

The Power of Facebook Friends: An Investigation of Young Adolescents' Processing of Social Advertising on Social Networking Sites

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Abstract

This study investigates the underlying mechanisms of how young adolescents process social advertising (*i.e.* advertising on social networking sites which shows how many and which of the user's friends have "liked" the brand's page). Particularly, two experiments examined the role of brand trust in adolescents' attitude formation and how brand trust is predicted by theories of social proof and persuasion knowledge. In addition, the moderating role of brand familiarity and brand value is investigated. The first experiment ($N = 142$) showed that higher brand trust was induced for social advertising for unfamiliar but not for familiar brands through the principle of social proof. This means that friends' likes may reduce uncertainty and increase trust in unfamiliar brands through social advertisements, which enhances brand attitudes. Persuasion knowledge could not explain the effects of social advertising. The second experiment ($N = 72$) showed that social advertisements are more effective for brands that are symbolic (versus non-symbolic brands). Managerial and policy implications regarding social advertising targeting adolescents are discussed.

Keywords

Adolescents, social network advertising, advertising type effects, advertising processing, social proof, persuasion knowledge

Introduction

Children's social media use significantly increases when they enter adolescence around the age of 12 (Ofcom, 2019). They mainly use social networking sites (SNS) such as Facebook, Instagram or Snapchat for social and entertainment goals, and especially to stay in touch with their friends (Kennedy et al., 2019). On these SNS, they are also exposed to commercial content. Facebook, for instance, embeds sponsored messages into their users' newsfeeds (Youn & Shin, 2019). These newsfeed advertisements are usually tailored to the users' characteristics and interests to increase personal relevance and generate positive consumer responses (De Keyzer et al., 2015; Voorveld, 2019; Walrave et al., 2016). One particular personalized advertising format on Facebook is "social advertising" (Windels et al., 2018). Social advertisements are sponsored posts that include a snippet of text telling how many and which of the users' friends have "liked" the page of the brand that runs the advertisement (Li et al., 2014; Xue & Zhou, 2019). Usually the name of one particular friend is highlighted in this so-called "social endorsement", which is displayed as "[Friend's Name] and [number of] other friends like [Advertised Brand]". As opposed to regular sponsored posts without such endorsements (*i.e.* non-social advertising), social advertisements stimulate online social influence (Bakshy et al., 2012).

Previous studies have already examined under which conditions social endorsements increase brand and advertising effects (Bakshy et al., 2012; Errmann et al., 2019; Kim et al., 2019; Li et al., 2014; Xue & Zhou, 2019). In addition to these studies – which primarily focused on adults – only one study has examined how adolescents interact with social advertising. Zarouali et al. (2018) conducted an experiment using a mock SNS which showed that social advertisements (indicating that "three friends like the advertised brand") generate more positive advertising attitudes and trigger less awareness of a persuasive attempt when adolescents (aged 14-16) have engaged in online peer communication (*i.e.* online chatting). Further research on

how young consumers form brand evaluations when exposed to this type of advertising is lacking, even though social advertisements may especially influence how this young target group interacts with sponsored content on SNS (Walrave & Van Ouytsel, 2014). Friends have a significant influence on adolescents' consumption decisions because they determine whether someone is accepted and fits in with the peer group. As a result, adolescents adapt their consumption choices to comply with their friends' preferences (Chaplin & John, 2007; Isaksen & Roper, 2012). Given this increased susceptibility to peer pressure and the persuasive influence of SNS advertising (Youn & Shin, 2019), further insights in how adolescents cope with social advertising are much needed.

The current study aims to address this research gap by examining the processes that lead to attitude formation when adolescents are exposed to social advertising. Therefore, we propose a conceptual model in which brand trust plays a central role. Adolescents generally distrust advertising and brands on SNS (Kelly et al., 2010). Endorsements by friends in the form of likes, however, can enhance trust by showing support for the advertised brand (Phua & Ahn, 2016; Seo et al., 2018; Xue & Zhou, 2019). Moreover, we propose that this brand trust can be increased by two principles, namely those of social proof and persuasion knowledge. On the one hand, this study looks into the use of social endorsements as a social learning factor that helps adolescents make inferences about their friends' actual liking of the brand. Following the principle of social proof (Cialdini, 2007), these inferences can be used to develop brand trust and brand evaluations (Seo et al., 2018; Xue & Zhou, 2019; Zarouali et al., 2018). On the other hand, adolescents may have difficulties in recognizing the commercial and persuasive intent of social advertising messages since these advertisements are embedded in their personal newsfeed and resemble organic content (Zarouali et al., 2018). Such unclear persuasion tactics may limit young consumers' ability to critically reflect on advertising and its source (Hudders

et al., 2017). Hence, this study aims to explore how this lack of persuasion knowledge influences adolescents' brand trust and brand evaluations.

Two experiments were set up in order to examine the mediating role of social proof, persuasion knowledge and brand trust in adolescents' attitude formation of social advertising. In these experiments, two moderating variables related to the advertised brand were incorporated: brand familiarity and brand value. As previously shown in studies on advertising effects, consumers' processing of advertising messages may be influenced by their familiarity with the brand (see *e.g.* van Berlo et al., 2017). Hence, the moderating role of brand familiarity is investigated in the first experiment. In a second experiment, the moderating role of brand value is examined, since adolescents may be more susceptible to their peers' influences when it concerns brands with symbolic versus functional value (*e.g.* Bearden & Etzel, 1982; Childers & Rao, 1992; Makgosa & Mohube, 2007). Adolescents interact with brands on SNS to communicate their identity (Dunne et al., 2010; Livingstone & Brake, 2010), so endorsements may be more convincing and trustworthy for brands that can symbolize the person who is using it (*i.e.* symbolic brands; Bernritter et al., 2017).

Unlike other studies that used a scenario-based approach in which participants had to imagine that they saw an advertisement that was endorsed by their friends (see *e.g.* Xue & Zhou, 2019), the current study uses an innovative methodology that resembles reality. We created an online environment imitating Facebook so that we could implement the name of the participants' best friend in the social endorsement. By doing so, the participants were shown a social advertisement highlighting a trustworthy friend, which increased the credibility of the endorsement. The results of the two experiments may be of interest to advertisers and public policy makers, since it provides insights into how young people cope with social endorsements.

Literature review

We propose a conceptual model to examine the role of brand trust in adolescents' attitude formation of socially advertised brands. Brand trust may be explained by the principles of social proof and persuasion knowledge. As such, these three mediating variables, both in parallel and series, are discussed in the following literature review. The moderating role of brand familiarity is considered when developing the research hypotheses for the first experiment. The conceptual framework representing the two hypotheses for this experiment is shown in figure 1. Brand value is included as a moderator in the second experiment and is discussed in the second part of this article.

--- FIGURE ONE ABOUT HERE ---

The Role of Brand Trust in the Effectiveness of Social Advertising

It is important for brands to build brand trust because this can deliver multiple benefits, such as being top-of-mind during the consumers' decision process, increasing loyalty or engagement and building lasting customer relationships (Edelman, 2020). Brand trust refers to the willingness of consumers to rely on a brand and is based on the consumers' beliefs and knowledge about that brand (Becerra & Badrinarayanan, 2013). These beliefs involve that the brand will meet the expectations of the customer, deliver the promises that it has made, and is reliable in general (Gefen et al., 2003; Sichtmann, 2007).

Brand trust can be established through several mechanisms, among which (electronic) word-of-mouth (eWOM) (Ha, 2004). This means that consumers will perceive brands as being more trustworthy when they are aware of other people having positive opinions regarding the brand. In a SNS context, users (un)intentionally illustrate their attitudes towards brands by liking or commenting on advertisements in their news feed, which creates positive eWOM (Wu et al., 2014). Social advertising aims to benefit from these processes by automatically adding a

social endorsement above the advertisement, referring to the friends of the recipient who like the advertising brand. In this way, social advertising presents one or more friends as endorsers of the advertising message and can thus be perceived as a personal recommendation or friend referral rather than a persuasion attempt (Windels et al., 2018; Xue & Zhou, 2019). These personal recommendations can contribute to the development of trust in the advertised brand, since they show support and approval for the brand (Phua & Ahn, 2016; Seo et al., 2018; Xue & Zhou, 2019).

The effect of social advertising (or eWOM on SNS) on brand trust may, however, depend on the strength of ties between the sender and the receiver of the advertising message (Wu et al., 2014). People with whom consumers have a close friendship are not expected to have commercial interests in recommending a product or brand or to manipulate their friends (Bickart & Schindler, 2001; Boerman et al., 2017; Errmann et al., 2019; Sen & Lerman, 2007). Moreover, they are perceived to be more trustworthy sources of information than advertisers. Trust in the endorser is thus key in determining the effectiveness of social advertising, because trust can be transferred from the endorser to the advertised brand (Reinikainen et al., 2020; Stewart, 2003). Eventually, the increased trust in the brand stemming from the social endorsement contributes to the attitudes that people develop toward the brand.

Since consumers – and adolescents in particular – generally distrust online advertisers (Kelly et al., 2010; Leong et al., 2020), it is important to examine how the presence of their friends influences these trust perceptions and consequently brand attitudes. The methodology of the current study allowed us to integrate the name of the adolescent's best friend in the social endorsement. In the following section, we discuss how processes of social influence involving such trustworthy endorsers could further explain this trust and attitude formation. Thereafter, the mediating role of persuasion knowledge is discussed.

Mediating Role of Social Proof

The principle of social proof refers to people's tendency to rely on others for cues on how to think and behave (Cialdini, 2007). This means that people will look for social evidence in a particular situation to find out what is correct to do, so that they can respond accordingly. A similar concept is called herd behavior, which indicates that people are likely to be influenced by the actions of others in their network by simply doing what they are doing (Banerjee, 1992). In previous studies, the social endorsement as delivered by social advertising has been proposed as such cue of social proof, on which consumers may rely when processing the advertising message (Seo et al., 2018; Xue & Zhou, 2019; Zarouali et al., 2018).

Particularly, the social endorsement shows that one or more friends have clicked on the like button at the brand's page, which reflects their affinity with the brand. Based on this social endorsement, people will make causal inferences regarding their friends' actual liking of the brand (see the attribution theory by Kelley, 1967), and these inferences may predict consumer attitudes (Silvera & Austad, 2004). Consumers may then rely on the assumption that when their friends think it is good, it must be good, persuading them to develop positive attitudes as well. In a similar vein, an earlier study on peer endorsements showed that the attributions one makes about an endorser (*i.e.* whether they assumed that the endorser actually likes the brand) is positively related to the individual's own brand evaluations (Sørsum et al., 2003). Hence, social proof – or the formation of inferences about the friend endorsers' brand liking – may positively influence perceptions of brand trust and consequently brand attitudes.

Mediating Role of Persuasion Knowledge

When adolescents rely on their friend's endorsement while processing the advertisement, it is unlikely that they will activate persuasion knowledge. Persuasion knowledge refers to the knowledge an individual has about the advertiser's persuasion goals and tactics (Friestad & Wright, 1994) and enables consumers to critically reflect on the advertisement and its source (Hudders et al., 2017). First, adolescents may have difficulties to

recognize the commercial and persuasive intent of advertising messages on SNS since these are embedded in their personal newsfeed and are very similar in format and style as the generic non-commercial posts (Boerman et al., 2017; Wojdyski et al., 2018; Youn & Shin, 2019). In addition, the entertaining nature of SNS and the information overload on these platforms may lower their ability to cope with advertising messages (Hudders et al., 2017). Social advertisements, moreover, include a personal endorsement and resemble organic posts as they appear in one's newsfeed when a friend spontaneously interacts with non-commercial content. As argued by Zarouali et al. (2018) the originating commercial source of these messages may then even be less clear for adolescents. Zarouali et al. (2018) found that social advertising triggers less persuasion knowledge compared to non-social advertising among 14- to 16-year-olds, but only when the adolescents engaged in online peer communication while being exposed to the advertisement. This distracted them from the underlying persuasive and commercial motives and suppressed the use of persuasion knowledge.

Hence, adolescents may accept social advertising messages and infer that his or her friend clicked the like button because of a real affinity toward the brand instead of reflecting on its commercial nature. Such uncritical processing of the advertising message may have an influence on brand trust as well. Adolescents may perceive their friend as the sender of the message and not develop feelings of distrust toward the original commercial source (*i.e.* the brand) (Boush et al., 1994; Friestad & Wright, 1994; Obermiller & Spangenberg, 1998). Hence, brand trust and brand attitudes will be higher when persuasion knowledge is not activated.

The Moderating Role of Brand Familiarity and Hypothesis Development

The extent to which social proof and persuasion knowledge are impacted by social advertising may depend on the adolescents' familiarity with the brand. For familiar brands, consumers may have experience using or trying the brand, or they may have family or peers who told them about it (Campbell & Keller, 2003). This means that they have built prior brand

attitudes or association structures in their memory, which are less subject to influence. Unfamiliar brands, on the other hand, are brands that are still unknown to the consumer.

First, we argue that social proof may be increasingly important for unfamiliar brands. As discussed by (Cialdini, 2007), consumers may especially revert to social proof in uncertain situations. When they do not know what to think or how to behave when confronted with an unfamiliar brand, adolescents may look for additional information cues – such as the endorsement – that can help them learn about the brand (Kim et al., 2019). A social endorsement can therefore be more helpful and informative in advertising for brands that are still unfamiliar to the adolescent than for brands that are generally accepted among the peer group (Kim et al., 2019). In other words, it is likely that adolescents are already aware of their friends' attitudes regarding familiar brands, since brands are a frequent subject of peer communication on SNS (Lawlor et al., 2016; Mishra et al., 2018). In this case, a social endorsement will not provide new information about a friend's brand liking and may not have such a large impact on adolescents' attitude formation. Hence, the likelihood that adolescents will actually make inferences about their friend's brand liking when processing social advertising may depend on their familiarity with the brand or the extent in which they desire this additional information. In sum, we expect that:

Hypothesis 1: Social advertising for unfamiliar brands increases inferences about the friend endorser's brand liking compared to non-social advertising, resulting in higher brand trust and brand attitudes. For familiar brands, such an effect is less likely to occur.

Second, adolescents' activation of persuasion knowledge regarding social advertising may depend on brand familiarity as well. Previous research suggests that consumers may be more critical of an advertisement for an unfamiliar brand, which may imply that their persuasion knowledge toward the message is triggered (Wei et al., 2008). However, processing an advertisement for an unfamiliar brand may require more cognitive effort of the adolescent,

which comes at the expense of recognizing its commercial and persuasive intent (van Berlo et al., 2017). When supplemented with a social endorsement, moreover, adolescents may be more inclined to learn about the brand and increasingly focus on the social value of this additional information (Hilton & Darley, 1991; Campbell & Keller, 2003). Therefore, we expect that persuasion knowledge is less likely to be triggered for social advertising compared to non-social advertising when it concerns an unfamiliar brand. An endorsement for a familiar brand, on the other hand, will not decrease or increase persuasion knowledge, since adolescents may be used to seeing similar messages appear in their newsfeed (as a result of their friends' spontaneous interactions). Especially when it concerns a brand that is known among the majority of adolescents, they may devote less cognitive resources to the endorsement, which will consequently not affect their persuasion knowledge compared to a non-social advertisement. The second hypothesis is formulated as follows:

Hypothesis 2: Social advertising for unfamiliar brands decreases persuasion knowledge compared to non-social advertising, resulting in higher brand trust and brand attitudes. For familiar brands, such an effect is less likely to occur.

Experiment 1

The first experiment examines the conceptual model and the related hypotheses as proposed in figure 1. This model with three mediators, both in parallel and series, examines how social proof and persuasion knowledge influence adolescents' trust perceptions and consequently brand attitudes. The moderating role of brand familiarity is hereby included.

Methodology

Design and participants

A two (advertising format: non-social versus social) by two (brand familiarity: unfamiliar versus familiar) between-subjects design was used to test the hypotheses. The sample consisted

of 142 adolescents in the first grade of secondary school ($M_{age} = 12.26$, $SD = .76$, 54.9% girls), recruited in two schools in [region blinded for review]. In total, 72% of the respondents had an active account on Facebook and 73% of them checked their newsfeed more than once a week.

Procedure

Before the experiment, institutional approval from the ethics committee of the researchers' university faculty was obtained as well as informed consent from the school principals, the adolescents, and the adolescents' parents. The experiment took place during school hours in a computer room under supervision of the first author and a teacher. All participants were informed that they were going to participate in a study about social media without disclosing the true purpose of the experiment. A debriefing was provided afterwards.

During the experiment, participants were first asked to navigate to a research tool that was developed for this experiment. They gained access to the tool by entering their first and last name (see Appendix 1). They then filled in a pre-questionnaire about their demographics, interests, and hobbies (see Appendix 2). After an additional filler task, they were redirected to a personalized mock Facebook website that contained a number of fictional posts. Among these was a newsfeed advertisement for the new collection of a sneaker brand. This advertisement was either a sponsored post that included a social endorsement (*i.e.* social advertisement, see Appendix 3) or a regular sponsored post without a social endorsement (*i.e.* non-social advertisement, see Appendix 4). Participants could look at the newsfeed as long as they wanted before continuing with a questionnaire. By following this procedure, it was possible to fully control the manipulation of the ads and to increase internal validity of the study.

Stimuli materials

The social advertisement as described above was created by collecting the name of the participant's best friend in advance and automatically inserting this name into the social

endorsement (*i.e.* the snippet of text “[Best friend] and 12 other friends like [Brand Name]”). By doing this, the authors created a recommendation from a trustworthy friend who is expected to have similar interests as the participants themselves. A sociometric nomination approach (*cf.* Poulin & Dishion 2008) was used to do so: participants were asked in the pre-questionnaire to indicate their best friend from a list with all the names of their classmates (see Appendix 2). The pre-questionnaire contained other filler questions and participants were instructed to do a filler task before logging in to the mock Facebook website, which distracted their attention from the manipulation of the social ad. As in Zarouali et al. (2018), the two ad formats were not pretested since the advertisements were reproduced using the exact same layout as existing Facebook ads.

The advertised brand was either an unfamiliar (Appendix 3) or familiar sneaker brand (Appendix 4). A pretest among 37 adolescents ($M_{\text{age}} = 12.43$, $SD = .80$; 35.1% girls) confirmed that Nike was an appropriate familiar brand for the study ($M_{\text{Nike}} = 6.41$, $SD = 1.62$) and that the fictional brand Vidé was unfamiliar to the respondents, as intended ($M_{\text{Vidé}} = 2.24$, $SD = 1.24$; $t(36) = 11.83$, $p < .001$, $d = 1.94$). The authors aimed to choose a familiar brand that was deemed popular among the target group to increase the likelihood that the brand was discussed frequently in peer groups. The pretest confirmed this; Nike was perceived as a popular ($M = 6.51$, $SD = 1.22$) and interesting ($M = 6.19$, $SD = 1.12$) brand.

Measures

The dependent variable—attitude toward the brand—was measured using six semantic differentials (*e.g.*, “Negative-Positive”; $\alpha = .93$; van Reijmersdal, Boerman, Buijzen, & Rozendaal 2017). Conceptual persuasion knowledge was assessed using four items ($\alpha = .73$; Tutaj & van Reijmersdal 2012): two items referring to selling intent (*e.g.* “The aim of this Facebook post is to sell products”) and two items referring to persuasive intent (*e.g.* “The aim

of this Facebook post is to make people like these shoes”). Furthermore, participants were asked to indicate on a semantic differential scale to what extent they thought their best friend likes the advertised brand (“Dislike-Like”). This measure was used to capture the inferences adolescents make about the friend endorser’s actual brand liking (see Sørsum et al., 2003). The scale for brand trust was composed of five items taken from Gefen et al. (2003) and Sichtmann (2007) with modified wording to fit the context of this study ($\alpha = .89$; e.g. “This brand is reliable”).

As a manipulation check, brand familiarity was measured with one item (“How familiar are you with this brand?”; van Reijmersdal et al. 2017) and trustworthiness of the friend endorser was assessed with four items ($\alpha = .89$; e.g. “I can trust my friend about sneakers”; Ohanian, 1990). Furthermore, number of variables were included for a randomization check. Frequency of Facebook use was assessed with five response categories: never, a few times a year, a few times a month, a few times a week, and daily (Tutaj & van Reijmersdal, 2012). Product involvement was measured using four items ($\alpha = .82$; e.g. “In general, I have a strong interest in sneakers”; Beatty and Talpade 1994). Demographic variables such as age and gender were assessed in the pre-questionnaire.

All variables were measured with 7-point Likert scales ranging from 1 (totally disagree) to 7 (totally agree) or semantic differentials. The intercorrelations, means, and standard deviations of the variables are presented in table 1.

--- TABLE ONE ABOUT HERE ---

Results

Randomization and Manipulation Check. The experimental groups did not differ with respect to frequency of Facebook use ($\chi^2(12) = 8.50, p = .75, \phi_c = .14$), product involvement ($F(3,138) = 2.19, p = .09, \eta_p^2 = .05$), age ($F(3,138) = 2.04, p = .11; \eta_p^2 = .04$), and gender ($\chi^2(3) = 2.73, p = .44; \phi = .14$). The manipulation check revealed that Nike ($M = 5.14, SD = 1.64$)

was perceived as significantly more familiar than the fictional brand Vidé ($M = 3.18$, $SD = 1.85$; $t(140) = -6.68$, $p < .001$; $d = 1.12$). The endorsers were perceived to be trustworthy sources of influence ($M = 5.65$, $SD = 1.27$).

Hypothesis Testing. To examine the hypotheses, analyses were conducted using moderated mediation analyses (Hayes, 2018; PROCESS, model 83, 5000 bootstrap samples; see figure 2). First, the results showed that the moderated mediation index is significant for the indirect effect of social advertising on brand attitude via inferences about the friend endorser's brand liking and brand trust, moderated by brand familiarity ($B = -.2325$, $SE = .1145$, 95% $CI = [-.4834, -.0331]$). In particular, these results revealed that social advertising increased brand attitudes via inferences about the endorser's brand liking and brand trust, but only when the advertised brand is unfamiliar ($B = .1677$, $SE = .0854$, 95% $CI = [.0277, .3607]$). This indirect effect was insignificant for familiar brands ($B = -.0649$, $SE = .0741$, 95% $CI = [-.2129, .0813]$). Confirming hypothesis 1, the proposed mediation is significant for unfamiliar brands, but not for familiar brands.

Second, the results showed that the moderated mediation index is not significant for the indirect effect of social advertising on brand attitude via persuasion knowledge and brand trust, moderated by brand familiarity ($B = -.0050$, $SE = .0312$, 95% $CI = [-.0873, .0472]$). The mediation effect is not significant for either unfamiliar ($B = .0031$, $SE = .0200$, 95% $CI = [-.0343, .0522]$) or unfamiliar brands ($B = -.0019$, $SE = .0223$, 95% $CI = [-.0571, .0383]$). Hence, hypothesis 2 is rejected.

--- FIGURE TWO ABOUT HERE ---

Conclusion

The results of this first experiment showed that adolescents make inferences about their best friend's liking of the advertised brand when this friend endorses the advertising message.

However, this is only the case when the advertised brand is unfamiliar. Moreover, the social endorsement can help reduce the uncertainty that adolescents feel toward unfamiliar brands. The experiment showed that brand trust in the unfamiliar brand increases and, consequently, positively influences brand attitudes. Contrary to the expectations, the results showed no effect of social advertising on persuasion knowledge, neither for familiar, nor for unfamiliar brands. This means that adolescents in the current study did not fail to trigger persuasion knowledge (in terms of a decreased understanding of the advertisement's persuasive and selling intent) when processing social advertising. As a consequence, indirect effects of social advertising on brand attitude via persuasion knowledge and brand trust were not found either.

In conclusion, the inferences adolescents make about the endorser's actual liking of the unfamiliar brand appear to be an important factor in increasing brand trust and attitudes. However, we expect that the effectiveness of the endorsement and adolescents' susceptibility towards it not only depends on the adolescents' familiarity with the brand, but also on the value they place on the brand. Therefore, a second experiment was set up.

Experiment 2

The second experiment examines whether endorsements are more effective in terms of social proof, brand trust and brand attitudes for symbolic versus non-symbolic brands. Symbolic brands are brands that symbolize the person who uses it and can be used as a means to communicate a social identity (Bernritter et al., 2017). Between the ages of 8 to 14 years, young consumers begin to see their possessions as a part of who they are and use certain brands to construct and communicate their self-concept (Chaplin & John, 2007). Hence, they begin to understand the symbolic meanings that are attached to certain brand names and make inferences about other people based on their use of these brands as well (John, 1999). In this regard, consuming the "right" (*i.e.* popular) brands is very important to them, because they know that

these brands can be used as a means to be accepted and fit in with the peer group (Chaplin & John, 2007; Isaksen & Roper, 2012; Piacentini & Mailer, 2004).

However, the representation of their social identity is not limited to the brands they actually consume. Since they spend a lot of their time on the internet, adolescents find it important to communicate a positive identity on SNS as well (Dunne et al., 2010; Livingstone & Brake, 2010). As such, they show off their favorite brands by posting pictures or videos on their profiles. Furthermore, brand-related interactions such as liking brand pages or commenting on brand posts are a form of self-expression as well (Hollenbeck & Kaikati, 2012). Adolescents do not consciously do this to promote these brands (Lawlor et al., 2016), but such interactions are visible to their friends and can be used by advertisers to create social endorsements. Moreover, seeing such brand-related interactions of others in their news feed enables adolescents to make inferences about their friends' brand preferences..

We suggest that a social endorsement may be more convincing and trustworthy for brands that are perceived to have symbolic value, since such endorsements make more sense. As recommended by Sørsum et al. (2003), it is important to make peer endorsements seem genuine in order to make an advertisement more persuasive. When endorsing the brand is less likely to be beneficial to adolescents' identity construction, adolescents may doubt whether their friend actually likes the brand. Hence, social endorsements for non-symbolic brands, that only have the ability to fulfill functional needs, may be less convincing and withhold adolescents to make the right inferences about their friend's brand liking. This may in turn impact their trust in the advertised brand. Based on this assumption and the literature previously reviewed in this paper, we formulate the third hypothesis (visualized in figure 3) as follows:

Hypothesis 3: Social advertising increases inferences about the friend endorsers' brand liking when this brand is symbolic versus non-symbolic, resulting in higher brand trust and brand attitudes.

--- FIGURE THREE ABOUT HERE ---

Method

Design and Participants

The second experiment used a between-subjects design with two conditions (social ad for a non-symbolic brand versus social ad for a symbolic brand). The participants ($N = 72$) were 12 to 15 years old ($M_{age} = 13.03$, $SD = .90$, 59.7% girls) and were recruited in secondary schools in [region blinded for review]. In total, almost 80% of the respondents had an active account on Facebook and 70.2% of them checked their newsfeed at least once a week.

Procedure

The procedure of the second experiment slightly differed from the procedure of the first. Again, informed consent was obtained from the school principals, the adolescents, and the adolescents' parents. One week prior to the experiment, the first author visited the participating classes. During this visit, the adolescents filled in a pre-questionnaire consisting of a dozen filler questions about their interests and hobbies. The answer on one of the questions ("What is the name of your best friend?") revealed the necessary information for personalizing the advertisements. By visiting the schools one week in advance, the time period between collecting the information about the participants' best friend and exposure to the stimulus material was extended. Furthermore, participants were not forced to choose their best friend's name from a list in this study, which allowed us to create a more natural endorsement. Before inserting the names into the stimulus ads, an extensive data check was performed.

During the experiment, participants again viewed a personalized mock-up Facebook website. However, one of the two ads was now displayed in a screenshot of a blurred newsfeed to make sure every participant could only focus on the stimulus post (Appendix 5). They were instructed to look at the newsfeed and were then directed to the questionnaire.

Stimuli materials

The fictional brand Vidé was again used to reproduce advertisements for non-symbolic and symbolic sneakers. The non-symbolic sneakers were advertised as excellent walking shoes focusing on product quality, while the symbolic sneakers were advertised as fashion articles that could help adolescents to signal their desired identity to a reference group. The advertisements differed in background and sneaker design and the manipulation was strengthened by adding a textual description of symbolic (*e.g.* “fully customizable”) or non-symbolic (*e.g.* “practical and solid”) product characteristics (see Appendix 6). Both advertisements included a social endorsement, based on the name of the participant’s best friend which was collected in advance. Other elements were kept similar to avoid confounding effects.

Based on Bhat & Reddy's scale (1998) to measure a brand’s symbolic value, we created five semantic differentials to assess whether the brands are perceived to have symbolic and social potential. The items were adapted to fit the context of the study (taking into account literature on consumption symbolism, *e.g.* Kim & Johnson, 2015; Sweeney & Soutar, 2001; Voss et al., 2003) and the cognitive level of the respondents. A pretest with an M-Turk sample ($N = 76$; $M_{age} = 35$, 51.3% women) showed that brand value was successfully manipulated: the symbolic sneakers ($M = 4.74$, $SD = 1.47$) were perceived as having more symbolic value than the non-symbolic sneakers ($M = 2.65$, $SD = 1.40$; $t(74) = -6.32$, $p < .001$, $d = 1.45$).

Measures

The same scales were used as in the first experiment, but the translation of some items was adjusted to enhance understandability. The meaning of the items remained the same. All items were again measured with 7-point Likert scales or semantic differentials. The intercorrelations, means, and standard deviations of the variables measured in the second study are presented in table 2.

Adolescents' perceptions about the friend endorser's actual brand liking was again assessed by asking participants to indicate to what extent they believe their friend actually likes the brand. Brand trust ($\alpha = .91$) and brand attitude ($\alpha = .88$) were also assessed in the same way. As a manipulation check, brand symbolism ($\alpha = .79$) was assessed as described above (based on Bhat & Reddy, 1998). Frequency of Facebook use was again included as a randomization check, as well as product involvement ($\alpha = .88$). Finally, the demographic variables age and gender were assessed.

--- TABLE TWO ABOUT HERE ---

Results

Randomization and Manipulation Check. The experimental groups did not differ with respect to frequency of Facebook use ($\chi^2(4) = 5.22, p = .27, \phi = .27$), product involvement ($t(55.90) = -1.71, p = .09; d = .41$), age ($t(70) = .01, p = .99; d = .00$), or gender ($\chi^2(1) = 2.53, p = .11; \phi = -.19$). The manipulation check revealed that the symbolic brand ($M = 4.53, SD = .89$) was perceived as significantly more symbolic compared to the non-symbolic brand ($M = 2.84, SD = 1.36; t(55.90) = -6.20, p < .001, d = 1.31$).

Mediation Effect. The mediation model proposed in hypothesis 3 was tested using model 6 in PROCESS (Hayes, 2018). The results (figure 4) show a significant indirect effect of the social advertisement on brand attitude via inferences about the endorser's brand liking and brand trust ($B = .17, SE = .08, 95\% CI [.0281, .3542]$). A social ad for a symbolic brand resulted

in greater inferences about the friend endorser's actual brand liking compared to a social ad for a non-symbolic brand ($B = .94$, $SE = .36$, $p = .01$) which increased brand trust ($B = .40$, $SE = .09$, $p < .001$), resulting in more favorable brand attitudes ($B = .45$, $SE = .10$, $p = .01$). Hence, hypothesis 3 is accepted.

--- FIGURE FOUR ABOUT HERE ---

General discussion

This study provides insights in adolescents' attitude formation when they are exposed to social advertising on Facebook – which includes a social endorsement by friends. To the best of our knowledge, only one study so far has examined how adolescents evaluate this advertising format (see Zarouali et al., 2018). Hence, this study extends the literature on how adolescents cope with personalized advertising in the first place (*e.g.* Walrave et al., 2018; Zarouali et al., 2017, 2018). Moreover, this study contributes to literature on the influence of peers on adolescents' consumer behavior and attitudes (*e.g.* Mangleburg & Bristol, 1998; Rozendaal et al., 2013). Additionally, it examines how the presence of these peers can enhance brand trust, responding to previous literature on online trust building (*e.g.* Ha, 2004; Wu et al., 2014). An innovative methodology was adopted to examine the role of social proof, brand trust and persuasion knowledge in adolescents' processing of social advertising, taking into account the moderating role of brand familiarity and brand value.

The key finding of this study is that adolescents make inferences about the brands their friends like when exposed to social advertising for unfamiliar brands, and that these inferences enhance trust and attitudes toward the advertised brands. First, this means that a social endorsement can convince adolescents about their friends' liking of a brand that they have not heard of before. For familiar brands, such an effect was not found. Social advertising does not increase these inferences since it is likely that adolescents are already aware of their friend's

affinity with the brand (*i.e.* they have strong inferences about their friend's liking of the brand anyway). In this case, it is unlikely that they value this additional information and use it when processing the advertisement. In line with research by Xue and Zhou (2019), this means that the endorsement can help create more favorable advertising responses for brands that are unknown or unfamiliar to the recipient.

Accordingly, our experiment showed that the endorsement can be used as a cue to assess the trustworthiness of the unfamiliar brand, which reduces the uncertainty that they may feel towards it. This can be explained by the endorser being a trusted source of influence, increasing the persuasiveness of the message (Araujo, 2019; Boerman et al., 2017; Voorveld, 2019). Brand trust consequently had a positive influence on adolescents' brand attitude. In line with previous research (Cronley et al., 1999; Silvera & Austad, 2004; Sørsum et al., 2003), this means that the inferences adolescents make about their friends' liking of the unfamiliar brand encourage them to develop positive attitudes toward the brand as well. Hence, this supports the assumption that the endorsement serves as a cue of social proof in forming positive brand attitudes (Seo et al., 2018; Xue & Zhou, 2019; Zarouali et al., 2018). Furthermore, this shows that adolescents consider their peers' preferences when evaluating brands, which confirms what previous researchers have observed in an offline context as well (Keillor, Parker, and Schaefer 1996; Mangleburg, Doney, and Bristol 2004; Moschis and Moore 1979; Meyer & Anderson, 2000).

Despite the assumption that adolescents would fail to trigger persuasion knowledge when confronted with social advertising for unfamiliar brands, we did not find significant differences between the experimental conditions. This means that the social endorsement may have occupied cognitive effort of the adolescents while making inferences about their friends' brand liking, but this did not come at the expense of recognizing its commercial and persuasive intent (van Berlo et al., 2017). Previous research by Zarouali et al. (2018), however, showed that social advertising triggers less persuasion knowledge when adolescents engaged in online

peer communication compared to when they did not. Future research may further examine the role of persuasion knowledge in adolescents' processing of social advertising. Important to note, however, is that adolescents' persuasion knowledge regarding the newsfeed advertisements shown during the experiment was relatively high ($M = 5.36$ on a seven-point scale, $SD = 1.23$). While previous research discussed that adolescents may have difficulties applying their persuasion knowledge for embedded advertising (Boerman et al., 2014; De Pauw et al., 2018; Hudders et al., 2017; van Reijmersdal et al., 2012; Walrave et al., 2016), the current study showed that this was not the case. Moreover, we can infer that adolescents are able to understand the persuasive and selling intent of newsfeed advertising on SNS – even when endorsed by their best friend – but that this does not have a negative effect on their attitude formation.

Based on the assumption that adolescents may be more convinced about their friend's endorsement for a brand that could contribute to identity construction, the second experiment examined the influence of social proof in social advertising for brands with different levels of symbolic value. The results showed that adolescents indeed make greater inferences about their friend's liking of the advertised brand when the brand has symbolic properties. Similar as in the first experiment, these perceptions allow adolescents to build trust in the brand and persuade them to develop positive attitudes toward the brand as well. This means that the endorsement can help create more favorable advertising responses for brands with symbolic value, but also that adolescents are even more likely to be persuaded by such endorsements. The implications that can be drawn from this are further discussed in the following section.

Marketing and public policy implications

First, the findings of our study can be translated in some important implications for the advertising industry. It shows that social advertising is an effective technique for advertisers to target young consumers and put their – yet unfamiliar – brand in the marketplace. Advertising

for unfamiliar brands may initially be perceived as intrusive and irrelevant by adolescents (Kelly et al., 2010), but these adverse effects could be reduced by including an endorsement by a close friend. It encourages them to make inferences about their friends' actual brand liking and develop their own attitudes accordingly. Moreover, social advertising may encourage trust in the unfamiliar brand, which can be a driver for loyalty and engagement in the long term (Edelman, 2020; Ha, 2004). Trust building is especially important under conditions of uncertainty (Lee & Turban, 2001), so advertisers could benefit from this by leveraging friend as endorsers. In the current study, the endorser was a trustworthy friend, which can explain these positive effects. Hence, advertisers should consider that endorsements by other – not so close – friends may not have such strong effects (see *e.g.* Bakshy et al., 2012; Huang et al., 2021). Furthermore, setting up a social advertising campaign in practice is only possible when the brand has already collected some page likes. Advertisers should still put effort in building their community before they can benefit from the social influences by the endorser. However, the organic brand-related interactions of their fans are still displayed in the news feeds of their fans' friends, which may create a similar endorsement effect. Lastly, the effectiveness of social endorsements depends on the brand value. The study has shown that the endorsement is more convincing for brands that can communicate something about the user. Hence, advertisers should consider whether their brand can benefit from these social influences to avoid the endorsement being suspicious.

Furthermore, this study can make both advertisers and public policy makers aware of adolescents' vulnerability to social endorsements. The results show that adolescents have high persuasion knowledge regarding social advertising, but this appears not to be disadvantageous for advertisers. Even if adolescents recognize the persuasive and commercial intent of the social advertising message, they still make positive inferences about their friends' actual brand liking based on the endorsement. The endorsement may thus overshadow the effects of persuasion

knowledge, resulting in positive advertising effects. As discussed by Hudders et al. (2017), adolescents' critical and conscious coping with embedded advertising formats also depends on their affective reactions toward the persuasion attempt. For instance, it could be that adolescents' persuasion knowledge diminishes advertising effects, but only when adolescents do not like the advertisement and judge the advertising tactic as unfair. Therefore, it is important that adolescents fully understand how social advertising can influence them (*i.e.* by using their friends as endorsers) so that they can evaluate these aspects as well. Furthermore, they may not aware that they engage in brand promotion themselves through interactions with brands on SNS and that these interactions can be used by advertisers to create social endorsements (see *e.g.* Lawlor et al., 2016). Both advertisers and public policy makers should take this in mind, either when developing advertising formats using such affect-based mechanisms or when developing interventions to increase adolescents' advertising literacy regarding these tactics.

Another reason why it is important to teach adolescents about such advertising techniques is because its social influences can induce other, unintended advertising effects. Social media are environments in which adolescents already experience a lot of peer pressure, making them increasingly vulnerable to endorsements from their peers (Sherman et al., 2016). Their experiences with social advertisements, which communicate their peers' preferences, may influence young people's materialism and eventually their self-esteem and wellbeing (Ho et al., 2019). Furthermore, previous research (in an offline context) has shown that adolescents are increasingly susceptible to their peers' influences when it concerns brands with symbolic or social value (see *e.g.* Bearden & Etzel, 1982; Childers & Rao, 1992; John, 1999; Makgosa & Mohube, 2007). Social endorsements for brands that are advertised as such, may thus even have greater repercussions. Given the developmental phase of the adolescents, these psychosocial influences need to be considered as well. Hence, we suggest that public policy

makers consider creating interventions that focus on the development of knowledge and skills that may help adolescents to cope with these psychological effects as well.

Limitations and further research

This study has some limitations that translate into suggestions for future research. First, using an innovative methodology (*i.e.* the development of a research tool) allowed us to successfully integrate the names of the respondents' friends into the stimulus material and create a realistic social endorsement. Therefore, the respondents were required to disclose their personal information (*i.e.* their name and their interpersonal relationships) to the researchers. The adolescents may have felt uncomfortable answering these questions, or they may have found out the purpose of the study after completing the pre-questionnaire. The researchers ensured the anonymity of their answers at different times during the experiment and emphasized that the adolescents' own opinion was very important, but this may still have resulted in socially desirable answers. Future research could be inspired by the methodology of this study, but it should aim to further improve the way in which experimental research on personalized advertising can be conducted.

Second, the participants were redirected to a mock Facebook website and did not log in to their own Facebook profile, which may have decreased the perception of a real-life setting. The procedure was adapted in the second experiment to overcome this limitation. Yet, adolescents mainly use social media in their spare time and access the internet through their mobile devices (Ofcom, 2019). Conducting the experiments in a school context on a computer has thus limited the external validity of the study. Scholars could further examine adolescents' responses to social or personalized advertising in a more natural setting, for instance by conducting field experiments in which participants can use their own smartphone. Furthermore, we examined social advertising on Facebook while recent studies show that adolescents' Facebook use is decreasing (Ofcom, 2019). There are two explanations for this choice. First,

social advertising is a primary advertising format on this platform, which makes SNS users most likely to see a social advertisement in their Facebook newsfeed (Xue & Zhou, 2019). Second, the current study was conducted in 2018 when Facebook was still the most used platform among the sample (Ofcom, 2018). With TikTok and Instagram gaining much popularity, further research could extend our work by examining social advertising effects on those platforms.

The final limitations concern the second experiment. The pretest for this experiment was carried out among adults. Conducting research studies among young people is very time consuming and the planning of experiments is often imposed by the participating schools. Due to time limitations, we conducted this pretest among a large adult sample through Amazon MTurk to indicate whether the manipulation was successful. However, when adapting Bhat & Reddy's scale (1998), a qualitative pretest among adolescents was conducted to make sure the measurement (based on Bhat & Reddy's scale, 1998) was clearly understandable and the end, the manipulation was confirmed among the actual sample. Lastly, the mean score on the question whether the participants thought that the friend endorsers actually like the advertised brand (*i.e.* adolescents' inferences about their friends' actual brand liking) was rather low in both conditions of the second experiment ($M_{symbolic} = 3.74$; $M_{non-symbolic} = 2.79$ on a seven-point scale). This may indicate that adolescents may still be suspicious toward the endorsement. A social endorsement is mostly created without knowledge of the endorser and may thus not always reflect reality. Hence, it may be relevant to examine what happens to adolescents' perceptions when the endorsement is explicitly (in)validated by the endorser. Furthermore, other cues, such as the overall number of *likes* and comments, may also play a significant role on how adolescents perceive SNS advertising. Hence, future research may investigate the impact of other social cues and endorsements more thoroughly.

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