

Advertisements and Selfish Attitudes: An Investigation of Self-Focused  
Metacommunication in Advertising

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**Abstract**

Traditional advertising-effectiveness research has concentrated on advertisements' impact on a personal level. This research believes, however, that exposure to advertisements can also elicit selfish attitudes in people. In two studies, it is examined if exposure to advertisements might increase greed, entitlement, materialism and decrease prosocial behavior because of abundance- and self-focused metacommunication. The first study found the unexpected result that exposure to commercial messages made people *less* greedy. However, this negative correlation can be explained by the fact that greedy people respond less to the survey prompts. The second study indicated that people who were exposed to commercials with self-focused metacommunication were greedier and had stronger feelings of entitlement. This effect could not be explained by how attractive people rated the advertisements and the advertised products. This study contributed to a new perspective on the consequences of metacommunication. Though evidence is still weak and does not hold for every form selfish attitudes tested in this study, this could be a first indication that the presence of self-focused metacommunication may affect people's selfish attitudes.

## Advertisements and Selfish Attitudes: An Investigation of Self-Focused Metacommunication in Advertising

In our everyday life, we are exposed to loads of commercial messages. Commercial messages can be defined as any form of paid communication by an identified sponsor aimed to inform and/or persuade target audiences about an organization, product, service or idea (Belch & Belch, 2004; Tellis, 2004; Yeshin, 2006). Most commercial messages are advertisements in form of television, radio and magazines. People are exposed to advertisements throughout the day a lot, whether they want it or not. Television stations in the Netherlands can send commercials for a maximum of 12 minutes per hour, which amounts to 20 percent of the total air time (“Stichting Reclame Code”, 2016). According to “Stichting Kijkonderzoek” (2015), Dutch citizens watch in general about 190 minutes’ television per day, which means that the general commercial consumption of the average Dutch citizen is about 38 minutes per day. And this is only about television. Other commercial messages are send via, radio, magazines, billboards in the city center and along the roads, via advertisements at Facebook and other internet sites, via a commercial before watching a YouTube video or series, and via pop-up banners on your computer-, tablet- and mobile screen. The average person sees more than 3000 advertisements per day (Fennis & Stroebe, 2016) and spends more than three years of his or her life watching commercials (Kilbourne, 2012).

### **Personal Advertising Effects**

Most advertising research has concentrated on advertisements’ impact on an individual level by studying the effectiveness of advertisements in terms of their effects on product liking. These effects are immediately perceived by the consumer, as they simply catalogue product attributes or benefits (Reinartz & Saffert, 2013). This is due the reason that

advertiser's main goal is to create a positive attitude towards the advertised product or service to influence the consumer to buy the product or service.

Unfortunately, advertising also has negative consequences at the individual level. For instance, Lakoff and Scherr, 1984, p. 290; Richins, 1991 blame advertisers of creating a cult of unrealizable beauty by using models in advertisements and setting an unrealistic standard for attractiveness. There are few people resembling the models in the advertisements, although they are exposed to those models in advertisements frequently. According to Richins, 1991; Hargreaves & Tiggemann, 2002, beautiful and thin models in cosmetics advertisements have created such unhappiness among young women about their appearance that their confidence and self-esteem is undermined. Also, according to Greenberg & Brand, 1993; Pollay, 1986; Wulfemeyer & Mueller, 1992, advertising can enhance materialism in children because advertising is designed to arouse desires for products that would not otherwise be salient. Advertising propagates the ideology that possessions are important and that desirable qualities, such success, happiness and beauty can be obtained only by material possessions (Pollay, 1986; Wulfemeyer & Mueller, 1992). However, though known is that there is a relation between increased media exposure and the development of materialism, the way in which this works remains unknown (Watkins, Aitken, Robertson, Thyne, & William, 2016).

### **Selfish Attitudes**

Despite personal effects, no studies have been conducted that investigated effects of exposure to advertisements on a more interpersonal level. This research believes that exposure to advertisements can also have some effects on how people think and behave towards others. This study proposes that exposure to advertisements might elicit more selfish attitudes in people, specifically by increasing greed and entitlement, resulting in less prosocial behavior. There are two reasons to believe that exposure to commercial messages makes

people think and behave in a more selfish manner. These reasons have to do with the metacommunication in commercial messages.

### **Metacommunication**

Metacommunication can be described as nonverbal, relational communication. According to Watzlawick, Bavelas, & Jackson (1967), every communication has a content and a relationship aspect such that the latter classifies the former and is therefore a metacommunication. Hence, the communication is the message itself, and the metacommunication is all the nonverbal equipment which accompanies the message. Messages sent through metacommunication are not explicitly mentioned in the ad and are responded to without conscious attention (Heath & Feldwick, 2008). They are processed and learned by people automatically, regardless of how much attention they pay. More important, the digital message in communication fades and vanishes over time, whereas the subtle patterns evoked by metacommunication endure, often for years (Watzlawick et al., 1967). Therefore, metacommunication may influence feelings and relationships of people (Heath & Feldwick, 2008).

Metacommunication can have negative effects on a personal level. According to Heath & Feldwick (2007), advertising via television is very powerful and includes metacommunication. As mentioned before, metacommunication in advertising can elicit negative changes in self-esteem and well-being, as metacommunication shows that the models' appearance is a standard that most women cannot meet (Hargreaves & Tiggemann, 2002). Furthermore, Watzlawick et al.'s (1967) study about the way in which relationships grow and break down shows that the communication between couples was regularly perfectly reasonable, but it was the metacommunication that was causing the breakdown. Specifically, although people were saying positive things, the way they communicated caused friction and negativity.

Coming back to the belief that exposure to advertisements can also have some effects on how people think and behave towards others, this study discuss two reasons in which metacommunication can elicit selfish attitudes.

### **Metacommunication in Advertising**

The first reason to believe that advertisements make people more selfish has to do with the suggestion of abundance in advertisements. This is not necessarily a feature of any particular ad, but more of the ubiquity of advertising in general. People are bombed with commercial messages during the day (Fennis & Stroebe, 2016). Advertisements are everywhere. Consumers are influenced by an implicit metacommunication that suggest abundance. Therefore, consumers believe that they can get everything they need and desire (Schwarz, 2009). Suggested abundance in advertising may therefore instigate self-focused patterns of social cognition and behavior. This is due the fact that it is less necessary to give much consideration to the needs and desires of others as everything is plentiful and the environment seems to allow for the complete satisfaction of all desires (e.g., Kraus, Piff, Mendoza-Denton Rheinschmidt & Keltner, 2012; Piff, Kraus, Côté, Cheng & Keltner, 2010). Also, Fennis & Stroebe (2016) support that abundance can lead to selfishness because when objects are available in abundance or easy to obtain, people tend to value those objects less than when those objects were scarce of easy to obtain.

The second reason to believe that advertisements make people more selfish has to do with self-focused metacommunication in particular ads. Some advertisements seem to convey the message that it is OK to think about yourself and allude to personal feelings of superiority. For instance, L'Oréal Paris slogan is: "*because you are worth it*", and is repeated at the end of almost all L'Oréal Paris commercials. Next to this verbal way of communicating, a metacommunication in those commercials suggest that having beautiful hair, skin, and make-up is necessary and important. Another example is that most whitening toothpaste

commercials suggest that brushing your teeth with whitening toothpaste makes you superior and irresistible. The same applies for Paco Rabanne's commercial about their perfume Olympéa, which suggest that people will become powerful and irresistible by using that perfume. These commercial does not directly tell consumers to be more selfish, but the metacommunication in those ads can elicit more selfish attitudes. As those messages are repeated so often, it becomes a sort of norm to just focus on yourself. Therefore, self-focused metacommunication in advertisements can activate selfish attitudes, which can be manifest in more greed, entitlement, materialism and less prosocial behavior.

### **The Present Research**

This thesis intends to determine the extent to which exposure to commercial messages makes people more selfish. Specifically, two studies set out to determine that people became greedier, had stronger feelings of entitlement, became more materialistic, and behaved in a less prosocial manner when exposed to commercial messages. Greed, entitlement and selfish behavior were investigated as they are traits on a more interpersonal level. Materialism, which is a personal effect, was measured because when considering literature, it will be likely that exposure to commercial messages can cause materialism as most advertisements send material messages to encourage people to purchase more (Kasser, Ryan, Couchman & Shelfon, 2004). This can enhance materialism and, in turn, an overemphasis on material possessions can result in selfishness (Richins & Dawson, 1992).

The first study used an event-sampling procedure to measure the frequency of people's exposure to commercial messages in their daily lives. This study assumed that more frequent exposure to commercial messages during the day would be related to higher levels of greed, entitlement, materialism, and lower levels of prosocial behavior. The second study set out to investigate if exposure to advertisements with self-focused metacommunication causally affected greed, entitlement, materialism, and pro-self-behavior.

## Study 1

The specific objective of this study was to investigate if people who are exposed to commercial messages in a higher frequency during the week, have higher levels of greed, entitlement, materialism, and lower levels of prosocial behavior.

## Method

### Participants

A total of 104 Dutch citizens (61.5% female,  $M_{age} = 30.13$ ,  $SD = 13.73$ , ranging from 17 to 76 years), participated in this study. Participants were recruited via the experimenters' family, friends and acquaintances. The participants were approached personally, by telephone and via social media and were asked if they wanted to participate in the study. Additional participants were recruited via snowball sampling.

### Materials and Measures

**Experience Sampling.** Participants were prompted by seven randomly-timed signals a day for a period of five days. The signals were sent via short message service (SMS) which sends short text messages. The web-based application SurveySignal took care of the distributions of the text messages. SurveySignal provided a simple and convenient sign-up system that allowed participants to register and verify their smartphone with their device and to provide consent for smartphone research. Subsequently, SurveySignal took care of the distribution of the mobile phone text messaging as they sent text messages as signals and reminders, according to fixed or random schedules. With embedded data, SurveySignal linking these signals to a mobile question designed with online survey software Qualtrics (Hofmann & Patel, 2015). Each text message the participants received contained a link to an online question that was created in Qualtrics. The following question was asked: *'Have you seen a commercial message within 10 minutes ago? Think about (television) commercials, billboards across the streets, at a bus box or in town, advertisements at Facebook or other*



*internet sites, magazines or other folders, or via the radio.*’ The participants had to answer the question with ‘yes’, ‘no’, or ‘*I do not know*’.

Qualtrics provided the answers on this question and SurveySignal provided the response rate, the percentage that participants did respond to the text messages. An outcome measure for Commercial Exposure was calculated. The number of responded text messages was divided by the number of text messages received. This number was multiplied by the number of text messages answered by yes. In this way, the number of advertisements that people see is corrected for the number of messages they've received and responded to.

**Self-ratings.** Next to the experience sampling, respectively greed, entitlement, materialism and prosocial behavior were measured with a self-rating survey made in Qualtrics. This survey was distributed via e-mail. Greed was measured using Seuntjens, Zeelenberg, van de Ven, & Breugelmans’ (2015) 7-item Dispositional Greed Scale (e.g. *Actually, I’m kind of greedy*). Entitlement was measured using Campbell, Bonacci, Shelton, Exline & Bushman’s (2004) 9-item Psychological Entitlement Scale (e.g. *I deserve more things in my life*). Materialism was measured using Richins & Dawson’s (1992) 9-item Materialistic Value Scale (e.g. *My life would be better if I owned certain things I don’t have*). Agreement with the statements belonging to the Greed and Entitlement measures was rated on a scale from 1 (*totally disagree*) to 7 (*totally agree*). Agreement with the statements belonging to the Materialism measure was rated on a scale from 1 (*totally disagree*) to 5 (*totally agree*). All three measures showed sufficient internal reliability ( $a = .778$  Greed,  $a = .797$  Entitlement,  $a = .644$  Materialism). Item scores were averaged into a single measure for each of these selfish attitude measures. Participants then had to read the following story devised by Sheldon & McGregor’s (2000) resource dilemma and were asked to imagine that they were in this situation:

Here's the situation (please read carefully): you are the owner of a timber company. Your company and three other timber companies are all working within the same national forest. There are 200 hectares of timbered land within this forest (a hectare is 100 acres, if you're curious). Your goal is to cut as many hectares of trees as you can, so that your company will profit and thrive. Each year, each of the four companies makes bids regarding how many hectares it will cut that year, ranging from a minimum of 0 to a maximum of 10. None of the companies ever finds out what the other companies have bid; all they know is the total number of hectares cut each year. This total amount can range from 0 (if all four companies bid 0) to 40 (if all four companies bid 10). Thus, in a given year, the forest can be reduced by as much as 40 hectares (i.e., in year 1, the forest can shrink from 200 to 160 hectares). Of course the forest also regenerates, at a rate of about 10% per year. Obviously, one danger is that the forest will eventually be wiped out, leaving all four companies "out in the cold." Thus, it may be to the four companies' collective advantage to make smaller bids. However, another danger is that a company will not do as well because it cuts less than the other three companies. Thus, it may be to each company's individual advantage to make larger bids.

After reading this scenario, participants rated the extent to which they would prefer more than the other three companies (referred to as *Acquisitiveness*) and the extent to which they would expect the other companies to try to cut maximum amounts each year (referred to as *Apprehensiveness*), using a 1 (*not at all*) to 7 (*very much*) scale. Next, participants indicated how much of the forest they themselves would cut in the first year, referred to as "Year 1 Bid". This variable could range from 0 to 10 hectares (Sheldon & McGregor, 2000). All three variables were measures for prosocial behavior.

### **Pretest**

Before the start of the experience sampling phase, a pretest was conducted to examine if there was enough variation of seeing commercial messages within 10 minutes. Thirty students at the Tilburg University campus were asked if they saw a commercial message between that very moment and 10 minutes before. The students answered the question with 'yes', 'no', or '*I do not know*'. Only four participants did not know if they had seen a commercial message within 10 minutes. Thus, it can conclude that 10 minutes is a valid time-range.

### **Procedure**

This study consisted of three parts: (1) Registration phase (registration with SurveySignal), (2) Experience sampling phase (where participants received text messages), and (3) Self-rating phase (where participants fill in the self-ratings). Requirements for participating in the study were access of a smartphone with SMS- and internet function. After committing for participation, participant entered the registration phase where they received an e-mail (see Appendix A) with more elaborated and specific information about the study. This e-mail also contained a registration link for their smartphones verification with SurveySignal. At the survey signal registration page, participants were also provided with informed consent ("SurveySignal", 2017). Five days before the start of the experience sampling phase, participants who did not verified their mobile phone yet were send a reminder via e-mail where they were asked to verify their mobile phone with SurveySignal as soon as possible. One day before the start of the experience sampling phase of the study, participants received a second e-mail (see Appendix B) with information about the study as a reminder, as well as with the link to the self-rating survey. Participants were asked to fill in this survey within two weeks.

At the 16<sup>th</sup> of March 2017, the experience sampling phase of the experiment started. Three participants started the 17<sup>th</sup> of March and one participant started at the 18<sup>th</sup> of March

because of late registration at SurveySignal. For each participant, the experience sampling phase lasted five days. Each day, seven daily signals were randomly distributed via smartphone between 8 AM and 10 PM. Signals were not sent before 8:00 and after 22:00 to not disturb participants while they were resting or sleeping. When the participants received a signal, they had two hours' time to respond to the signal. Each participant could provide up to 35 records throughout the experience-sampling period.

## Results

### Data

Sixteen participants could not respond to at least half of 35 text messages. These were less than 18 responses and those people were excluded from analysis. A minimum of 50% response rate is seen as a reassuring benchmark (Hofmann & Patel, 2015). The final sample consisted of 76 participants (59.2% female,  $M_{\text{age}} = 31.86$ ,  $SD = 15.18$ , ranging from 17 to 76 years). Table 1 presents the Pearson correlations coefficients and descriptive statistics of the measures for selfish attitudes

### Commercial Message Exposure

The results of the correlational analysis are shown no significant correlations between commercial message exposure and self-reported feelings of entitlement and materialism. The same applies to prosocial behavior (i.e. acquisitiveness, apprehensiveness and year 1 bid). These results suggested that more frequent exposure to commercial messages did not result in stronger feelings of entitlement, materialism and less prosocial behavior.

Interestingly, a negative correlation was found between commercial message exposure and greed, which suggested that people with more frequent exposure to commercial messages were less greedy than people who were exposed to commercial messages to a lesser extent. Subsequently, a significant negative correlation between response rate and greed was found, which suggested that the greedier people are, the less they responded to the text messages.

This suggestion was further confirmed by analyzing the total sample ( $N=104$ ), which showed significant negative correlations between response rate and greed,  $r(102) = -.271, p = .006$ , entitlement,  $r(102) = -.199, p = .044$ , and materialism,  $r(102), -.226, p = .022$ . These results suggested that indeed selfish people responded less to the text messages.

### Discussion

Study 1 has been unable to demonstrate that exposure to commercial messages makes people more selfish. Results of this study indicate that there is only an effect of greed on commercial message exposure. What is surprising is that relation turned out to be negative. This finding was unexpected and suggests that more frequent exposure to commercial messages results in lower levels of greed. Another outcome provides that greedier people responded less to the text messages. This relation could be attributed to the selfish nature of greed (Seuntjens, Zeelenberg & van de Ven, 2015). It may be that greedy participants did not feel a strong need to respond the text messages, as they most likely do what they want themselves. This result can be a possible explanation for the negative correlation between frequent exposure to commercial messages and greed. By calculating commercial exposure as a measure, the number of responded text messages was divided by the number of text messages received. This number we multiplied by the number of text messages answered by 'yes'. The number with which you will multiply 'yes' at a high greed score will become smaller. Because greedy people responded less, the correction factor is getting smaller and therefore 'yes' is getting less stable. Thus, it is not that greedy people are exposed to less commercial messages or pay less attention to commercial messages. They just respond less to the received text messages and therefore there arises a distorted view.

The first item of the 7-item Dispositional Greed Scale (*Actually, I'm kind of greedy*) was accidentally not implemented in the survey.

## Study 2

The specific objective of this study was to establish a more direct link between exposure to advertisements and selfish attitudes. To obtain support for a possible causal influence of watching commercials on people's selfish attitudes, levels of greed, entitlement, materialism and prosocial behavior were compared after participants saw either commercials with self-focused metacommunication or commercials with no self-focused metacommunication. Commercial with self-focused metacommunication had a strong focus on the consumer(s) in the commercial. Commercials with no self-focused metacommunication had a focus on the products advertised in the commercial.

## Method

### Participants and Design

One hundred and sixty-four women ( $M_{age} = 37.14$ ,  $SD = 15.96$ , ranging between 18 and 77 years) participated in this experiment. Only women participated in this study because literature showed that mostly women's have the feeling that they cannot meet the standard displayed in advertisements and therefore have decreased self-esteem (Hargreaves & Tiggemann, 2002). Therefore, the used commercials are aimed at women.

Participants were randomly assigned to one of two between subject conditions, a self-focused condition ( $n = 81$ ) or a control condition ( $n = 83$ ). In the self-focused condition, participants were exposed to four commercials with self-focused metacommunication. In the control condition, participants were exposed to four commercials with no self-focused metacommunication. All the commercials in both conditions were falling in one product category, which is cosmetics.

### Procedure and Measures

Data was collected at Tilburg University, where participants were asked by the experimenter to fill in a survey at the laptop of the experimenter. A second sample of

participants reacted on a survey link that was posted on Facebook. When clicking on the survey link, participants entered the introduction page where participants were informed about the fact that participation in this research was voluntary, that the answers were processed in an anonymous manner, that the participant's information was kept confidential and that the results were only used for scientific purposes. Thereafter, participants watched four commercials (see Appendix C). In the self-focused condition, participants saw respectively a toothpaste commercial (i.e. Prodent White Now), a hair care commercial (i.e. Elvive Extraordinary Oil by L'Oréal Paris), a perfume commercial (i.e. Olympéa by Paco Rabanne), and a make-up commercial (i.e. Color Riche Palette by L'Oréal Paris). Those commercials contained self-focused metacommunication as they had a strong focus on the person in the commercial and were convey the message that it is OK to think about yourself and allude to personal feelings of superiority. In the control condition, participants saw respectively a toothpaste commercial (i.e. Prodent), and three skin care products commercials (i.e. Nivea, Sanex, Neutral). Those commercials contained no self-focused metacommunication because those commercials had a focus on the product presented the commercial, as they described components of which the product consisted.

After each commercial, participants were asked (1) How likely is it that you will purchase this product after seeing this commercial? We used a scale ranging from 1 (*very unlikely*) to 5 (*very likely*), (2) How attractive do you find this commercial? Used scale ranged from 1 (*very unattractive*) to 5 (*very attractive*), (3) To what extend do you find this advertisement focused on the product or on the user of the product? Used scale ranged from 1 (*strongly focused on the product*) to 5 (*strongly focused on the user*). The second question was used as a measure for Attractiveness. The third question was used as a manipulation check for self-focused metacommunication in advertisements. When participants rated the

commercial as more consumer-orientated, it was more likely that the commercial contained self-focused metacommunication.

After watching all four commercials, participants were provided with some self-ratings. Again, the surveys used for this study were respectively Sheldon & McGregor's (2000) resource dilemma to measure prosocial behavior, Seuntjens et al.'s (2015) 7-item Dispositional Greed Scale to measure greed, Richins & Dawson's (1992) 9-item Material Values Scale to measure materialism, and Campbell et al.'s 9-item Psychological Entitlement Scale (2004) to measure entitlement. Finally, participants had to fill in their gender and age. All three computed measures (Greed, Entitlement, and Materialism) showed sufficient internal reliability (Greed; .883, Entitlement: .830, Materialism .816). Item scores were averaged into a single measure for each of these measures.

After reporting their gender and age, participants were thanked before finishing the survey.

## Results

### Manipulation check

An independent samples *t* test was used to examine if participants did perceive the commercials in the self-focused condition as more self-focused than people in the control condition. Suggesting that the manipulation of commercial metacommunication was effective, participants in the self-focused condition did perceive the commercial as more consumer orientated,  $M = 3.24$ ,  $SD = 0.81$ , and participants in the control condition perceived the commercials as more product orientated,  $M = 2.79$ ,  $SD = 0.74$ ,  $p < .001$ , two-tailed.

### Attractiveness

An independent-samples *t* test was conducted to compare attractiveness for self-focused and non-self-focused commercials. There was no significant difference in the scores for the self-focused ( $M = 3.46$ ,  $SD = .77$ ) condition and the control ( $M = 3.58$ ,  $SD = .54$ )



condition,  $t(143.34) = -0.17, p = .25$ , two-tailed. In fact, attractiveness did not have a significant effect on condition.

### **Greed, Entitlement, and Materialism**

Group means and standard deviations for each dependent variable are presented in Table 2. A multivariate analysis of variance (MANOVA) was used to examine the effects of self-focused metacommunication on greed, entitlement and materialism. The MANOVA was statistically significant, Wilks'  $\lambda = .950, F(1, 162) = 2.83, p = .040$ , indicating the presence of any meaningful differences of selfish metacommunication in commercials on selfish attitudes. Given the significance of the overall test, the univariate main effects were examined. Significant univariate main effects for condition were obtained for greed,  $F(1, 162) = 7.401, p = .007$  and entitlement,  $F(1, 162) = 5.103, p = .025$ . The MANOVA showed no significant difference in materialism for the two conditions. Group means (and standard deviations) for each dependent variable are presented in table 2.

### **Prosocial Behavior**

A second MANOVA was used to examine the effects of self-focused metacommunication on prosocial behavior. More specific, on acquisitiveness, apprehensiveness and with year 1 bid. The MANOVA was statistically not significant, Wilks'  $\lambda = .980, F(1, 162) = 1.112, p = .346$ , indicating the absence of any meaningful commercial differences on social behavior. The results of the MANOVA analysis for prosocial behavior are shown in Table 2.

## **Discussion**

The second study indicated that exposure to commercials with self-focused metacommunication makes people greedier and leads to stronger feelings of entitlement. It can be ruled out that the attractiveness of the commercial caused the effect. In fact, the results

suggest that there is no difference in how attractive the commercials were rated by the two groups.

### **General Discussion**

The present study was designed to determine the extent to which exposure to commercial messages makes people more self-focused. In the first study, it was tested whether exposure to commercial messages during the day results in more greed, entitlement, materialism and less prosocial behavior (*hypothesis 1*). In the second study, it was tested whether exposure to commercials with self-focused metacommunication results in more greed, entitlement, materialism and less prosocial behavior (*hypothesis 2*).

The current study found that exposure to commercial messages does not lead to more selfish attitudes, but that exposure to commercials with self-focused metacommunication partially does. The present results are unable demonstrate that more frequent exposure to commercial messages elicits more selfish behavior. One explanation for this could be that those constructs are unrelated. Another explanation could be that the described relationship is more complicated than typically portrayed. The literature review suggested that there is such thing as abundance metacommunication. However, according to our results, it might be that abundance metacommunication does not play a role in eliciting selfish attitudes. Or even stronger, it can be the case that abundance metacommunication is not necessarily a feature of commercial messages in general. It may be that some specific ads have abundance metacommunication, but that commercial messages all together failed to create a feeling of abundance. Turn it the other way, it may be possible that the influence of commercial messages in general is not as strong as we previously thought. According to Gillan (2010), it might be that commercial messages does not caught that much attention from people. For instance, new technology makes it more easily to run through advertising on television and therefore people pay less attention to it (Gillan, 2010).

Another important finding of this research was that exposure to commercials with self-focused metacommunication elicits greed and entitlement. Therefore, it seems that there is partially support for the hypothesis that exposure to commercials with self-focused metacommunication makes people more selfish. Contrary to expectations, perceived attractiveness of the commercial did not account for the effect of commercials on greed and entitlement. Therefore, it might be probable that it was indeed self-focused metacommunication in commercials was a factor that caused the effect. Further support for this is the successful manipulation of self-focused metacommunication in commercials. Indeed, participants rated the commercial with self-focused metacommunication as more consumer-orientated.

### **Study limitations**

However, this research can never completely determine whether it was indeed self-focused metacommunication that caused the effects. According to previous literature, metacommunication is a phenomenon that cannot be directly measured. Messages sent through metacommunication are responded to without conscious attention and are processed and learned by people automatically (Watzlawick et al., 1967; Heath & Feldwick, 2008). It is beyond the scope of this study to examine what abundance metacommunication precisely is.

The decreased sample in the first study is another limitation. This limitation has influenced the studies' outcome in a way that selfish participants were mostly excluded from analysis. This was due the fact that selfish participants had a lower response rate. When all participants were analyzed, results showed that people with higher levels of greed, entitlement, and materialism responded in a lesser extent than people with higher scores on those constructs. Future research could ensure that participants answer a probable number of text messages. In that way, the sample consists of both more selfish and more social participants and that will increase the validity of the study.

### **Theoretical and Practical Implications**

This study has several theoretical and practical implications. Its results showed that self-focused metacommunication indeed play a role in eliciting selfish attitudes. These findings provide a better understanding of implicit messages in advertisements and provide insights into how self-focused metacommunication can be manipulated and measured in future research. More research is required to determine if this studies' findings also account for exposure to other forms of advertisements (e.g. magazines, billboards and advertisements at social media platforms). Also, future research can examine whether specific metacommunication is applicable for different segments of the population. According to Verhoef, Spring, Hoekstra & Leeflang (2003), segmentation serves to place customers into clusters, implying that the members of a segment react to marketing actions similarly, but differently than members of another segment. Therefore, influences of consumer-targeted metacommunication on selfishness will differ from one another, so is the assumption.

Lastly, this study extends our knowledge in a way that it showed the relevance of how abundance- and self-focused metacommunication influence the world in a positive or negative way. Studying selfish attitudes is important because selfishness does not make the society better. However, the question remains whether advertising policy should be adjusted. Turn it the other way, metacommunication can also be approached positive. For instance, metacommunication that addresses the importance of sustainability influences people's behavior in a positive way. By repeating positive nonverbal messages as metacommunication, people can get used to sustainable or other positive behaviors. In this way, metacommunication can be used practically by promoting positive behavior.

To summarize, this study created a more comprehensive picture of effects of commercial messages that can make people more selfish versus more social. Though evidence is still weak and does not hold for every form of selfish attitudes tested in this study, this

could be a first indication that the presence of self-focused metacommunication play a role in eliciting selfish attitudes. Research is needed to replicate and expand current findings of the function of metacommunication in advertising.

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Table 1

Pearson Correlations Coefficients and Descriptive Statistics of the Measures for Selfish Attitudes

	<i>M</i>	<i>SD</i>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
1. Age	31.86	15.18	-									
2. Gender	1.59	.49	-.27*	-								
3. Commercial Exposure	7.92	4.19	.33**	.00	-							
4. Response Rate	75.83	14.38	.34**	.18	.53**	-						
5. Greed	2.89	.930	-.33**	.16	-.23*	-.24*	-					
6. Entitlement	3.16	.848	-.07	-.16	-.13	-.21	.44**	-				
7. Materialism	2.27	.454	-.36**	.38**	-.09	-.17	.60**	.20	-			
8. Acquisitiveness	3.57	1.59	-.12	-.09	-.06	-.08	.32**	.28*	.15	-		
9. Apprehensiveness	4.88	1.44	-.00	.04	.18	.20	.21	.07	.11	.35**	-	
10. Year 1 Bid	5.84	2.17	.03	-.23*	.12	.19	.26*	.10	-.02	.45**	.33**	-

\*  $p < .05$ ; \*\*  $p < 0.00$

Table 2

Descriptive Statistics for the Self-Focused Condition (n = 81) and the Control Condition (n = 83) on Each Dependent Variable

<b>Dependent variable</b>	<b>Condition</b>	<b><i>M</i></b>	<b><i>SD</i></b>
Greed	Self-focused	3.21	1.36
	Control	2.72	0.91
Entitlement	Self-focused	3.40	1.03
	Control	3.06	0.83
Materialism	Self-focused	2.45	0.73
	Control	2.29	0.55
Acquisitiveness	Self-focused	4.26	1.59
	Control	3.88	1.50
Apprehensiveness	Self-focused	5.42	1.23
	Control	5.17	1.40
Year 1 bid	Self-focused	5.85	2.41
	Control	5.43	2.20

## Appendix A

## Participant E-mail Study 1 (in Dutch)

Beste **voornaam** **achternaam**,

Hartelijk dank voor je medewerking aan deze studie. Dit onderzoek wordt uitgevoerd in het kader van mijn master thesis Economic Psychology aan Tilburg University. Deze mail bevat alle noodzakelijke achtergrondinformatie over mijn studie. Mensen worden tegenwoordig overspoeld met commerciële boodschappen. Dit zijn niet alleen reclames op televisie of de radio, maar ook pop-up banners op facebook of andere internetsites, reclameposters langs de straat, en advertenties in tijdschriften en reclamefoldertjes. Ik ben geïnteresseerd in het verband tussen het zien van deze commerciële boodschappen en bepaalde persoonlijkheidseigenschappen. Als deelnemer aan dit onderzoek zal je een vragenlijst over persoonskenmerken invullen, die je via email van mij zult ontvangen. Het invullen van deze vragenlijst duurt ongeveer 10 minuten.

Daarna zal je gedurende vijf dagen, via je mobiele telefoon, zeven keer per dag een Sms-bericht krijgen met de vraag of je op dat moment of kort daarvoor een commerciële boodschap gezien hebt. Voor dat deel van het onderzoek wordt gebruik gemaakt van SurveySignal, een applicatie gespecialiseerd in het uitvoeren van dit soort studies.

SurveySignal zal tijdens de ‘*Mobiele Fase*’ van het onderzoek automatisch een aantal Sms’jes verzenden **Om mee te kunnen doen met de studie moet je eerst je telefoon registreren bij**

**Survey Signal.**

Dat doe je door te klikken op deze link:

<http://www.surveysignal.com/RegParticipant.aspx?surveyid=030317081802>

Hier moet je, je voornaam, achternaam, e-mail, mobiele nummer, land en tijdzone invullen.

**LET OP:** je dient je mobiele nummer als volgt te noteren: **642004762** (dus zonder de 0 op het begin en zonder landcode).

Tijdzone is (GMT + 1:00 hours) CET (Central.Europe Time).

Na het klikken op ‘register’ krijg je een sms’je met een link waarmee je, je smartphone kan verifiëren met SurveySignal. Ik wil je verzoeken dit meteen te doen.

Eén dag voor de start van de mobiele fase krijg je van mij via e-mail een vragenlijst over persoonlijkheidskenmerken doorgestuurd. Het beantwoorden van deze vragenlijst zal ongeveer 10 minuten duren.

**Vanaf donderdag 16 maart tot en met maandag 20 maart 2017** loopt de mobiele fase van het onderzoek. Deze dagen krijg je op 7 willekeurige momenten (tussen 8:00 en 22:00) een sms op je smartphone met een link. Deze link stuurt je door naar de vraag die je elke keer dient te beantwoorden. Deze vraag luidt als volgt: *‘Heb je binnen 10 minuten geleden en dit moment een commerciële boodschap gezien?’* De vraag kan je beantwoorden door ‘ja’, ‘nee’ of ‘weet ik niet’ aan te klikken.

Zoals eerder vermeld bedoelen we met commerciële boodschappen onder andere (televisie)-reclames, posters/billboards op straat, advertenties op internet, tijdschriften en radio. Dus alle vormen van reclame. Het beantwoorden van deze vraag duurt per keer een paar seconden.

Wel is het belangrijk om deze vraag steeds zo snel mogelijk na het ontvangen van de sms te beantwoorden. De link blijft maximaal 2 uur actief. Je kan het sms’je dus tot anderhalf uur na het ontvangen nog beantwoorden. Hierna vervalst de link. Het kan natuurlijk zo zijn dat je aan het werk bent of op een andere manier geen beschikking hebt tot je mobiele telefoon. Dit kan gebeuren. Probeer de sms’jes echter zo vaak mogelijk te beantwoorden.

Belangrijk om nog te vermelden is dat er vertrouwelijk met alle informatie wordt omgegaan en dat deze alleen wordt gebruikt voor wetenschappelijke doeleinden. Wanneer je naar aanleiding van deze mail nog vragen of opmerkingen hebt, neem contact op met E. Kersten.

Met vriendelijke groet,

Eline Kersten

## Appendix B

## Second Participant E-mail Study 1 (in Dutch)

Beste **voornaam** **achternaam**,

Morgen is het zover, dan begint de ‘‘mobiele fase’’ van mijn onderzoek. In deze fase zal je gedurende 5 dagen op 7 willekeurige tijden een sms ontvangen op je mobiele telefoon met een link naar een enquête. Hierin wordt de vraag gesteld: *Heb je binnen nu en 10 minuten geleden een commerciële boodschap gezien? Denk aan (televisie)reclames, billboards langs de weg, reclameborden bij een bushokje of in de stad, advertenties op facebook of andere internetsites, tijdschriften of andere foldertjes of via de radio. Commerciële merken die op producten zitten tellen niet mee. Dus géén merk op kleding, tassen, schoenen en voedingsmiddelen.* Je kan de vraag beantwoorden met: ‘Ja’, ‘Nee’, of ‘Weet ik niet’. Probeer de vraag zo vaak mogelijk te beantwoorden. De link blijft steeds 2 uur actief, dus binnen die tijd kan je de vraag nog beantwoorden. Wanneer deze 2 uur voorbij zijn en je hebt niet geantwoord, dan dien je te wachten op het volgende sms’je.

Wat is een commerciële boodschap?

Om verwarring te voorkomen leg ik bij deze uit wat ik bedoel met een commerciële boodschap. Hierbij moet je denken aan commerciële boodschappen die je binnen krijgt via (televisie)reclames, billboards langs de weg, reclameborden bij een bushokje of in de stad, advertenties op facebook of andere internetsites, tijdschriften of andere foldertjes of via de radio. Hierbij worden **commerciële producten** aangeprezen, zoals make-up, kleding, tandpasta, verzorgingsproducten, scheerapparaat etc.

Commerciële merken die **op** producten zitten tellen **niet** mee. Dus géén merk op kleding, tassen en schoenen (iemand met een T-shirt, tas of schoenen van Nike), géén producten (pakje

Becel boter of een Liga-reep). Ook tellen boodschappen m.b.t. bijvoorbeeld de politiek of evenementen in de zakelijke niet mee. De boodschap moet commercieel zijn.

Persoonlijkheidsvragenlijst

In mijn vorige mail heb ik jullie gewezen op een persoonlijkheidsvragenlijst die jullie in dienen te vullen. Hierbij de link van deze vragenlijst:

LINK

Gelieve deze vragenlijst binnen 2 weken in te vullen.

Wanneer je naar aanleiding van deze mail nog vragen of opmerkingen hebt, neem contact op met E. Kersten

Met vriendelijke groet,

Eline Kersten

## Appendix C

## URL's Commercials Study 2

Table A1

URL's Commercials (Study 2)

<b>Commercial</b>	<b>Condition</b>	<b>URL</b>
1	Self-focused	<a href="https://m.youtube.com/watch?v=5XReqvWVFIk">https://m.youtube.com/watch?v=5XReqvWVFIk</a>
	Control	<a href="https://www.youtube.com/watch?v=AekUVaiQUnA">https://www.youtube.com/watch?v=AekUVaiQUnA</a>
2	Self-focused	<a href="https://www.youtube.com/watch?v=AekUVaiQUnA">https://www.youtube.com/watch?v=AekUVaiQUnA</a>
	Control	<a href="https://www.youtube.com/watch?v=VyAVzeswWTc">https://www.youtube.com/watch?v=VyAVzeswWTc</a>
3	Self-focused	<a href="https://www.youtube.com/watch?v=TzTMMcuAFSI">https://www.youtube.com/watch?v=TzTMMcuAFSI</a>
	Control	<a href="https://www.youtube.com/watch?v=SW2o7Ib_IT0">https://www.youtube.com/watch?v=SW2o7Ib_IT0</a>
4	Self-focused	<a href="https://www.youtube.com/watch?v=jL0qWbN88qA">https://www.youtube.com/watch?v=jL0qWbN88qA</a>
	Control	<a href="https://www.youtube.com/watch?v=KWTWqfWBqn8">https://www.youtube.com/watch?v=KWTWqfWBqn8</a>



## Appendix D

## 7-item Dispositional Greed Scale

1. I always want more.
2. Actually, I'm kind of greedy.
3. One can never have too much money.
4. As soon as I have acquired something, I start to think about the next thing I want.
5. It doesn't matter how much I have. I'm never completely satisfied.
6. My life motto is "more is better."
7. I can't imagine having too many things.

This questionnaire use a 7-point scale: 1 = strong disagreement. 2 = moderate disagreement. 3 = slight disagreement. 4 = neither agreement nor disagreement. 5 = slight agreement. 6 = moderate agreement. 7 = strong agreement.

## Appendix E

## 9-item Psychological Entitlement Scale

1. I honestly feel I'm just more deserving than others.
2. Great things should come to me.
3. If I were on the Titanic, I would deserve to be on the first life boat!
4. I demand the best because I'm worth it.
5. I do not necessarily deserve special treatment.
6. I deserve more things in my life.
7. People like me deserve an extra break now and then.
8. Things should go my way.
9. I feel entitled to more of everything.

This questionnaire use a 7-point scale: 1 = strong disagreement. 2 = moderate disagreement. 3 = slight disagreement. 4 = neither agreement nor disagreement. 5 = slight agreement. 6 = moderate agreement. 7 = strong agreement.

## Appendix F

## 9-item Material Value Scale

1. Some of the most important achievements in life include acquiring material possessions.
2. My life would be better if I owned certain things I don't have.
3. I usually buy only the things I need.
4. I enjoy spending money on things that aren't practical.
5. I'd be happier if I could afford to buy more things.
6. I admire people who own expensive homes, cars, and clothes.
7. I try to keep my life simple, as far as possessions are concerned.
8. I have all the things I really need to enjoy life.
9. I don't place much emphasis on the amount of material objects people own as a sign of success.

This questionnaire use a 5-point scale: 1 = strongly agree. 2 = agree. 3 = neutral. 4 = disagree. 5 = strongly disagree.

## Appendix G

## Common-Good Dilemma Questionnaire

Now, we would like you to imagine that you are in a particular situation. Try to anticipate what you would actually do in this situation, being as realistic and honest as you can.

*Here's the situation (please read carefully): you are the owner of a timber company. Your company and three other timber companies are all working within the same national forest. There are 200 hectares of timbered land within this forest (a hectare is 100 acres, if you're curious). Your goal is to cut as many hectares of trees as you can, so that your company will profit and thrive. Each year, each of the four companies makes bids regarding how many hectares it will cut that year, ranging from a minimum of 0 to a maximum of 10. None of the companies ever finds out what the other companies have bid; all they know is the total number of hectares cut each year. This total amount can range from 0 (if all four companies bid 0) to 40 (if all four companies bid 10). Thus, in a given year, the forest can be reduced by as much as 40 hectares (i.e., in year 1, the forest can shrink from 200 to 160 hectares). Of course the forest also regenerates, at a rate of about 10% per year.*

*Obviously, one danger is that the forest will eventually be wiped out, leaving all four companies "out in the cold." Thus, it may be to the four companies' collective advantage to make smaller bids. However, another danger is that a company will not do as well because it cuts less than the other three companies. Thus, it may be to each company's individual advantage to make larger bids.*

What we are interested in is how you would think and behave in a situation such as this.

Please answer the questions below, by imagining yourself in the above situation and anticipating your own responses. There are no "right" answers here; different people resolve such dilemmas in different ways.

1. To what extent would you prefer to profit more than the other three companies?
2. To what extent would you expect the other companies to try to cut maximum amounts each year?

The first two questions use a scale ranging 1 (=not at all) to 7 (=very much).

3. Please indicate on the slider below how much of the forest you would cut in the first year.

The amount of hectares in the forest I would cut:

