

Personalized Advertising based on the Predominant Personality Traits of Product Category's Consumers

Dr. Hhabil. Friederike Paetz,
Clausthal University of Technology,
Institute of Management and Economics,
Department of Management and Marketing, Julius-Albert-Str. 6, 38678
Clausthal-Zellerfeld, Germany
tel: +49 5323 727682,
email: friederike.paetz@tu-clausthal.de

Abstract

Company's communication strategies like advertising in mass-media are targeted to anchor the promoted products in the recipient's perceptual space. Commonly, non-personalized advertising is used, which is obviously unable to account for recipient's heterogeneity. Personalization based on recipient's personality has proven successful for the prediction of cognitive and affective ad-effects. While suggestions w.r.t. personalized designs of an advertisement or its message content have been discussed so far, no study has focused on predominant personality traits within buyer groups of certain products to create basic designs, which are subsequently fine-tuned to target individual recipients. We present an empirical study that determines the personality of several sport clusters. By selecting one sport cluster, we focus on sport shoes' advertisements. We personalize the design and message content based on revealed predominant personality traits and discuss advertisements' fine-tunings.

1. Introduction and Objectives

In order to stay competitive, marketing managers have to deal with a huge number of tasks and decisions in various areas. In addition to the development of marketable products, the setting of adequate prices and the development of an efficient sales system, companies must also pursue a targeted communication policy. Here, different instruments are available, e.g., sales promotion, events, media advertising. Media advertising, like advertising in print, TV or internet, is a widely used instrument to anchor products in the perceptual space of the recipients, i.e., potential buyers. In order to design sales-effective advertising, the knowledge of the mode of advertising's operational process is key: A company serves as a sender of an advertising's message, which is coded by the advertisement, and decoded by potential buyers as recipients. Naturally, the advertising's message is differently decoded by different recipients depending on their actual awareness (cognitive stage), emotions (affective stage) or experience (conative stage) with the advertising itself or the promoted brand. All the more astonishing, commonly non-personalized advertising is primarily used, while personalized advertising slowly gains in importance only recently. In this context, we understand 'non-personalized advertising' as the development of *one* advertising campaign for all recipients, which does not vary the advertising's message content or design. Personalized advertising, on the other hand, tries to appeal individual recipients more efficiently by trying to increase cognitive and affective effects towards the advertisement.

While conative effects result from previous experiences with the product being acquired, the cognitive and affective effects ground on recipient's neurological and psychological constitution. Obviously, these constitutions are (partly) in-born and naturally vary between recipients. It is therefore essential for marketing managers to identify determinants that moderate these perceptual differences. The recipient's personality has already proven as an adequate approach for the prediction of cognitive and affective ad-effects (e.g., Hirsh, Kang and Bodenhausen, 2012; Myers, Sen and Alexandrov, 2010). Different personality types show different approaches in their neurological and psychological processing of advertising and thus ultimately differ in their reactions, i.e., buying versus non-buying behavior. Suggestions w.r.t. an advertisement's design or its message content for varying personality types have been discussed in the relevant literature in general so far. However, no study has taken into account predominant personality traits within buyer groups of certain products. For example, video game players/buyers are associated to introversion (cp. Barnett, Vitaglione, and Harper, 1997). Marketing managers should take those pre-dominant personality traits into account, when designing an advertisement. Subsequently, the personalization of an advertisement should be aimed to other personality traits of the targeted recipient as well, but should work on the 'basic design' resulting from the predominant personality traits of all potential buyers within the product category.

The present study tries to contribute to this research field. Within an empirical study, we determine the personality traits of several sport clusters and focus on one sport cluster for the derivation of personalized advertisements. Based on the revealed predominant personality traits within one sport cluster, we derive suggestions for personalized advertisements in a certain sports shoe category. Therefore, we incorporate individual's preferences for advertisement's design and message content based on certain personality traits.

The remainder of this contribution is as follows: In section 2, we lay the theoretical foundation for our study and provide a short review on relevant literature findings. In section 3, we report the results of an empirical study w.r.t. personality differences between sport clusters. Then, we give recommendations for the design of an advertisement based on (one) sport cluster's predominant personality traits and work out personalized fine-tunings of advertisement's design and message content based on recipient's individual personality traits. Conclusions as well as limitations of our study and issues for future research are given in section 4.

2. Theoretical Foundations

In the following, we briefly review how advertising is processed by recipients in 2.1. Subsequently, we provide a brief discussion of the popular Five Factor model to measure a person's personality in 2.2 and give a short literature review on personality differences towards preferred advertisements' designs and message contents in 2.3.

2.1 Recipient's processing of advertising

In order to illustrate the transition of a advertising message from the sender (i.e., company) to the recipient (potential buyer) several models exist. For example, the AIDA (Attention, Interest, Desire, Action) model of Lewis (1903) is highly popular. The AIDA model assumes the presence of four hierarchical stages to transfer an advertising message. First, the advertisement has to evoke recipient's attention, then recipient's interest for the promoted product arises. The

interest entails an evaluation of the advertisement's message content, which results (at best) in recipient's desire for the promoted product and, lastly, (at best) in the purchase of the brand. Hierarchical effects models are highly popular in the relevant literature. However, it has been found by Vakratsas and Ambler (1999, p. 26), "that there is little support for any hierarchy, in the sense of temporal sequence, of effects." Rather, effects work simultaneously.

Independent of the underlying assumption of a hierarchy of effects or a non-hierarchy, the process of recipients' information processing could be assumed as illustrated in Figure 1.

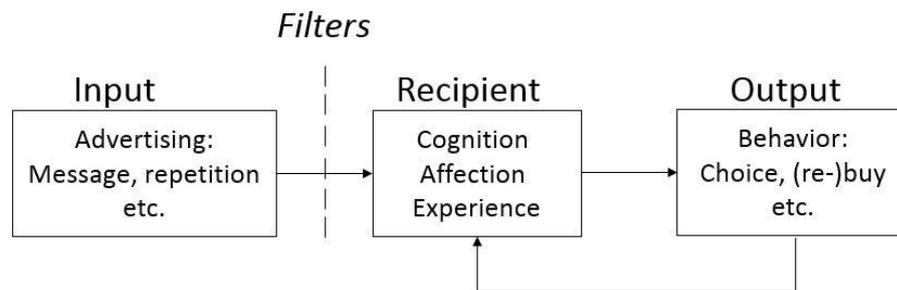


Figure 1: Recipient's information processing

Based on Vakratsas and Ambler (1999), p. 26.

Obviously, an advertising (Input) is processed by recipients based on their motivation to engage themselves with the focal advertisement or with their involvement towards the promoted product (Filters). These filters differ across recipients. In addition, recipients differ within their (cognitive, affective, conative) affects towards an advertising. The individual appeal of an advertising (as the result of the individual affects) leads to recipient's behavior (Output). This behavior could either be the general attitude/choice to buy or the actual (re-)buy of a product. Obviously, this (choice or buying) decision affects the advertising's processing of a recipient in the future.

In the following, we lay our focus on two of recipient's intrinsic effects, i.e., cognitive and affective effects. In this context, we, first, take a look at the predominant personality of potential consumers within a certain product category and try to draw conclusion on an 'omnipotent' advertisement's design to attract potential buyers. Second, we give recommendation on a fine-tuning of an advertisement in accordance to recipient's further individual personality traits.

2.2 Five Factor Model of Personality

Following the Five Factor Theory, five independent factors exist, that determine the personality of a respondent, i.e., agreeableness, conscientiousness, extraversion, neuroticism and openness (cp. John & Srivastava, 1999). Each factor constitutes of several facets, e.g., openness is linked to liberalism, intellectualism and fantasy (cp. McCrae & John, 1992), while extraversion is linked to facets like activity and thirst for adventure (cp. Saum-Aldehoff, 2012). To derive an individual's personality, individuals commonly self-report on rating-scales how several facets apply to their own personality. Based on the ratings, factor results are achieved from the aggregation of the associated facets' evaluations. As a result, a person could be characterized as, for example, less agreeable and less neurotic, but highly open, extrovert and conscious.

2.3 Literature Review

The Five Factor Theory, as a tool to determine consumer's personality, has gained attention within the marketing literature. Recent studies have worked out relationships between single personality traits of a consumer and his/her preference for advertisements' designs. For example, Cetola and Priney (1996) found extrovert radio listener prefer a higher volume of embedded commercials in contrast to the radio program. Mooradian (1996) identified negative evoked feelings from advertising by neurotic recipients, while extrovert recipients showed positive ad-evoked feelings. Myers et al. (2010) give recommendations for highly informative advertisements in order to target conscious consumers, while open and agreeable personalities prefer transformational, i.e., emotional, advertising. Clark and Calli (2014) report individual differences based on consumer's personality within their 'like', 'share' and 'comment' behavior on Facebook. While extrovert Facebook users frequently 'like' or 'share' advertisements, neurotic or agreeable users are less inclined to 'comment' or 'like' advertisements.

3. Empirical Study

In the following, we are going to describe the data and the results w.r.t. sport cluster-specific personality differences of our empirical study in 3.1. Then, we provide some managerial implications for personalized advertisements for a specific sport shoe category in 3.2.

3.1 Data analysis and statistical results

We conducted an empirical study at several leisure sport courses offered by a German university. 153 respondents, i.e., students and academic staff, reported their favored kinds of sports. The various sport preferences were subsequently clustered into several sport clusters, i.e. sport games, fitness sports, endurance-trained athletes such as swimmers, long-distant runners and triathletes, adventure/nature sports, sport fighting, dancing/gymnastics, and others such as riders. An extra cluster contained those (three) respondents, who refused to state their favored kind of sports.

In addition, the respondents filled out a personality test adopted from Saum-Aldehoff (2012), pp. 190-198, which was based on the Five Factor Theory. The test uses 5-point Likert-scales and the score for each factor ranges between -20 and 20. Therefore, zero constitutes the 'neutral' point and a lower/higher scores reflects a lower/higher level of the focal personality factor. For example, if two persons yield the values '-8' and '-12' for the factor 'extraversion', respectively, they are both introvert (, i.e., the values are lower than zero) and the latter person is more introvert than the first (, i.e., -12 is smaller than -8).

To draw conclusion on sport cluster-specific personality differences, we conducted one-way ANOVA. We found significant differences between sport clusters for the personality factors 'extraversion' ($p = 0.08$) and 'openness' ($p = 0.03$). Subsequent pairwise t-tests revealed, that sport players (3.69), sport fighters (3.29) and others (2.33) rate themselves as weakly extrovert. These sport clusters are less extrovert than fitness sportsmen (6.33, $p < 0.05$) and adventure/nature sportsmen (6.59, $p \leq 0.12$). Adventure/nature sportsmen are significantly more open (10.29) than sport fighters (5.29, $p = 0.02$), sport players (6.18, $p = 0.03$) and endurance trained athletes (7.10, $p = 0.08$).

Because adventure/nature sportsmen show significantly higher values in two (of five) personality traits, we are going to focus on this sport cluster for our further analysis. In

particular, we are going to focus on the creation of an advertisement for hiking shoes, because this product category is obviously highly relevant for adventure/nature sportsmen.

3.2 Implications for personalized advertisements

First of all, adventure/nature sportsmen's high level in extraversion builds the necessary basis for a successful advertising effect, because extrovert recipients are known to show positive ad-evoked feelings (cp. Mooradian, 1996). Furthermore, it is assumed by Myers et al. (2010), that open recipients (like adventure/nature sportsmen) appreciate imagination and, therefore, strongly tend to an initial affective effect rather than to an initial cognitive effect. The same obviously holds for extrovert recipients, because - as mentioned above - extraversion is linked to facets like activity and thirst for adventure. These predominant personality traits of adventure/nature sportsmen as the target audience for an advertisement of hiking shoes should be taken into account by marketing managers. Hence, for example, print advertisements that are charged with emotions, are highly appropriate to attract adventure/nature sportsmen: Colorful pictures/photographs of beautiful landscapes, which could be covered by hiking, like mountain lakes or idyllic forest tracts etc.

Based on these basic suggestions (based on the predominant personality traits of adventure/nature sportsmen), we could now give recommendations on fine-tunings of the advertisement based on the other three individual personality traits: Conscious persons are known to be interested in detailed product information to ensure high quality or a good price-performance ratio. Hence, Myers et al. (2010, p. 13) suggest comparative advertising in order to appease conscious person's hunger for information. Hence, the (basic) advertisement should be enlarged by further product information. In addition to the design of an advertisement, the message content should be tailored to the focal personality trait as well. Since conscious persons exhibit self-discipline and goal-pursuit, the message content may point to such attributes. Within an advertisement for hiking shoes, marketing managers may use attributes that match both the personality trait 'consciousness' and hiking, like attributes such as 'efficient' or 'goal-reaching' (cp. Hirsh et al. 2012, p. 580).

Agreeable persons, on the other hand, prefer non-comparative and experience-based advertising (cp. Myers et al. (2010), p. 12). This may be implemented by advertisement's visual incorporation of hikers, who wear the promoted shoes. Also, the inclusion of a group of hikers may contribute to agreeable peoples' attitudes towards the advertising, because the factor 'agreeableness' is inter alia associated with social skills. In this vein, the message content should point to connections with social components, too, like 'hiking with family or friends' (cp. Hirsh et al. 2012, p. 580).

For neurotic people, the design of a personalized advertisement is challenging. On the one hand, neuroticism is known to be related to negative ad-evoked feelings, which implies that neurotic people are hard to target with advertising per se. On the other hand, advertising may try to reduce neurotic recipient's prevalent anxiety: A comparative advertising or a message content pointing to security and safety components (cp. Hirsh et al. 2012, p. 580) of the hiking shoes (, e.g., robustness of the material, surge baffle system to reduce ankle injuries etc.) seem to be best appropriated for these kind of recipients.

4. Conclusions

Nowadays, companies' communication via media advertising is common practice. Although, it is known, that recipients differ within their approach of information processing, non-personalized advertising is primarily used. In recent years, the internet and in particular social media lay the basis for a stronger focus on personalization through -for example- (internet) banner advertising or posted or shared advertisements within Facebook.

In the context of determinants for individual recipient's cognitive and affective ad-effects, recipient's personality has proven as a strong moderator. Recent literature identified suggestions w.r.t. advertisement's design or message content for varying personality types. However, no study has taken into account predominant personality traits within buyer groups of certain products for the derivation of an advertisement's 'basic-design', which is subsequently fine-tuned for individual personalization. The present study tries to contribute to this research field. In an empirical study, we determined the personality traits of several sport clusters and focused on highly extrovert and open adventure/nature sportsmen for the derivation of personalized advertisements within the product category of hiking shoes. Based on the revealed predominant personality traits we derived an advertisement's 'basic-design', and gave recommendations for a fine-tuning w.r.t. design enhancements and message content based on the other personality traits, i.e., consciousness, agreeableness and neuroticism, respectively.

Obviously, the most critical point within the derivation of a personality-centered personalization of advertisements is the exploration of recipient's individual personality. A lot of research was done in this field, and recent studies found, that consumer's personality could be derived from easily observable variables like, for example, email addresses (cp. Back, Schmukle, and Egloff, 2008). Hence, if a company uses direct mailing, it could use the 'personality information' extracted from such variables.

Another limitation seems to be the focus on single personality traits for the derivation of personalized advertisements, because the personality of a recipient, obviously, encompasses all five traits simultaneously. Nevertheless, we recommend to focus on the most prevalent trait or at that personality trait that could be easily derived from other variables like email addresses.

So far, we discussed personality-based recommendations for the design of an advertisement and its message content. However, the medium of advertising should be taken into account as well. For example, different personality types differently respond to advertisements in Facebook w.r.t. to their 'like', 'share' and 'comment' behavior. Hence, advertising in social media might be less or even highly effective for recipients of certain personality types.

References

- Back, M.D., Schmukle, S.C., & Egloff, B. (2008) How extraverted is honey.bunny77@hotmail.de? Inferring personality from e-mail addresses. *Journal of Research in Personality*, 42, 1116-1122.
- Barnett, M.A., Vitaglione, G.D., Harper, K.K.G., Quackenbush, S.W., Steadman, L.A., & Valdez, B.S. (1997) Late Adolescents' Experiences With and Attitudes Toward Videogames. *Journal of Applied Social Psychology*, 27, 1316-1334.

- Cetola, H., & Prinkey, K. (1986) Introversion Extraversion and Loud Commercials. *Psychology & Marketing*, 3 , 123-132.
- Clark, L. & Calli, L. (2014) Personality types and Facebook advertising: An explorative study. *Journal of Direct, Data and Digital Marketing Practice*, 15, 327-336.
- Hirsh, J.B., Kan, S.K., & Bodenhausen, G.V. (2012) Personalized Persuasion: Tailoring Persuasive Appeals to Recipients' Personality Traits. *Psychological Science*, 23, 578-581.
- John, O.P., & Srivastava, S. (1999) The big five trait taxonomy: History, measurement, and theoretical perspectives. In: L. A. Pervin, O. John (eds.), *Handbook of personality: Theory and research: 2nd edition* (pp.102-138). New York, The Guilford Press.
- Lewis, E. St. (1903) Catch-Line and Argument. *The Book Keeper*, 15, 124.
- McCrae, R.R., & John, O.P. (1992) An introduction to the five-factor model and its applications. *Journal of Personality*, 60, 175-215.
- Mooradian, T.A. (1996) Personality and Ad-Evoked Feelings: The Case for Extraversion and Neuroticism. *Journal of the Academy of Marketing Science*, 24, 99-109.
- Myers, S.D, Sen, S., & Alexandrov, A. (2010) The moderating effect of personality traits on attitudes toward advertisements: A contingency framework. *Management & Marketing Challenges for Knowledge Society*, 5, 3-20.
- Saum-Aldehoff, T. (2012) *Big Five: Sich selbst und andere erkennen [Big Five: Recognize yourself and others]: 2nd edition*. Ostfildern: Patmos. (in German)