Online consumer behavior and its relationship with socio-demographics, shopping orientations, need for emotion, and fashion leadership

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ABSTRACT

With online shopping entering a consolidation phase, there is a need for research differentiating online consumer behavior for a range of product categories. Also, individual differences in online shopping need to be considered. Therefore, a survey (N = 405) assessing online information search and online shopping for nine different product categories as well as socio-demographic and individual variables (shopping orientation, need for emotion, and fashion leadership) was conducted in Germany. Results showed significant differences in online information search as well as shopping regarding gender, status of employment, and education. Moreover, individual variables were differently related to online shopping behavior. Findings are discussed with respect to the future development of the internet as well as scientific and practical insights.

Keywords: online consumer behavior, information search, individual differences

1   Online consumer behavior

The general decision-making process of buying a product involves problem recognition, information search, alternative evaluations, purchase decision, and post-purchase evaluation (Fill, 2009). The internet with its possibilities for online information seeking, online comparison of attributes and prices, and online purchase influences a number of stages in the decision-making process of consumers (Schindler & Bickart, 2005). Tailoring marketing communication to different consumers, knowledge of the buying decision-making process and its determinants is crucial (Fill, 2009). In this article, we address online information search and online purchase decision with respect to person-related variables and different product categories.

From the early stage of online shopping and "early adopters" (Kwak, Fox, & Zinkham, 2002, p. 33), online shopping appears to have entered a consolidation phase. Furthermore, the introduction of Web 2.0 brought about additional possibilities for consumers beyond product purchase. Consumers can post reviews of products, read reviews by other consumers, and exchange experiences with products, brands, or services (Schindler & Bickart, 2005). Early research on online shopping addressed consumer characteristics affecting the choice between online and offline shopping (e.g., shopping center, farmer's market; Ng, 2003). Furthermore, research has had a strong focus on benefits and obstacles of internet shopping. A range of studies addressed positive and negative features of online shopping (e.g., Cho, Kang, & Cheon, 2006; Warden, Wu, & Tsai, 2006; Yang & Lester, 2004). The most

cited benefits of shopping online were convenience, greater access to information, competitive pricing, and broader selection. Among the obstacles for shopping online were security and privacy concerns and the suitability of products to be sold. These benefits and obstacles were also found to be relevant across different cultures (e.g., Efendioglu & Yip, 2004; Yang, Lester, & James, 2007).

With regard to the development of the internet and online shopping, it is likely that new types of consumers are searching for information and buying online and that the group of online information searchers and shoppers is becoming more diverse. For instance, early studies of online shopping have shown a connection between technology acceptance and online shopping behavior (e.g., Chen, Gillenson, & Sherrell, 2002). With the broadening of the internet, it is likely that not only technology-oriented consumers will buy online. This assumption is backed by the fact that internet use in general has become common today and is not confined to a special group of e.g., well-educated people (Kwak et al., 2002), anymore.

With online shopping being in a second stage, novel research questions arise. The present study seeks to build on previous research findings and to go beyond the mentioned general characteristics and motives of online shopping and investigate personal characteristics of online information searchers and shoppers. From a theoretical point of view, such research can help predict the influence of personal characteristics in different stages of the purchase decision-making process and concerning different product categories more precisely. From a practical point

of view, information about consumer characteristics is relevant to optimize the purchase process by tailoring it to the target groups while considering the product categories as well.

1.1 Online consumer behavior and individual differences

Below, we summarize past research with respect to online consumer behavior and individual differences, that is, socio-demografic variables and individual variables, and derive research assumptions based on it.

1.1.1 Socio-demografic variables

Gender. Men were seen as early adopters of online shopping. However, with online shopping becoming more common, the number of women shopping online increased (Kim & Kim, 2002). In Germany for instance, in 2009 for the first time, a majority of the women asked about their postal and online shopping behavior, indicated to buy online instead of via mail (bvh, 2010). Gender differences in online shopping were also found regarding product types. For instance, women were more likely than men to shop home furnishings, apparel, and jewellery online (Chiger, 2001; Norum, 2008; Seock & Bailey, 2008) while men were more likely to shop entertainment, videos/DVDs, computers, and electronics online (Norum, 2008). Thus, we assume that there are gender differences with respect to online shopping behavior and product types with women buying furniture and apparel online and men technical appliances.

Age. Findings regarding age and online shopping behavior have been inconsistent (Cowart & Goldsmith, 2007). While some research showed that elder individuals were more prone to buy online than younger ones (Cowart & Goldsmith, 2007), other research found younger consumers more likely to shop online than elder consumers (Cowart & Goldsmith, 2007; Joines, Scherer, & Scheufele, 2003). These different results might be explained by methodical reasons, for instance different outcome variables and product types (Cowart & Goldsmith, 2007). In Germany, the percentage of consumers from 50 to 59 years that bought online instead of mail ordering has increased more than 15% from 2008 (43%) to 2009 (58%); the percentage of consumers from 60 to 69 years almost 10% from 2008 (19%) to 2009 (28%; bvh, 2010). Therefore, we assume that there are no significant differences in online shopping with respect to age anymore, i.e., there is no relationship between age and online shopping.

Education, employment, and income. Previous studies found that higher education was positively correlated with online shopping (Norum, 2008). Furthermore, Lightner (2003) showed that education and income were positively related to the satisfaction with online purchase experiences. At the same time, education and income were also intercorrelated. Education and income level also affected preferences for web site characteristics such as the appearance of the web site, price, information quantity, and the possibility for comparison of product and price. Thus,

we believe that education, employment, and income are positively related to online shopping behavior.

1.1.2 Individual variables

While general motives of online shopping have been widely researched (see above), there seems to be much less research regarding individual variables and online shopping. However, as a link between personality and internet use in general has been shown in previous research (e.g., Hamburger & Ben-Artzi, 2000), it is assumed that personality might also be related to online shopping behavior. Individual variables that have a strong link to consumer behavior were selected and are presented below.

Shopping orientations. Based on research on general (shopping) trends and values, five different shopping orientations are distinguished by Diehl (2002) and Loevenich and Lingenfelder (2004): Experience, service, price, convenience, and brand orientation. *Experience orientation* is characterized by a desire for emotional stimulation while shopping. Individuals with an experience orientation see shopping as an adventure and experience (Loevenich & Lingenfelder, 2004). We assume that emotional and sensational stimulation can (yet) only be found to a limited degree in online shopping and therefore, experience-oriented consumers are less interested in online shopping than other consumers (Diehl, 2002; Zhou, Dai, & Zhang, 2007). While in stores or malls "shoppers can consume the 'atmosphere', can see the product, and touch, listen to, or smell the product" (Ng, 2003, p. 446), stimulation in online shopping "is limited to the visual image, written description, and some sound and video" (Ng, 2003, p. 446). Therefore, a negative relationship between experience orientation and online shopping is expected. *Service orientation* is characterized by seeking advice, counsel, and service from sales personnel (Loevenich & Lingenfelder, 2004). Personal contact to sales personnel is hardly given in online shopping (cf. Ng, 2003). However, many websites provide the possibility to contact personnel via e-mail or chat and "have begun to 'personalize' their customer service Web pages […] by providing customer reviews" (Ng, 2003, p. 450). For service oriented individuals who appreciate personal contact, the latter services might not be a sufficient substitution for personal contact. Therefore, we assume a negative relationship between service orientation and online shopping. *Convenience orientation* manifests itself in trying to reduce time and effort in shopping while *price orientation* manifests itself in searching for the best price for a product (Loevenich & Lingenfelder, 2004). Based on research regarding benefits of online shopping (Diehl, 2002; Warden et al., 2006; Yang & Lester, 2004), we believe online shopping to best meet the needs of convenience and price oriented shoppers. Thus, we expect a positive relationship between convenience and price orientation and online shopping. Last, *brand orientation* describes the extent to which individuals prefer brand products to no-name products (Loevenich & Lingenfelder, 2004). Because of the broad selection of products in the internet, its internationality, and accessibility (cf., Warden et al., 2006; Yang & Lester, 2004), brand oriented shoppers might find their favorite brands easier online. Therefore, we expect a

positive relationship between brand orientation and online shopping.

Need for emotion (NFE). NFE is described as the "tendency or propensity for individuals to seek out emotional situations, enjoy stimuli, and exhibit a preference to use emotion in interacting with the world" (Raman, Chattopadhyay, & Hoyer, 1995, p. 537). The construct seeks to provide "insights regarding how individuals seek out situations of varying emotional intensity, process information from communications and engage in decision making" (Raman et al., 1995, p. 538). Research has shown the importance of effects of affect and moods on consumers' memories, evaluations, judgments, and behavior (Raman et al., 1995). Since NFE plays an important role in consumer behavior, the question arises, to what extent online shopping meets this need. Depending on the design of the website, a potential shopper may perceive online shopping as an emotional situation. However, the emotional intensity may be limited especially with regard to absent personal communication and limited sensory stimulation (cf., Ng, 2003). Therefore, we assume a negative relationship between NFE and online shopping.

Fashion leadership (FL). Apparel has for the first time in 2009 become the most frequently bought product on the internet in Germany (GfK, 2009). This fact underlines the need to further analyze individuals interested in buying apparel online. One possible explaining factor is thought to be fashion leadership. Following Goldsmith, Freiden and Kilsheimer (1993), fashion leaders are assumed to learn about new fashion earlier than the average buyer. Fashion leaders enjoy the fashion buying process because of the excitement and they also play a key role in the diffusion of fashion and fashion information (Bearden & Netemeyer, 1999). Furthermore, fashion leaders have a higher level of media consumption than non-fashion leaders (Bearden & Netemeyer, 1999; Palegato & Wall, 1980). We therefore expect a positive relationship between FL and online shopping of apparel.

1.2 The present study

A survey was conducted to investigate the research questions. To ensure that not only technology-oriented respondents were approached, the survey was administered as a paper-pencil questionnaire instead of an online questionnaire. This approach differs from many recent studies on online shopping conducted that employed web-based questionnaires (e.g., Cho et al., 2006; Norum, 2008; Kwak et al., 2002). Furthermore, aiming at a more representative sample, it was accounted for that participants from a broad range of age were invited to take part in the study, beginning from the age at which some financial autonomy is given to the elder consumer (i.e. from 14 to 88 years). Also in this respect, the present study differed from previous studies in which mainly college students at a young age participated (e.g., Cho et al., 2006; Yang & Lester, 2004).

Online shopping was assessed for a broad range of products with nine different product categories aiming at covering the most relevant product types. Furthermore, respondents were asked about the frequency they were buying certain products online (from *never* to *always*), instead of merely asking whether they once had purchased a specific product category online. Since most of the consumers use the internet to gather information on products (Bellman, Lohse, & Johnson, 1999; Chen et al., 2002; Cowart & Goldsmith, 2007), online information search behavior was assessed in addition to online shopping. Thus, online shopping behavior was differentiated in online information search and online shopping.

2 Method

2.1 Participants

In all, 405 participants (49.6% female) from Germany filled in the questionnaires. Their ages ranged from 14 to 88 and their average age was 36.6 years (SD = 17.4). Participants were mostly recruited through personal contacts (e.g., family, friends, and acquaintances). This represents a convenience sample. However, we attempted to increase sample representativeness by inviting people from a broad range of ages as well as men and women at an equal ratio to participate. An overview of the sample regarding gender, education, employment, and income can be found in Table 1. More than 90% of the participants had internet access in their own households. In order to prevent the questionnaire from getting too long for the respondents to fill in, the sample was divided in subsamples and thus, NFE and FL were only assessed for a subsample of 107 participants (53.3% female, M age = 34.0 years, SD age = 15.0).

Table 1.   Description of the Sample (N = 405)

Socio-demografic variables	Female	Male	Total
Gender	49.6%	50.4%	100.0%
Education			
No degree	4.0%	3.4%	3.7%
Degree of secondary education	30.3%	26.5%	28.4%
High school degree	51.2%	51.0%	51.1%
University degree	13.9%	18.1%	16.0%
Employment			
Unoccupied	38.8%	37.3%	38.4%
Employed	59.2%	62.7%	61.6%
Income at disposal for shopping[1]			
0 to 150 EUR/month (150 EUR = approx. 210 USD)	31.3%	29.9%	30.6%
150 to 500 EUR/month (500 EUR = approx. 700 USD)	40.3%	36.3%	38.3%
500+ EUR/month	25.4%	33.9%	29.7%

Notes: [1]At disposal for shopping when fix costs for rent, food, phone, commute etc. were deducted. (Percentages for education, employment, and income will not add to 100% because of missing values).

2.2 Independent variables

Socio-demographic variables. As socio-demographic variables, gender (male/female), age (in years), employment status (employed/unoccupied), education (highest degree), and income, i.e., for shopping disposable amount of money, were assessed. For the latter, participants were asked how much money they had at their disposal for shopping excluding the expenses for rent, telephone, commute, and food etc. Since the question about income

is a personal and potentially sensible question, we provided answer categories (i.e., ordinal scale), even though assessing income on an interval scale would have been preferable.

Shopping orientations. The development of items regarding the five shopping orientations was based on Diehl (2002) and results from a prestudy using similar items (Rohr, 2009). A factor analysis (see Table A in the Appendix) showed five factors explaining a total of 72% of variance. Reliability (Cronbach's Alpha) of the five shopping orientations scales were .89 for experience orientation (3 items), .79 for service orientation (3 items), .60 for convenience orientation (3 items), .50 for price orientation (2 items), and .57 for brand orientation (2 items).

Need for emotion (NFE). The NFE scale by Raman, Chattopadhyay, and Hoyer (1995) was employed. The scale captures individuals' tendencies to seek out and enjoy emotional situations. The scale consists of twelve items which were rated on a 5-point scale ranging from 1 (*I do not agree at all*) to 5 (*I totally agree*). An example item was: "Experiencing strong emotions is not something I enjoy very much" (reverse scored). Cronbach's Alpha of the adapted German version of the scale was satisfactory (Cronbach's Alpha = .87).

Fashion leadership (FL). A scale by Goldsmith, Freiden, and Kilsheimer (1993) was employed to assess FL. The scale consists of six items which were rated on a 5-point scale ranging from 1 (*I do not agree at all*) to 5 (*I totally agree*). An example item was: "I am aware of fashion trends and want to be one of the first to try them". Cronbach's Alpha of the adapted German version of the scale was satisfactory (Cronbach's Alpha = .85).

Discriminant and convergent validity. None of the shopping orientations were significantly related to NFE ($-.11 \leq r_s \leq .10$, $p > .05$, two-sided), except for price orientation ($r_s = -.23$, $p < .05$). Fashion leadership showed similarities with some of the shopping orientations: FL was significantly and positively associated with experience orientation ($r_s = .59$, $p < .001$) and brand orientation ($r_s = .34$, $p < .001$) as well as significantly and negatively related to convenience orientation ($r_s = -.27$, $p < .01$). Fashion leadership was not significantly related neither to service ($r_s = .17$, $p > .05$) nor price orientation ($r_s = .02$, $p > .05$, all $N = 107$, two-sided).

2.3 Dependent variables

Online information behavior. Information behavior regarding shopping was assessed by asking "How often do you look for information about these product categories online?" on a scale from 1 (*never*) to 5 (*always*). Product categories were chosen following Levin, Levin, and Heath (2005). Participants were asked to answer the question for the following nine different product categories: Travelling (e.g., flight tickets, hotel reservations, rental car), events (e.g., concerts); CDs, DVDs, books, computer software (e.g., games); apparel, fashion, and shoes; electronics (e.g., TVs, DVD players, computer hardware, home appliances); health and care products, cosmetics, and pharmaceutical; sporting goods; food; furniture and

fixtures; car equipment. As an overall indicator of online information search, a mean value of all categories was calculated.

Online shopping. Online shopping behavior was assessed by asking "How often do you buy these product categories online?" employing the same nine product categories as for measuring information search behavior. A scale ranging from 1 (*never*) to 5 (*always*) was used. As an overall indicator of online shopping, a mean value of all categories was computed.

3 Results

Mean values of online information behavior were higher than for online shopping (see Table 2). As assumed, male participants indicated to buy CDs etc., electronics, sporting goods, and car equipment online (see Tables 3 and 4). However, while for male participants, online information behavior and shopping was similar, female participants looked for information about apparel as well as health and care products online but did not actually buy them online. Employed respondents searched for information and purchased online more often than unoccupied respondents.

Table 2. Spearman Correlations between Socio-demographic Variables and Online Shopping Behavior

Product Categories	M	SD	Age	Education	Income
Online information behavior					
Travelling	2.96	1.49	−.29**	.27**	.02
CDs etc.	2.84	1.52	−.35**	.27**	−.02
Apparel	2.59	1.36	−.45**	.11*	−.11*
Electronics	2.77	1.49	−.29**	.16**	.06
Health and care	1.71	0.99	−.02	−.03	.06
Sporting goods	2.02	1.28	−.17**	.09	.10*
Food	1.38	0.89	−.07	.05	−.00
Furniture	2.21	1.24	−.15**	.10*	.05
Car equipment	2.07	1.38	−.00	.12*	.13**
Mean all categories	2.28	0.83	−.31**	.19**	.05
Online Shopping					
Travelling	2.61	1.48	−.20**	.34**	.01
CDs etc.	2.54	1.42	−.32**	.31**	.01
Apparel	2.14	1.23	−.35**	.15**	−.00
Electronics	2.11	1.27	−.26**	.21**	.11*
Health and care	1.39	0.74	.06	.04	.08
Sporting goods	1.56	1.00	−.10	.09	.07
Food	1.12	0.51	.00	.05	.06
Furniture	1.55	0.89	−.11*	.04	.09
Car equipment	1.61	1.08	−.02	.13*	.15**
Mean all categories	1.85	0.66	−.31**	.29**	.08

Notes: *$p < .05$, **$p < .01$ (two-tailed)

We found a negative relationship between age and both online information behavior and shopping (see Table 2). Thus, in tendency, the younger the individual, the more the internet is used for both information search and shopping. As expected, there was a positive relationship between employment, education, and online information behavior and shopping, indicating that employed and highly educated participants tend to shop online rather

than offline. However, no significant relationship was found for income and online shopping behavior.

Table 3. Descriptive Statistics on Online Information Behavior as a Function of Gender and Employment

Product Categories	Female	Male		Un-occupied	Employed	
	M (SD)	M (SD)	t (df), p, r	M (SD)	M (SD)	t (df), p, r
Travelling	2.95 (1.48)	2.97 (1.51)	t (399) = −0.138, p = .891, r = .01	2.74 (1.53)	3.09 (1.45)	t (395) = −2.307, p < .05, r = .11
CDs etc.	2.60 (1.47)	3.08 (1.53)	t (399) = −3.170, p < .01, r = .16	2.65 (1.49)	2.99 (1.52)	t (395) = −2.209, p < .05, r = .11
Apparel	2.76 (1.39)	2.43 (1.32)	t (399) = 2.422, p < .05, r = .12	2.46 (1.32)	2.70 (1.38)	t (395) = −1.709, p = .088, r = .09
Electronics	2.26 (1.34)	3.28 (1.47)	t (399) = −7.314, p < .001, r = .34	2.40 (1.35)	3.03 (1.53)	t (345.0) = −4.284, p < .001, r = .22
Health and care	1.83 (1.00)	1.58 (0.96)	t (398) = 2.591, p < .05, r = .13	1.59 (0.89)	1.77 (1.03)	t (347.1) = −1.873, p = .062, r = .10
Sporting goods	1.62 (0.98)	2.41 (1.42)	t (357.5) = −6.530, p < .001, r = .33	1.67 (1.05)	2.22 (1.36)	t (370.7) = −4.491, p < .001, r = .23
Food	1.32 (0.80)	1.44 (0.97)	t (387.0) = −1.319, p = .188, r = .07	1.35 (0.92)	1.38 (0.85)	t (394) = −0.303, p = .762, r = .02
Furniture	2.19 (1.22)	2.22 (1.27)	t (399) = −0.256, p = .798, r = .01	1.95 (1.14)	2.36 (1.26)	t (339.2) = −3.336, p < .01, r = .18
Car equipment	1.67 (1.09)	2.46 (1.52)	t (365.2) = −6.020 p < .001, r = .30	1.65 (1.08)	2.34 (1.48)	t (379.2) = −5.297, p < .001, r = .26
Mean all categories	2.13 (0.78)	2.43 (0.86)	t (398) = −3.605, p < .001, r = .18	2.05 (0.77)	2.43 (0.84)	t (394) = −4.495, p < .001, r = .22

Regarding shopping orientations, brand orientation was significantly and positively related to both online information behavior and shopping (see Table 5). This indicates that participants who consider brands to be important buy online rather than offline, a result in line with our hypothesis. Also for service orientation, we observed a negative and significant relationship with online information behavior, as expected. In line with our hypothesis, price orientation was positively and significantly related to online information behavior and online shopping. There were no other significant relationships regarding shopping orientations and online shopping behavior.

Table 4. Descriptive Statistics on Online Shopping as a Function of Gender and Employment

Product Categories	Female	Male		Un-occupied	Employed	
	M (SD)	M (SD)	t (df), p, r	M (SD)	M (SD)	t (df), p, r
Travelling	2.62 (1.50)	2.61 (1.47)	t (398) = 0.049, p = .961, r = .00	2.49 (1.52)	2.70 (1.45)	t (394) = −1.346, p = .179, r = .07
CDs etc.	2.34 (1.36)	2.73 (1.44)	t (398) = −2.773, p < .01, r = .14	2.32 (1.35)	2.70 (1.43)	t (394) = −2.569, p < .05, r = .13
Apparel	2.25 (1.24)	2.02 (1.22)	t (396) = 1.897, p = .059, r = .09	1.93 (1.11)	2.28 (1.29)	t (345.6) = −2.800, p < .01, r = .15
Electronics	1.77 (1.12)	2.45 (1.32)	t (389.7) = −5.552, p < .001, r = .27	1.89 (1.12)	2.26 (1.33)	t (352.5) = −3.015, p < .01, r = .16
Health and care	1.40 (0.70)	1.38 (0.77)	t (396) = 0.261, p = .794, r = .01	1.30 (0.73)	1.45 (0.74)	t (392) = −1.983, p < .05, r = .10
Sporting goods	1.29 (0.70)	1.81 (1.17)	t (330.3) = −5.394, p < .001, r = .28	1.32 (0.83)	1.70 (1.07)	t (369.1) = −4.005, p < .001, r = .20
Food	1.10 (0.41)	1.14 (0.59)	t (398) = −0.837, p = .403, r = .04	1.11 (0.60)	1.11 (0.44)	t (394) = 0.014, p = .989, r = .00
Furniture	1.51 (0.82)	1.59 (0.96)	t (389.9) = −0.941, p = .347, r = .05	1.42 (0.82)	1.63 (0.93)	t (342.1) = −2.325, p < .05, r = .12
Car equipment	1.33 (0.74)	1.89 (1.28)	t (322.9) = −5.293, p < .001, r = .28	1.34 (0.80)	1.79 (1.20)	t (390.7) = −4.411, p < .001, r = .22
Mean all categories	1.73 (0.59)	1.96 (0.70)	t (387.3) = −3.525, p < .001, r = .18	1.68 (0.60)	1.96 (0.67)	t (390) = −4.178, p < .001, r = .21

The relationship between NFE and online shopping behavior was negative as assumed, but did not reach significance (see Table 6). As hypothesized, we observed that FL was positively and significantly related to online information behavior and shopping of both apparel and health and care products.

Table 5. Spearman Correlations Between Shopping Orientations and Online Shopping Behavior

Product Categories	Experience	Service	Convenience	Price	Brand
Online information behavior					
Travelling	.09	−.13**	−.01	.15**	.02
CDs etc.	.01	−.19**	−.02	.14**	.05
Apparel	.26**	−.12**	−.05	.03	.19**
Electronics	−.08	−.17**	.04	.12*	.12*
Health and care	.16**	.07	.03	.10*	.03
Sporting goods	−.00	−.02	.08	.12*	.16**
Food	.10*	.02	.00	.02	.02
Furniture	.17**	−.03	.07	.11*	.03
Car equipment	−.08	−.08	.10*	.15**	.13**
Mean all categories	.09	−.12*	.04	.17**	.13**
Online Shopping					
Travelling	.07	−.07	−.01	.13*	.03
CDs etc.	.02	−.15**	−.06	.09	.07
Apparel	.17**	−.06	−.11*	−.00	.18**
Electronics	−.04	−.09	−.11*	.02	.17**
Health and care	.09	.02	−.07	.08	.07
Sporting goods	.02	−.04	−.01	.05	.22**
Food	.01	.05	−.05	−.03	.06
Furniture	.13**	.11*	−.01	.09	.09
Car equipment	−.03	−.01	−.04	.15**	.15**
Mean all categories	.07	−.07	−.09	.12*	.17**

Notes: *p < .05, **p < .01 (two-tailed).

Finally, multiple regression analyses with online information behavior and online shopping as dependent variables were conducted (see Table 7). The most promising variables were chosen as predictors based on past research (cf. Field, 2005) and current findings. That is,

variables with the strongest relations to online shopping behavior were selected. In the first step, socio-demografic variables were entered and in the second step, shopping orientations (NFE and FL were not considered due to sample size). Age, employment, price and brand orientation proved to be significant predictors of online information behavior. Overall, these variables accounted for 28% of the variation in online information behavior. With respect to online shopping, age, education, employment, brand and price orientation were shown to be significant predictors and they accounted for 24% of the variation in online shopping.

Table 6. **Spearman Correlations Between Need for Emotion (NFE), Fashion Leadership (FL) and Online Information Behavior as well as Online Shopping**

Product categories	Online information behavior		Online shopping	
	NFE	FL	NFE	FL
Travelling	−.15	.10	.04	.21[*]
CDs etc.	.03	−.01	.05	.06
Apparel	−.05	.38[**]	−.14	.20[*]
Electronics	−.12	−.08	−.10	.02
Health and care	−.06	.26[**]	−.17	.24[*]
Sporting goods	−.12	.12	−.17	.07
Food	.01	.08	−.04	.14
Furniture	−.04	.16	−.05	.17
Car equipment	−.28[**]	−.04	−.16	.04
Mean all categories	−.15	.16	−.13	.19

Notes: [*]$p < .05$, [**]$p < .01$ (two-tailed). [1]Subsample: n = 107.

Table 7. **Hierarchical regression analyses with online information behavior and online shopping as dependent variables**

	B	SE B	β
Online information behavior			
Step 1			
Age	−.02	.00	−.38[***]
Education	.04	.03	.06
Employment	.37	.08	.22[***]
Step 2			
Age	−.02	.00	−.37[***]
Education	.03	.03	.04
Employment	.35	.08	.20[***]
Price orientation	.21	.04	.24[***]
Brand orientation	.09	.04	.11[*]
Service orientation	−.07	.04	−.08
Online Shopping			
Step 1			
Age	−.01	.00	−.31[***]
Education	.07	.02	.16[**]
Employment	.25	.06	.19[***]
Step 2			
Age	−.01	.00	−.31[***]
Education	.07	.02	.15[**]
Employment	.23	.06	.17[***]
Brand orientation	.09	.03	.14[**]
Price orientation	.12	.03	.18[***]

Note: Online Information behavior: R^2 = .21 for Step 1; ΔR^2 = .07 for Step 2 (R^2 total = .28); Online shopping: R^2 = .19 for Step 1; ΔR^2 = .05 for Step 2 (R^2 total = .24). [*]$p < .05$, [**]$p < .01$, [***]$p < .001$

4   Discussion

Online shopping is entering a consolidation phase in which it is likely that the group of online shoppers is becoming more diverse. Therefore, the objective of the study was to study online consumer behavior regarding individual characteristics and to differentiate online shopping for a range of product categories. Findings showed that the typical online shopper is young, male, employed, highly educated as well as service and brand oriented. However, these findings need to be differentiated with respect to product categories as well as online information behavior versus actual online shopping. For instance, female participants tend to search for information via the internet for apparel, shoes, fashion as well as health and care products, but they do not buy them online.

Since the percentage of elder online shoppers has increased in recent years (bvh, 2010), we expected age to be unrelated to online shopping behavior. However, we found a negative relationship between age and online shopping behavior indicating that currently, younger consumers buy online more often than elder consumers. In future years however, technology acceptance and use among elder consumers may increase and hence, online shopping frequency among elder consumers may increase as well (cf. Chen et al., 2002).

Contrary to our assumptions, there were no significant relationships between experience as well as convenience orientation and online shopping behavior. We expected a negative relationship between experience orientation and online shopping behavior because emotional and sensational stimulation can (yet) only be found to a limited degree in online shopping. However, findings showed that there were positive relationships between experience orientation and some product categories such as apparel and furniture. Thus, it seems that online shopping may nevertheless be experienced as providing adventure and experience (cf. Loevenich & Lingenfelder, 2004). With the further development of technology, the possibilities for emotional and sensational stimulation may possibly increase even more, for instance with product virtualization technologies such as 3D rotation views and virtual try-on (Kim & Forsythe, 2007). With respect to findings regarding shopping orientations and online shopping behavior–which showed rather small effect sizes–methodological issues might also have had an influence on the outcomes. Some of the reliability scores of the shopping orientation scales were rather low. Therefore, in future studies, operationalization of the shopping orientations needs some improvement. Reliability of the shopping orientation scales need to be increased by revising the scales, that is, adding and improving items (cf. Cortina, 1993).

The relationship between NFE and online shopping behavior was negative as expected, but it did not reach significance. The results indicate that there is no general relationship between NFE and online consumer behavior. Thus, searching for information or purchasing a product online is generally attractive for consumers with a high or low NFE. With respect to the two stages of information search and purchase within the buyer's decision-making process (Fill, 2009), emotions in general and NFE might

not be as relevant as assumed. Furthermore, the NFE scale by Raman et al. (1995) may measure the construct on a too broad and general level as it was developed before the wide spread use of the internet. In future research, we suggest using items that more strongly address the specific relationship between emotions and the purchase decision-making process (Fill, 2009). For instance, items could represent current trends regarding online consumer behavior (e.g., "I experience strong emotions when searching the internet for new fashion styles with my friends"). Finally, NFE and FL were measured only for a subsample of 107 participants due to length restrictions. To be better able to interpret the relationships between NFE, FL, and online shopping behavior, findings need to be replicated with a larger sample.

Some limitations of the study need to be discussed. First, a convenience sample was used. Although representativeness was considered by paying attention to the distribution of age and gender, the representativeness of the present sample may be limited. Furthermore, the measurement of the dependent variables–online information behavior and online shopping–could benefit from assessing general shopping frequencies. Respondents were asked "How often do you buy these product categories online?" with response categories ranging from 1 (*never*) to 5 (*always*). The interpretation of this data could be improved by assessing offline shopping frequencies for the product categories in addition to assessing online shopping frequencies. For instance, in case a respondent chooses the response category "never", having the information whether the respondent never buys a product category (neither online nor offline) would be helpful for data interpretation.

The present study provides both practical and scientific insights. From a scientific point of view, the study showed that online consumer behavior is a multilayered process with a range of factors that influence the shopping decisions–socio-demographic variables, personality or shopping orientations all have a different effect on online consumer behavior. From a practical point of view, findings suggest a careful analysis of targeted consumers for advertising design with respect to online information and shopping behavior, product categories, and a range of individual characteristics. On the basis of a detailed analysis of the targeted consumers, appropriate advertising measures can be taken. For instance, offline marketing communication such as billboards or magazine advertisements can be used to raise interest among the target audience. Once the consumer visits the website, in-depth product information tailored to the consumers' characteristics can be provided (Fill, 2009). More knowledge about consumer characteristics predicting online information search and purchase therefore enables a high degree of personalization, for example with respect to gender (female) and product categories (apparel and health care products). Our research aimed at providing one first step in that direction but further research is required for instance with respect to lifestyles and consumption choices (Solomon, Bamossy, Askegaard, & Hogg, 2010).

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Appendix

Table A. Factor Analysis of Shopping Orientation Items (VARIMAX rotation)

Items	Factor loadings of factors				
	E	S	C	P	B
1. Shopping is an adventure for me	**.87**	.23	.03	.00	.04
2. The shopping experience is important to me	**.90**	.20	−.04	.02	.12
3. I feel great anticipation before shopping	**.88**	.03	−.01	−.00	.07
4. It is important to me to get assistance by salespersons while shopping	.07	**.83**	.05	.07	.10
5. It is important to me to chat casually with salespersons while shopping	.09	**.87**	−.02	.05	.05
6. It is important to me to be shepherded while shopping (e.g., with a coffee)	.28	**.75**	.06	−.02	−.04
7. It is important to me that retail outlets are fast and easy to reach	−.10	.07	**.78**	.17	−.11
8. With respect to shopping, I want to be independent of time	.15	−.04	**.79**	−.13	.15
9. With respect to shopping, it is important to me to find information about products fast and easy	−.13	.10	**.59**	.50	−.02
10. With respect to shopping, it is important to me to buy products to the lowest price possible	.04	−.07	−.00	**.75**	−.16
11. With respect to shopping, it is important to me to be able to compare prices of products in advance	.02	.14	.12	**.81**	.11
12. I buy mainly brands	−.00	−.06	.05	−.16	**.85**
13. With respect to shopping, it is important to me to buy products with a high degree of popularity	.19	.16	−.03	.10	**.79**
Eigenvalue	2.52	2.18	1.61	1.56	1.44
Percent of variance	19.34	16.77	12.38	12.00	11.10

Notes: Bold: Factor loading > .55. Percent of variance total: 71.59%. E: Experience, S: Service, C: Convenience, P: Price, B: Brand

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