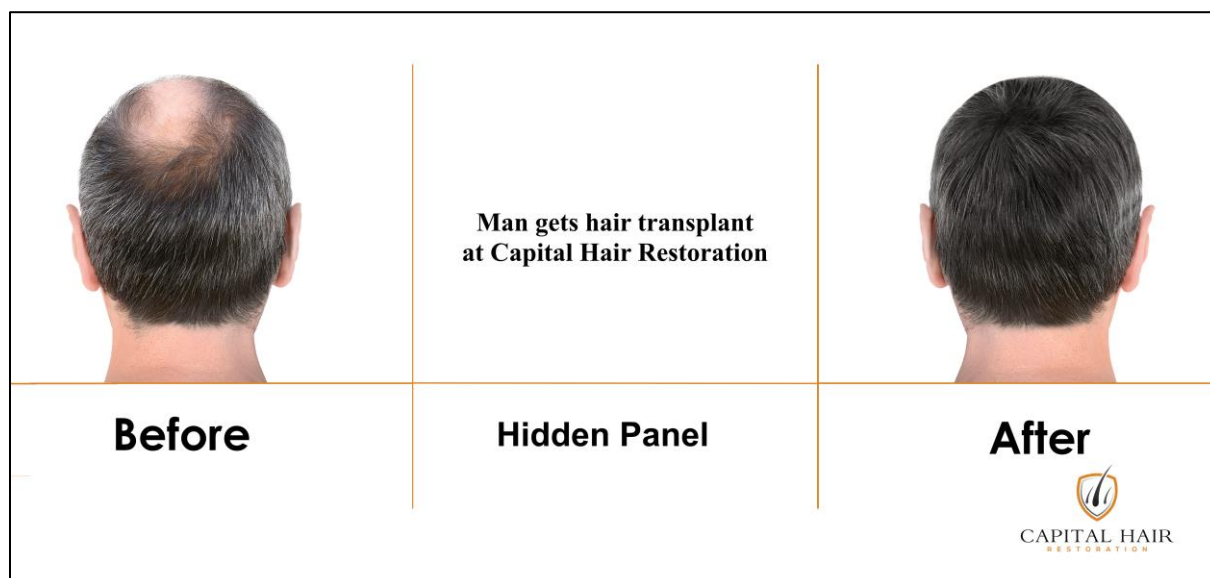
The general format, or construction of BA-images has been analyzed extensively by Schilperoord & Cohn (2022). This analysis found that typical BA-images always contain (images of) two entities (called E1 and E2): an image presenting the before state (E1), an image presenting the after state (E2) and a topic (T), which is claimed to have caused the change from E1 to E2. Applying this to figure 5, the before state where the man is balding, is E1. E2 is the after state where the man has a full head of hair. The difference between E1 and

E2 suggest some change (getting hair again) and is understood to have been caused by the topic, Capital Hair Restoration.

According to Schilperoord and Cohn, BA-images need to adhere to two constraints to show change effectively: the *continuity* and the *activity* constraint. The continuity constraint ensures identification of entities across a sequence of images (Klomberg et al., 2023). More simply put: The continuity constraint makes sure consumers understand that the entity in E1 holds the same identity as the entity in E2. According to Hornsby and Egenhofer (2000), this concept of identity is the basis for noticing change. Because figure 5 adheres to the continuity constraint, the man in E2 is recognized as the same man as the man in E1, and not as a completely different person.

However, for BA-images to illustrate change, E1 and E2 have to be in a different state. The activity constraint thus holds that at least one element has to be different between E1 and E2. Otherwise E1 and E2 would just be the same person in the same state, failing to demonstrate any change. Referring back to figure 5, the man in E2 differs from the man in E1, yet we still assume the man in E2 is the same individual as the man in E1. This implies that the man, who is bald in E1, is able to grow back his hair in E2, thanks to the topic (Capital Hair Restoration). So figure 5 adheres both to the continuity and the activity constraint, as the continuity of identity is maintained despite the change in state.

The way an entity changes from the before to the after state is not shown directly in BA-advertisements. Using the three elements in the BA-image, consumers partly need to construct how an entity has changed from E1 to E2 themselves. BA-images give consumers a few ‘clues’ as to what happened, but consumers need to construct a ‘hidden event’ between E1 and E2. This hidden event explains what allegedly caused the change between the before and after and how the change happened. For example, when we look at the image visualizing a hair transplant (figure 5) again, the person went from being bald, to having a full head of hair again. To explain this change, a hidden event must be inferred that must have taken place between the two depicted states: one that says something along the lines of: ‘this person got a hair transplant’ causing the person to grow back his hair. This hidden event is visualized in figure 6.

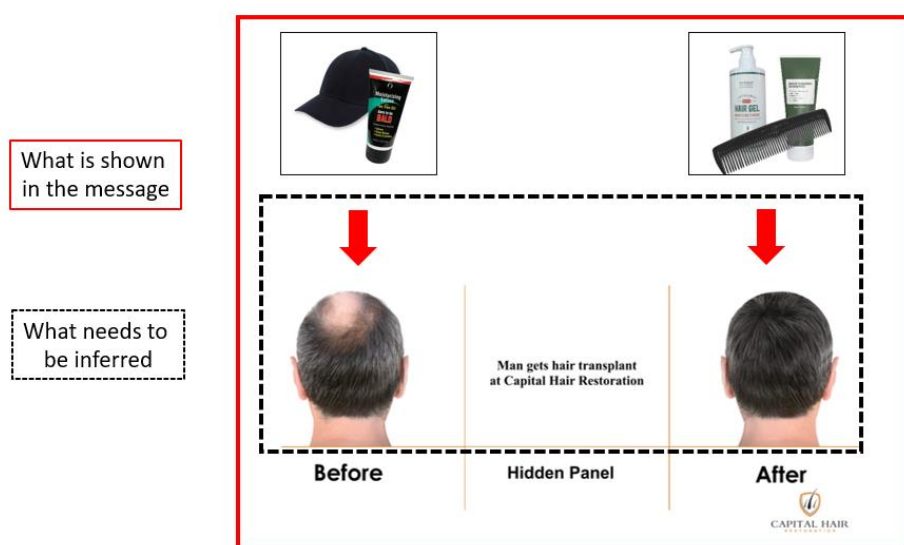
Figure 6

All BA-images shown thus far are quite easy to interpret and understand, and all adhere to the continuity and the activity constraints. However, sometimes designers create BA-images which are more challenging to decode as they do not immediately adhere to the continuity/activity constraint on purpose. For example, in figure 7, Capital Hair Restoration again advertises their hair transplant service. However, in this advertisement they show a cap and moisturizing lotion in E1 and hair gel, a comb and moisturizing shampoo in E2. This image does not adhere to the continuity constraint as the products in E1 and E2 are definitely not identical. Therefore, also the activity constraint is not met because since the entities in E1 and E2 are not the same, they can not have changed from the before state into the after-state. To understand this message, another cognitive step must be taken: the viewer has to infer that the products shown in E1 are mainly used by bald people, while the products shown in E2 are used by people with hair. Therefore E1 ‘stands for’ baldness, while E2 ‘stands for’ having hair. To understand BA-images like this one, consumers do not just need to add the hidden event, but they also need to make the extra step of inferring E1 and E2 from what is actually shown. These kinds of BA-images will be called *indirect* BA-images. A visualization of the full process to understand figure 7 can be found in figure 8.

Figure 7



Figure 8



In this case, the relation between the entities that are actually shown and baldness/having hair is *indexical*. Entities like hair gel indicate the presence of hair, while products like scalp lotion indicate baldness. The relation between what is shown in the message and what needs to be inferred to understand the message is not always indexical. In figure 9 for example, the relation between what is shown and what needs to be inferred appears to be *metaphorical*. This BA-ad implies skin before using CeraVe's skincare products is *as rough as a gravel tile*, while it becomes *as smooth as a concrete floor* after using their products.

Figure 9

While the structural details of direct and indirect templates of BA-messages have been analyzed thoroughly by Schilperoord & Cohn (2022), little to no research has been conducted on the effects these different templates of BA-advertisements have. Therefore, this study will investigate how effects of BA-advertisements differ between direct and indirect BA-advertisements. As it has become clear above that indirect BA-advertisements require more steps to interpret than direct BA-advertisement, the first hypothesis is:

H1: Indirect BA-advertisements are harder to understand than direct BA-advertisements.

2.2 Typicality, novelty

Indirect BA-advertisements require more thinking and inferencing and are therefore less standard than other BA-advertisements. In fact, there are tons of direct before-after hair transplant images to be found, but finding a BA-ad for hair transplants which does not just use a bald and a hairy man, like the one in Figure 7, is much harder.

When people process objects cognitively, they tend to categorize the perceived objects based on previous encounters with similar objects. The more similar a stimulus is to previously encountered stimuli, the easier and more fluent the processing of that stimulus will probably be. Therefore, when seeing a stimulus that has been encountered frequently, appreciation for that stimuli rises (Bornstein, 1989, this phenomenon is also known as the ‘mere exposure’ effect, cf. Zajonc 1968). Furthermore, when an encountered stimulus is similar to clear exemplars of a category, categorizing the stimulus gets easier. This also increases appreciation. This similarity of new stimuli to previously encountered things is referred to as *typicality* (Berghman & Hekkert, 2017). According to this, direct BA-

advertisements may be liked better, as they are more similar to other encountered ads.

However, more typical stimuli are not always liked more than less typical stimuli. More original, or *novel*, stimuli are liked too, because these stimuli allow us to learn and enrich our experience (Bornstein, 1989). People enjoy stimuli which balance typicality and novelty, by being different from other stimuli in its category, while still being recognizable (Biederman & Vessel, 2006).

According to other studies, there are additional motivations to make advertisements appear more novel. Over the last years, society's exposure to mass-media and advertising has risen to new heights, this leads to people seeing advertisements as irritable and intrusive more and more (Franke & Taylor, 2017). There currently is an oversaturation of the market of advertising. With this oversaturation, consumers are becoming better at consciously or subconsciously ignoring ads (Lehnert et al., 2020). One way to make sure consumers have a better chance of noticing and remembering ads is by making more creative ads. According to Jin et al. (2022), when creative ads are shown alongside 'regular' ads, the recall for the less creative ads reduces. Ads are perceived by consumers as creative when they differ from other ads within their product group (Rosengren et al., 2020). As a result, novel ads have become essential for marketers having trouble with standing out in an oversaturated ad market (Peterson & Malhetra, 2023). This might cause indirect BA-advertisements to be liked better, as indirect BA-ads are generally considered more novel than direct BA-ads.

In order for an ad to be novel, it needs to differ from other advertisements promoting similar products. As indirect BA-advertisements often do not show things which can be directly linked to the advertised product, and are more original than direct BA-advertisements, these advertisements might be seen as less typical, and therefore more novel. Based on this, the following hypotheses have been formulated:

H2a: Indirect BA-advertisements are perceived as less typical than direct BA-advertisements.

H2b: Indirect BA-advertisements are perceived as more novel than direct BA-advertisements.

2.3 Aesthetic pleasure

Finding the right balance between typicality and novelty might increase consumers' aesthetic pleasure when looking at an ad. Aesthetic pleasure is defined by Dutton (2009) as "the pleasure people derive from processing the object for its own sake, as a source of immediate experiential pleasure in itself, and not essentially for its utility in producing something else that is either useful or pleasurable." Or in more plain language: the pleasure

one might get from perceiving an object.

Visual aesthetics have many advantages, according to Tractinsky (2016). Among other things, visual aesthetics lead to more intrinsic motivation in receivers through experienced pleasure and engagement. Furthermore, aesthetic pleasure can influence receivers' initial attitudes towards an object. Aesthetic evaluation may affect the way other aspects of an object get reviewed as well. So basically, humans see objects which are beautiful as better and more trustworthy.

Both typicality and novelty influence aesthetic pleasure. Because a difference in both novelty and typicality is expected between direct and indirect BA-advertisements, a difference in aesthetic pleasure is expected as well. The highest aesthetic pleasure can be achieved through finding the right balance between typicality and novelty (Biederman and Vessel, 2006, Berghman & Hekkert, 2017). Though the indirect stimuli are less typical, it is expected that they are still understandable for consumers. Therefore, this study's third hypothesis will be:

H3: Aesthetic pleasure is higher for indirect BA-advertisements, as long as the ad scores high on understandability.

2.4 Resistance towards advertising and ad performance

The goal of (BA-)advertisements is to persuade consumers into performing certain behaviors. However, consumers are not always open to be persuaded and will often tend to resist persuasion attempts. This leads to what is called *resistance towards advertisements* (Strick et al., 2012). Resistance towards advertisements can take many forms. Fransen et al. (2015) distinguish three types of resistance: avoidance, contesting and empowering. Avoidance concerns all the ways in which consumers try to limit their exposure to advertisements, this could for example be by zapping away during a commercial break, installing an ad-blocker or by not paying attention to advertisements (Speck & Elliot, 1997).

Contesting strategies involve all strategies where consumers actively try invalidating a message by using counter-arguments to challenge it. Counter-arguing is a thought process that involves generating reasons to disagree with a message opposing one's existing attitudes (Zuwerink Jacks & Cameron, 2003). This could for example be derogating the source, message or persuasion tactics used in a message.

Finally, empowering strategies concern strategies where consumers reinforce their own attitude to counteract persuasive messages. Examples of empowering strategies include generating thoughts which are in line with an existing attitude, seeking for social validation

and asserting confidence in one's own beliefs (Zuwerink Jacks & Cameron, 2003).

Resistance towards an advertisement may have several negative effects for advertising brands. Firstly, it can prevent the ad from influencing the consumer. Therefore it decreases the extent to which ads can influence a consumer's attitude and brand choice (Brehm, 1966). Furthermore, as advertisements try depicting a company as positive, resistance towards these ads may lead to a more negative brand image (Strick et al., 2012).

Resisting persuasive messages generally requires effort and cognitive resources. As humor usually needs solving, humor also draws on cognitive resources. Therefore, Strick et al. (2012) investigated whether the use of humor in advertisements could prevent these negative brand associations through reducing resistance. They examined the effect humor in ads has on resistance through distraction. They found that humor indeed took consumers' limited cognitive resources away, which led to less cognitive resources left to resist the ads, leading to less resistance towards advertising. Furthermore, as they hypothesized, Strick et al. (2012) found that the distracting characteristic of humor did not only reduce resistance towards an advertisement, but also that distraction prevented them from forming negative brand associations.

Similar to humor, indirect BA-ads require more cognitive resources to understand the message, because consumers have to add (1) an inference and (2) a hidden event, in order to understand the message of the advertisement. Just as humor diverts cognitive resources through distraction, indirect BA-advertising may also consume cognitive resources through distraction.

The goal of most advertisements is to persuade consumers into buying their product or service. Therefore it is important for companies to know what factors contribute to sales and which do not. The effectiveness in terms of contributing to sales is measured by purchase intention. There are many factors influencing purchase intention. Firstly, brand associations are positively related to purchase intention (O'Cass & Lim, 2002). This means people have more intention to buy products from brands to which they have positive feelings attached. Furthermore, according to Bigoin-Gagnan & Lacoste-Badie (2018), aesthetic appreciation influences purchase intention as well.

It is expected that indirect BA-advertisements will take up more cognitive effort to understand than direct BA-advertisements as indirect ads are less straight forward. As indicated, previous research suggests that the extra work it takes to understand more complex ads takes away from consumers' ability to resist the message. Since distraction reduced resistance, it is also anticipated that distraction prevents consumers from forming negative

brand associations. Finally, as aesthetic appreciation and brand associations influence purchase intention, expectations are that purchase intention will be higher for indirect BA-ads than for direct BA-ads. Therefore, the following hypotheses have been formulated:

H4: Resistance towards the advertisement is higher for direct BA-advertisements than for indirect BA-advertisements.

H5: Brand image will be higher for indirect BA-advertisements than for direct BA-advertisements.

H6: Purchase intention will be higher for indirect BA-advertisements than for direct BA-advertisements.

3. Method

3.1 Design

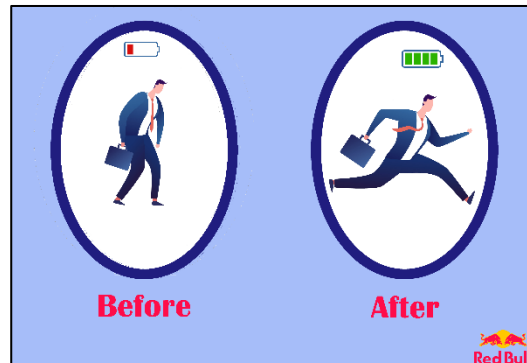
In order to study the effect the presence of indirect references in BA-advertisements has, an experimental study was conducted. In this experiment, a within subject design was used, so participants saw both direct and indirect BA-advertisements. The main independent variable is the usage of direct or indirect references in the advertisement, while the dependent variables were understandability, aesthetic pleasure, novelty, typicality, resistance towards the advertisement, brand image and purchase intention.

3.2 Participants

A total of 30 adults were recruited using convenience sampling. There were 16 (53.3%) men and 14 (46.7%) women. The average age was 35.6 years old, ranging from 18 to 65.

3.3 Stimuli

For this experiment, each participant saw seven advertisements in total. For some participants, four ads were direct while three were indirect, and for others, three ads were direct while four were indirect. In total, seven sets of indirect and direct versions of an advertisement were created. This way, the indirect version of an ad was shown to half of the participants, while the direct version of the same ad was shown to the other half of the participants. An example of a set of a direct and indirect ad can be seen in figure 10. Here, the ad implies that Red Bull will make you go from sleepy to energetic and active.

Figure 10*Direct:**Indirect:*

3.4 Instruments

To measure understandability and the constructs aesthetic pleasure, typicality, novelty, resistance towards the advertisement, attitude towards brand and purchase intention, various existing scales were used, but adjusted to fit this study and translated to Dutch if needed. The items used to measure these constructs can be found in table 1 in the appendix. All items were measured on a seven-point Likert scale (1 = strongly disagree to 7 = strongly agree).

Understandability

Understandability was measured using two items. Firstly, participants were asked if they understood the message. Secondly, participants were asked how easy it was to understand the message. The reliability of the scale was good ($\alpha = .893$).

Typicality/Novelty

Both typicality and novelty were measured using an item from the *aesthetic pleasure in design scale* by Blijlevens et al. (2017). The item used for typicality was, "This is a standard ad." The item used to measure novelty was, "This ad is innovative."

Aesthetic pleasure

Aesthetic pleasure was also measured using an item from the *aesthetic pleasure in design scale* by Blijlevens et al. (2017). This item was, "This ad looks beautiful."

Resistance towards advertisement

Resistance towards the advertisement was measured by one item from Dillard & Shen (2005). To measure resistance, participants were asked to what extent they felt like the advertisement was trying to influence them.

Brand image

To measure brand image two items were used. The first item was, "I think this brand is trustworthy." (Berger & Mitchell, 1989). The second item was, "This ad provides an accurate

depiction of the consequences of using this product.” (Erdem et al., 2002). The reliability of this scale was a bit low ($\alpha = .649$).

Purchase intention

To measure purchase intention, one item from Coulter and Coulter (2005) was used. This item was, “I can imagine someone buying this product after seeing the ad.”.

3.5 Procedure

After clicking on the survey link, participants were welcomed by an introduction page which notified them about the length of the survey and the way their data would be stored. The participants were also instructed briefly on how to answer and they were asked to give permission to use their data. After the introduction, some demographic questions were asked (e.g., age, gender), after which the stimuli were shown. Each stimulus was on a separate page, together with the items and 7-point Likert scales ranging from strongly disagree to strongly agree. Each participant saw seven stimuli, of which 3 were indirect BA-ads and 4 were direct BA-ads, or vice versa.

After the participant had answered all questions about the stimuli, they were thanked for completing the survey. They were also informed about what the study was about and given an email so they could ask any remaining questions about the study. They were then told they could close the survey window, as their response had been recorded.

4. Results

In this part, the effects of ad type on all seven dependent variables be given. A summary of all results can be found in table 1.

Table 1

Summary of all results.

Dependent variable	ANOVA type	Mean / Median direct	Mean / Median indirect	Standard Deviation direct	Standard Deviation indirect	<i>p</i>	η^2
<i>Understandability</i>	KW	7	5.5	-	-	<.001	.236
<i>Typicality</i>	One-way	6.22	4.70	1.38	1.88	<.001	.380
<i>Novelty</i>	One-way	3.28	4.05	1.52	1.76	<.001	.053
<i>Aesthetic Pleasure</i>	One-way	4.06	3.65	1.54	1.72	.079	-
<i>Resistance</i>	One-way	4.82	4.30	1.67	1.79	.033	.022
<i>Brand image</i>	One-way	3.73	3.61	1.38	1.41	.554	-
<i>Purchase intention</i>	KW	5	3	-	-	<.001	.153

4.1 Understanding

To test whether direct BA-advertisements are easier to understand than indirect BA-advertisements, a one-way ANOVA was performed. The data was not normally distributed (direct BA-advertisement z-score skewness = -10.64 and z-score kurtosis = 13.21; indirect BA-advertisement z-score skewness = -2.64 and z-score kurtosis = 1.60). Assumptions of homogeneity were met ($VR = 1.86$). Therefore, a Kruskal-Wallis one-way ANOVA was performed.

Understanding for direct BA-advertisements had a median score of 7. Understanding for indirect BA-advertisements had a median score of 5.50. The overall ANOVA was significant, indicating that there are differences in understanding between direct and indirect BA-advertisements, $KW(1) = 49.3$, $p < .001$, $\eta^2 = .236$. This means the hypothesis, “Indirect BA-advertisements are harder to understand than direct BA-advertisements.” is supported by the results.

4.2 Typicality

To test the hypothesis that typicality is higher for direct BA-ads than for indirect BA-ads a one-way ANOVA was performed. The data was normally distributed (direct BA-advertisement z-score skewness = 2.16 and z-score kurtosis = -.23; indirect BA-advertisement z-score skewness = -2.08 and z-score kurtosis = -.88). Assumptions of homogeneity were met ($VR = 1.39$).

Typicality for direct BA-advertisements had a mean of 6.22 ($SD = 1.38$). Typicality for indirect BA-advertisements had a mean of 4.70 ($SD = 1.88$). The overall ANOVA was significant, indicating that there are differences in typicality between direct and indirect BA-advertisements, $F(1, 208) = 128$, $p < .001$, $\eta^2 = .380$. Indicating that the hypothesis, “Indirect BA-advertisements are perceived as less typical than direct BA-advertisements.” is supported by the results.

4.3 Novelty

To test the hypothesis that novelty is higher for indirect BA-ads than for direct BA-ads, a one-way ANOVA was performed. The data was normally distributed (direct BA-advertisement z-score skewness = -.54 and z-score kurtosis = 2.03; indirect BA-advertisement z-score skewness = 2.11 and z-score kurtosis = .11). Assumptions of homogeneity were met ($VR = 1.34$).

On average, novelty for direct BA-advertisements had a mean of 3.28 ($SD = 1.52$). Novelty for indirect BA-advertisements had a mean of 4.05 ($SD = 1.76$). The overall ANOVA

was significant, indicating that there are differences in novelty between direct and indirect BA-advertisements, $F(1, 208) = 11.6$, $p < .001$, $\eta^2 = .053$. This means the hypothesis, “Indirect BA-advertisements are perceived as more novel than direct BA-advertisements.” is supported by the results.

4.4 Aesthetic pleasure

To test the hypothesis that aesthetic pleasure is higher for indirect BA-ads than for direct BA-ads, a one-way ANOVA was performed. The data was normally distributed (direct BA-advertisement z-score skewness = .73 and z-score kurtosis = -2.31; indirect BA-advertisement z-score skewness = -1.63 and z-score kurtosis = -1.30). Assumptions of homogeneity were met ($VR = 1.24$).

On average, aesthetic pleasure for direct BA-advertisements had a mean of 4.06 ($SD = 1.54$). Aesthetic pleasure for indirect BA-advertisements had a mean of 3.65 ($SD = 1.72$). The overall ANOVA was not significant, indicating that there are no differences in aesthetic pleasure between direct and indirect BA-advertisements, $F(1, 208) = 3.30$, $p = .079$. So the results do not support the hypothesis, “Aesthetic pleasure is higher for indirect BA-advertisements, as long as the ad scores high on understandability.”

4.5 Resistance

To test the hypothesis that resistance is higher for direct BA-ads than for indirect BA-ads, a one-way ANOVA was performed. The data was normally distributed (direct BA-advertisement z-score skewness = -1.13 and z-score kurtosis = -1.62; indirect BA-advertisement z-score skewness = -2.06 and z-score kurtosis = -1.69). Assumptions of homogeneity were met ($VR = 1.07$).

On average, resistance for direct BA-advertisements had a mean of 4.82 ($SD = 1.67$). Resistance for indirect BA-advertisements had a mean of 4.30 ($SD = 1.79$). The overall ANOVA was significant, indicating that there are differences in resistance between direct and indirect BA-advertisements, $F(1, 208) = 4.63$, $p = .033$, $\eta^2 = .022$. This indicates that the hypothesis, “Resistance towards the advertisement is higher for direct BA-advertisements than for indirect BA-advertisements.” is supported by the results.

4.6 Brand Image

To test the hypothesis that brand image is higher for indirect BA-ads than for direct BA-ads, a one-way ANOVA was performed. The data was normally distributed (direct BA-advertisement z-score skewness = .36 and z-score kurtosis = -1.72; indirect BA-advertisement z-score skewness = .87 and z-score kurtosis = -.70). Assumptions of

homogeneity were met ($VR = 1.04$).

On average, brand image for direct BA-advertisements had a mean of 3.73 ($SD = 1.38$). Brand image for indirect BA-advertisements had a mean of 3.61 ($SD = 1.41$). The overall ANOVA was not significant, indicating that there are no differences in brand image between direct and indirect BA-advertisements, $F(1, 208) = 0.352$, $p = .554$. This means the hypothesis, “Brand image will be higher for indirect BA-advertisements than for direct BA-advertisements.” is not supported by the results.

4.7 Purchase intention

To test the hypothesis that purchase intention is higher for indirect BA-ads than for direct BA-ads, a one-way ANOVA was performed. Purchase intention was measured using a scale consisting of one item on a seven-point Likert scale (“I can imagine someone wanting to follow a dieting program after seeing this ad”). The data was not normally distributed (direct BA-advertisement z-score skewness = -3.44 and z-score kurtosis = 1.01; indirect BA-advertisement z-score skewness = .49 and z-score kurtosis = 2.76). Assumptions of homogeneity were met ($VR = 1.44$). Therefore, a Kruskal-Wallis one-way ANOVA was performed.

Purchase intention for direct BA-advertisements had a median score of 5. Purchase intention for indirect BA-advertisements had a median score of 3. The overall ANOVA was significant, indicating that there are differences in purchase intention between direct and indirect BA-advertisements, $KW(1) = 32.1$, $p < .001$, $\eta^2 = .153$. These results indicate no support for the hypothesis, “Purchase intention will be higher for indirect BA-advertisements than for direct BA-advertisements.”

4.8 Further explorations

In order to get more information out of the results than just the tested hypothesis, correlations between different variables were calculated. Based on these correlations, further exploratory analyses have been conducted. The correlation matrix can be found in table 2.

Table 2*Correlation Matrix*

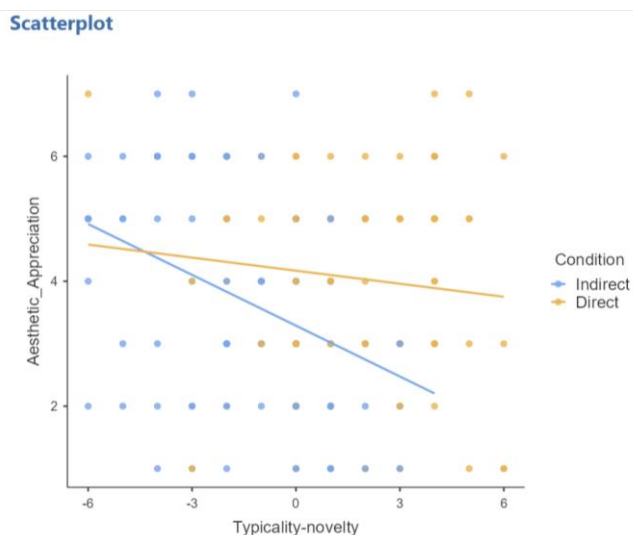
		Mean_Understanding	Resistance_2	Brand_Image	Aesthetic_Appreciation	Typicality	Purchase_Intention	Novelty
Mean_Understanding	Pearson's r	—						
	df	—						
	p-value	—						
Resistance_2	Pearson's r	0.311	—					
	df	208	—					
	p-value	< .001	—					
Brand_Image	Pearson's r	0.292	0.113	—				
	df	208	208	—				
	p-value	< .001	0.101	—				
Aesthetic_Appreciation	Pearson's r	0.325	0.122	0.527	—			
	df	208	208	208	—			
	p-value	< .001	0.077	< .001	—			
Typicality	Pearson's r	0.343	0.154	0.194	0.157	—		
	df	208	208	208	208	—		
	p-value	< .001	0.025	0.005	0.023	—		
Purchase_Intention	Pearson's r	0.489	0.265	0.480	0.467	0.333	—	
	df	208	208	208	208	208	—	
	p-value	< .001	< .001	< .001	< .001	< .001	—	
Novelty	Pearson's r	0.066	0.075	0.261	0.403	-0.290	0.237	—
	df	208	208	208	208	208	208	—
	p-value	0.339	0.281	< .001	< .001	< .001	< .001	—

The first correlation worth exploring is the correlation between purchase intention and understandability ($p < .001$, $r = .489$). Given that both understandability and purchase intention were higher for direct BA-advertisements, this suggests a mediating role of understandability in the effect of the type of BA-advertisement on purchase intention.

When investigating this correlation main effects on purchase intention were found for both understandability and (in)direct BA-ads. Stimuli which were understood very well (understandability > 6) had a mean purchase intention score of 4.78 (SD = 1.73). Stimuli which were less clear to participants (understandability ≤ 6) had a mean purchase intention of 3.56 (SD = 1.59). The overall ANOVA was significant, indicating that there are differences in purchase intention between ads that were understood very well and ads that were less clear, $F(1) = 27.5$, $p < .001$, $\eta^2 = .117$. Like indicated before, there was also a main effect of condition on purchase intention. However, no interaction effect of understanding and condition was found on purchase intention ($p = .976$).

Other interesting correlations are the correlation between typicality and aesthetic appreciation ($p = 0.024$, $r = .157$) and the correlation between novelty and aesthetic appreciation ($p < .001$, $r = .403$). According to Berghman and Hekkert (2017) the highest aesthetic pleasure is evoked when the right balance between typicality and novelty is found. To explore this balance, a new variable was created: typicality-novelty. This variable contains the typicality scores with the novelty scores deducted from it, meaning the lower the score is, the more novel it is. However, when looking at the results, it does not appear like a balance has to be struck, but just that more novel ads score higher on aesthetic pleasure (see figure 11). Furthermore, this plot shows that novelty especially increases aesthetic pleasure for indirect BA-ads.

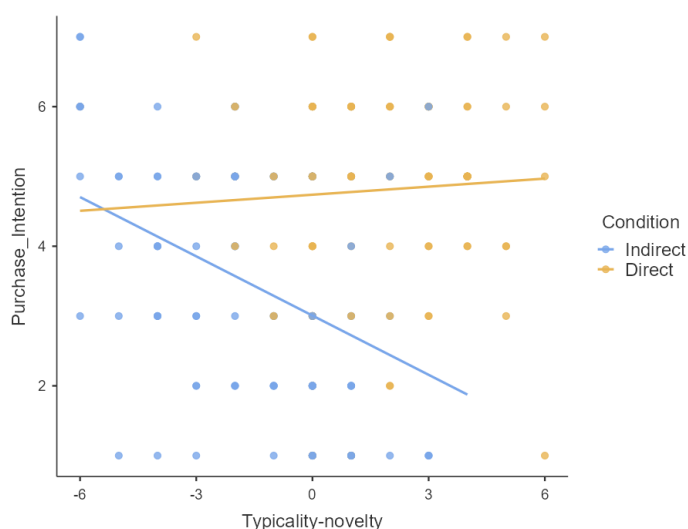
Figure 11



Similar results arise when exploring the correlations between typicality, novelty and purchase intention (figure 12; $p < .001$, $r = .237$; $p < .001$, $r = .333$). Here, it seems that more novel ads score higher on purchase intention. Just like with aesthetic appreciation, the effect novelty has is stronger for indirect ads than for direct ads. Furthermore, this plot indicates that purchase intention may be higher for very novel indirect ads, despite generally scoring lower on purchase intention than direct ads.

Figure 12

Scatterplot



5. Conclusion and Discussion

5.1 Conclusion

The purpose of this experimental study was to get more insight into the extent to which the use of indirect BA-advertisements impacts understandability, aesthetic pleasure, typicality, novelty, resistance towards the advertisement, brand image and purchase intention.

The first hypothesis claimed that direct BA-advertisements would be easier to understand than indirect BA-advertisements. The results revealed participants thought it was easier to understand direct BA-ads than indirect BA-ads, supporting the first hypothesis. The results also revealed that participants thought indirect BA-ads were more novel and less typical than direct BA-ads, supporting the second and third hypothesis. Contrary to the expectations, no effect of ad type on aesthetic pleasure was found, so these results indicate that no support is found for the fourth hypothesis.

In line with expectations, indirect ads were found to evoke less resistance than direct ads. However, no significant difference in effect on both brand image and purchase intention

was found. So the results of this experiment do not support the sixth and seventh hypothesis.

5.2 Discussion

The results do not support the hypothesis that aesthetic pleasure would be higher for indirect BA-advertisements than for direct BA-ads. This absence of an effect on aesthetic pleasure can perhaps be attributed to the fact that direct BA-ads are perceived as more typical, possibly leading to increased aesthetic pleasure for direct BA-ads (Bornstein, 1989). Meanwhile, indirect BA-ads are seen as more novel, possibly leading to higher aesthetic pleasure for indirect BA-ads as well (Biederman & Vessel, 2006). So aesthetic pleasure for direct BA-ads increases due to typicality, while aesthetic pleasure for indirect BA-ads increases due to novelty. Therefore, the increases in aesthetic pleasure from both typicality and novelty may have offset each other, resulting in no significant effect of ad type on aesthetic pleasure. This is also supported by the results, as both typicality ($r = .157$, $p = .023$) and novelty ($r = .403$, $p < .001$) correlate positively with aesthetic appreciation.

Furthermore, the lack of appreciation for indirect advertisements could be attributed to cultural reasons. Hornikx and Le Pair (2017) found that people from countries with low-context culture (e.g. the Netherlands) perceived advertisements containing metaphors as more complex and less appealing than people from countries with high-context culture (e.g. Belgium). This complexity tends to lower the preference for advertisements with metaphors among individuals from low-context cultures. Since all participants in this study are Dutch, they may perceive the indirect BA-ads as more complex than intended and consequently not recognize the message behind the ad. According to Berghman and Hekkert (2017), aesthetic pleasure decreases when people do not recognize what they are seeing.

This lack in difference of aesthetic pleasure between both ad types, could also explain the lack of difference in brand image. According to Tractinsky (2016), aesthetic pleasure influences people's initial attitudes towards an object. Therefore, the lack of difference in aesthetic pleasure, may have contributed to a lack of difference in brand image. This was also supported by the results, as aesthetic pleasure positively correlates with brand image ($r = .527$, $p < .001$).

Finally, it was expected that purchase intention would be higher for indirect BA-ads than for direct BA-ads. Yet, it was found that purchase intention was significantly higher for direct BA-ads. A possible explanation for this contrast in expectations and reality, could once again be cultural differences. Because the participants were all Dutch, the use of complex ads is likely to reduce ad liking (Hornikx & le Pair, 2017). Fam et al. (2013) found that advertising dislikeability reduced purchase intention. Therefore, the possible decrease in ad

liking because of cultural differences might explain why the use of indirect BA-ads led to lower purchase intention.

5.3 Suggestions for future research

To account for possible cultural differences, future research should focus on getting people from both low- and high-context cultures, so the two groups can be compared. Earlier research points out that high-context cultures may react differently to more complex advertisements, resulting in lower perceived complexity and higher ad liking (Hornikx & Le Pair, 2017). Accounting for these differences will allow future studies to investigate if these effects do indeed also apply to indirect BA-advertising, as well as give insight as to whether this influences other variables, such as understanding, aesthetic pleasure and purchase intention.

Furthermore, it was found that purchase intention was lower for indirect BA-ads than for direct BA-ads. However, this effect could be mitigated and even reversed by making the advertisements more novel. Also, results indicated the same trend can be found for novelty and aesthetic pleasure. Therefore, future research should investigate what exactly makes some stimuli more novel than others and how to use this information to be able to create more novel ads.

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