



How valence, volume and variance of online reviews influence brand attitudes

Agnieszka Zablocki¹ · Bodo Schlegelmilch^{1,2} · Michael J. Houston³

Received: 6 June 2016 / Accepted: 21 June 2018 / Published online: 3 July 2018
© Academy of Marketing Science 2018, corrected publication July/2018

Abstract

Online reviews can strongly influence purchase decisions. In the past decade, extensive research in the field of online reviews has focused on product categories (e.g., hedonic, utilitarian) and product sales. However, research on how the characteristics of online reviews (valence, volume, and variance) influence attitudes toward brands is sparse, even though brands are among the most valuable corporate assets and companies use online marketing extensively to increase brand loyalty. Thus, this paper offers a conceptual model that closely examines the relationship between the characteristics of online reviews and brand attitudes. The model contributes to a better understanding of the influence of contextual factors on brand attitudes within online communication. In line with prior research, the study conceptualizes volume and variance as moderators of valence. Furthermore, the proposed conceptual model integrates brand type (functional, emotional, symbolic, and lifestyle) and the source of review (stranger or acquaintance) as potential moderators. Conceptual insights, along with managerial implications for online marketing managers, are provided.

Keywords Online reviews · Brand attitudes · Valence · Volume · Variance

Introduction

Online shopping tends to follow a familiar pattern: search the web, read recommendations and reviews, and make a decision (Hong and Cha 2013; Simonson and Rosen 2014). Thus, reviews and recommendations¹ are central to the purchasing

¹ Online reviews refer to negative and positive reviews about brands and/or products. As recommendations, by contrast, solely imply positive reviews (Christodoulides et al. 2012), we use the term “online reviews,” as it suits the aim of this paper.

✉ Agnieszka Zablocki
agnieszka.zablocki@wu.ac.at

Bodo Schlegelmilch
bodo.schlegelmilch@wu.ac.at

Michael J. Houston
mhouston@umn.edu

¹ Institute for International Marketing Management, Vienna University of Economics and Business, Welthandelsplatz 1, 1020 Vienne, Vienna, Austria

² Lingnan (University) College, Sun Yat-sen University, Guangzhou, China

³ Carlson School of Management, 3-171, University of Minnesota, 321 - 19th Avenue South, Minneapolis, MN 55455, USA

process (Chen and Xie 2008; Godes and Mayzlin 2004; Jimenez and Mendoza 2013; Liu 2006) because consumers often perceive them as valuable and trustworthy (Gruen et al. 2006; Gupta and Harris 2010; Mayzlin 2006). Most studies to date have investigated the impact of reviews on the choice of hedonic and utilitarian products (e.g., Dellarocas et al. 2007; Godes and Mayzlin 2004; Schindler and Bickart 2005; Zhu and Zhang 2010) and extensively on product sales (Chevalier and Mayzlin 2006; Cui et al. 2012; Floyd et al. 2014; Senecal and Nantel 2004). However, research on how brands themselves are influenced by online reviews is still in the early stages (Kostyra et al. 2016); the few notable exceptions consider the influence of online reviews on brand strength (Ho-Dac et al. 2013), brand image, brand associations (Gensler et al. 2016), and choice of brands (Kostyra et al. 2016). Little, if any, research has investigated the relationship between online reviews and brand attitudes, even though brand attitudes are an important precursor for purchase intentions and consumer choices (Czellar 2003; Priester et al. 2004) and are a critical driver of brand equity (Park et al. 2010). In online communications, consumers adjust their attitudes to other consumers’ opinions when discussing products (Schlosser 2009), but there are significant gaps in the understanding of how online reviews influence consumer attitudes toward brands. Consequently, this paper offers a conceptual approach on how different characteristics (*valence*,

volume, and *variance*) of online reviews might influence consumers' brand attitudes.

Brand attitudes depend on brand associations, which in turn are determined by the positioning of a brand (Aaker 1996). Companies can include different *brand types* in their brand-positioning strategy, such as functional (e.g., Clorox Bleach), emotional (e.g., Cartier), symbolic (e.g., Lenox, BMW), or lifestyle (e.g., Apple). Most brands incorporate more than one type; BMW as a brand, for example, can be both symbolic and emotional. Each brand type serves different consumer needs, such as functionality or the desire to present a certain lifestyle represented by consuming a particular brand (Park et al. 1986); these needs, in turn, influence how consumers process information. For symbolic and lifestyle brands, consumers tend to pay attention to positive reviews, which help them identify and choose brands favored by aspirationally evaluated social groups (Tajfel and Turner 1985). Conversely, consumers seeking brands to satisfy functional needs tend to focus on negative reviews, as negative information prevails in decisions based on utilitarian criteria (Sen and Lerman 2007). Thus, we expect the characteristics of online reviews to affect brand attitudes differently, depending on brand type. As the consumption of symbolic and lifestyle brands tends to reflect consumers' affiliations with social groups or categories (Escalas and Bettman 2005; Orth and De Marchi 2007), the *source of review* can also influence the relationship between the characteristics of online reviews and brand attitudes. Consequently, we distinguish between reviews from and for *strangers* and those from and for *acquaintances*, as research has found that the content of messages differs as a function of relationship level (Huston and Houts 1998); that is, reviews written for and from strangers may differ in content and, consequently, in their impact on attitudes than reviews written for and from acquaintances.

The paper begins with a conceptualization of the different types of online communication, including user-generated content (UGC), electronic or online word of mouth (WOM), online reviews, and online recommendations, to draw a clear line between these constructs and to provide arguments for the choice of online reviews. We then proceed with a conceptualization of online reviews and their characteristics, in which we consider the valence, volume, variance, and content of online reviews, as well as the brand attitudes that emerge from such reviews. In line with previous research (Kostyra et al. 2016), we treat volume and variance as moderators of the main effect of valence. Subsequently, we provide definitions and conceptualizations of other moderators (i.e., *brand type* and *source of review*). These proposed moderators influence (1) how consumers process information, (2) what information they perceive as relevant to the decision-making process, and (3) what kind of information is provided within online communication, which in turn affects attitude formation. For each moderator, we derive propositions on the relationship between brand

attitudes and the valence of online reviews. The paper concludes with a discussion of the theoretical contributions and marketing consequences and suggestions for further research.

The conceptual model, underlying constructs, and research propositions

Conceptualization of online reviews relative to other online constructs

The terms “user-generated content,” “electronic or online word of mouth,” “online review,” and “online recommendation” are often used interchangeably, though definitions reveal important differences among the constructs. According to Benkler (2006, p. 60), UGC entails “common-based peer production [...] that is decentralized, collaborative, and non-proprietary; based on sharing [...] outputs among widely distributed, loosely connected individuals.” According to Tang et al. (2014, p. 41), UGC “refers to media content created by users to share information and/or opinions with users,” covering almost everything from “blogs (e.g. MSN spaces), wikis (e.g. Wikipedia), virtual worlds (e.g. Second life), social-networking sites (e.g. Facebook), [and] podcasting (e.g. iTunes), to websites allowing feedback (e.g., [FanFiction.net](#))” (Christodoulides et al. 2012, p. 1689). eWOM is the “predominant form of UGC” (Kim et al. 2015, p. 412) and refers to “any positive or negative statement made by potential, actual, or former customers about a product or company which is made available to a multitude of people and institutions via the Internet” (Hennig-Thurau et al. 2004, p. 39). It “can be expressed in different forms such as opinions, online ratings, online feedback, reviews, comments, and experience-sharing on the Internet. It utilizes online communication channels, for example, blogs ([blogger.com](#), [worldpress.com](#)), review sites ([yelp.com](#), [epinions.com](#)), discussion forums (chan4, gaia online), online e-retailers ([Amazon.com](#), [bestbuy.com](#)), firms' own brand and product sites (Microsoft, Apple), and social networking sites (Facebook, Twitter)” (Mishra and Satish 2016, p. 223). Online WOM is a different expression for eWOM and captures “the opinions of thousands of strangers (restaurant reviews at Yelp, movie ratings at IMDb, forum posts at CNET, etc.)” (He and Bond 2015, p. 1510). Online reviews are embedded in eWOM (Floyd et al. 2014; Chevalier and Mayzlin 2006) as “peer-generated product evaluations posted on company or third-party websites” (Mudambi and Schuff 2010, p. 186), which can be positive or negative. Finally, online recommendations serve as guidance for the usage or avoidance of a specific product or service (Cascio et al. 2015). This also applies to online reviews. Both concepts include guidance for consumers' decision-making processes, but online reviews offer a product or service evaluation that is absent in recommendations. Furthermore, online reviews mostly refer to peer-

generated content, while recommendations also refer to so-called recommendation systems, in which recommendation software suggests what target consumers might like in relation to their previous product choices (Ying et al. 2006). Figure 1 displays the hierarchical taxonomy of UGC, eWOM, online reviews, and online recommendations.

Our taxonomy illustrates that UGC captures many characteristics of online communication, such as tweets, comments, reviews, recommendations, and blogs. For online WOM, the literature offers no separate definition from eWOM or uses it interchangeably with online reviews or recommendations. Online recommendations include a call for a certain behavior (usage vs. avoidance) and refer to specific products or services, which again narrows the scope. By contrast, online reviews mostly communicate experiences consumers have had with a product or service, without actively urging a certain behavior. Thus, our conceptual model is based on online reviews. Online reviews, as a facet of the broader construct of eWOM, include specific characteristics such as valence and content. On retail websites, consumers can rate a product on a numeric (usually 1–5) scale and add open-ended comments. Companies can purchase these reviews and use them on their own websites. Research offers evidence on how valence, volume, variance, and content affect product sales (e.g., Chevalier and Mayzlin 2006; Moore 2015). To extend existing knowledge on online reviews, we offer a conceptual model on the influence of certain online review characteristics on brand attitudes instead of product evaluations and sales. Figure 2, which displays the conceptual model, depicts the potential influence of the characteristics of online reviews (valence, volume, and variance) on brand attitudes. Valence serves as the independent variable. For volume and variance, we incorporate the findings of Kostyra et al. (2016) and use these as moderator variables of the independent variable. Furthermore, we propose that the relationship between these two key constructs is partially moderated by the brand type to

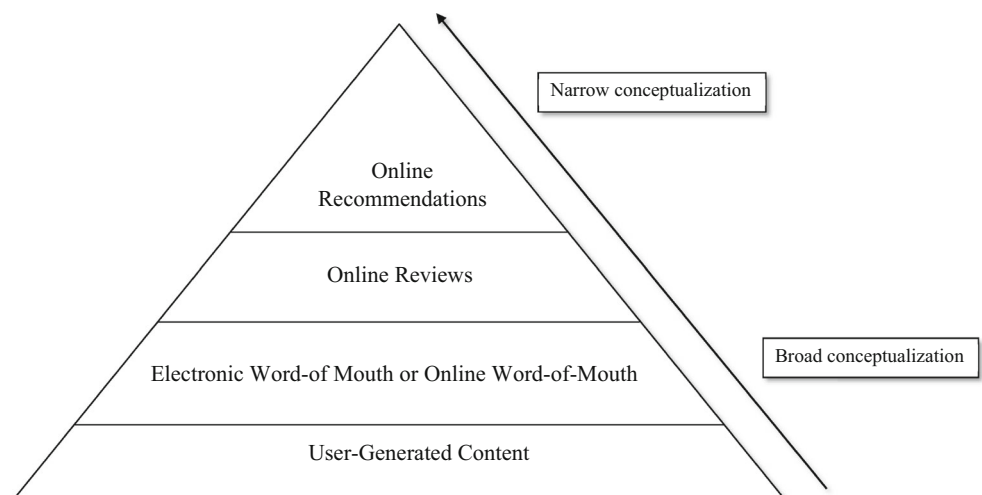
which online reviews refer (functional, emotional, symbolic, and lifestyle) and the people with whom consumers share or from whom they read online reviews (stranger vs. acquaintance).

A conceptual model integrating the characteristics of online reviews and brand attitudes

Valence as an independent variable Valence is one of the most important attributes of consumer-created information (e.g., Neelamegham and Chintagunta 1999); it refers to “the evaluative direction of the review, and can be positive, neutral or negative” (Purnawirawan et al. 2012, p. 245). In principle, positive comments can lead to positive attitudes and high purchase intentions, while negative comments can lead to negative attitudes and low purchase intentions. East et al. (2008) find that positive reviews increase purchase probability more strongly than negative reviews detract from purchase probability, and Ye et al. (2009) find that sales increase significantly with the number of positive reviews. An explanation for this lies in confirmatory bias, which drives consumers to seek information supporting an already-made decision (Chevalier and Mayzlin 2006); positive messages are especially effective when consumers rely more on positive than negative cues in their decision-making processes (Skowronski and Carlston 1989).

Contrary to these findings, however, several studies have shown that purchase decisions are influenced more by negative reviews (e.g., Aggarwal et al. 2012; Chakravarty et al. 2010; Chang and Wu 2014; Cui et al. 2012; Yoo et al. 2013). Hennig-Thurau et al. (2004) claim that negative reviews act as an instrument of power, substantially influencing consumers’ perceptions of a company and its brands. Negative information tends to be more diagnostic, useful, and informative than positive information and therefore is weighted more heavily in judgment processes (Ahluwalia and Shiv 2002; Bambauer-Sachse and Mangold 2011;

Fig. 1 Hierarchical taxonomy of user-generated content (UGC), electronic word of mouth (eWOM), online reviews, and online recommendations



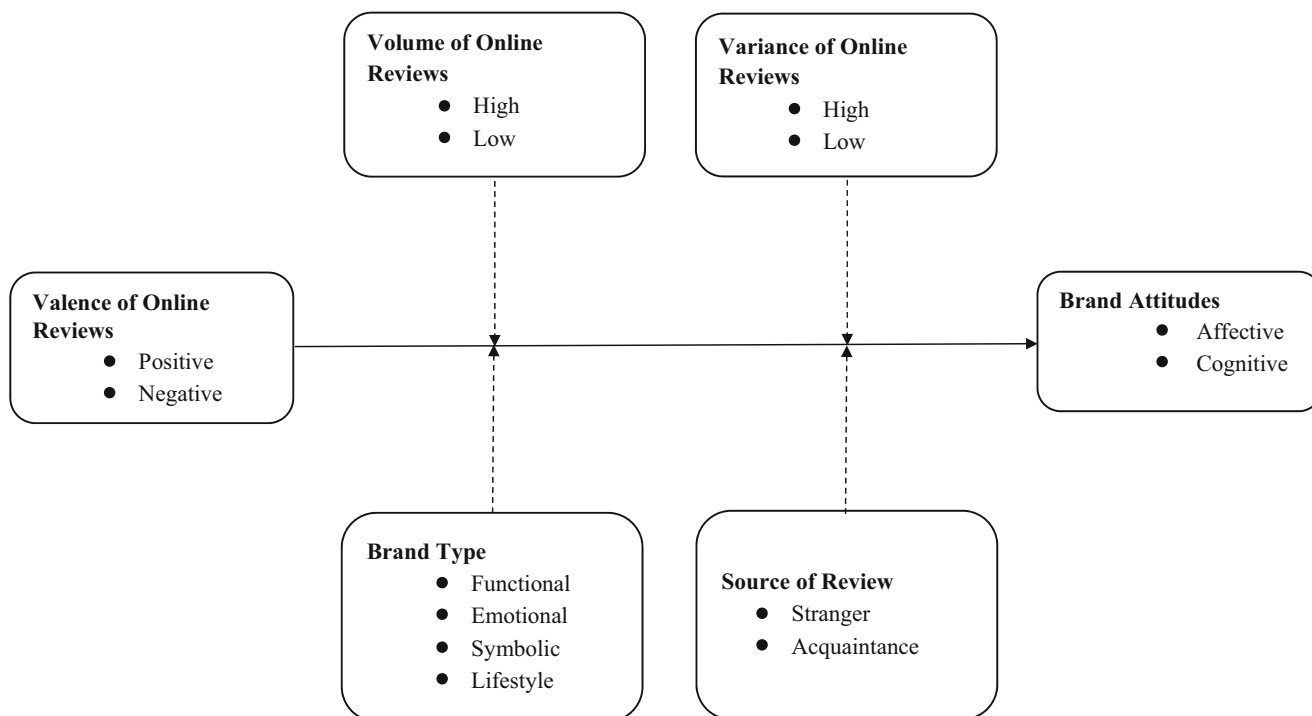


Fig. 2 The relationship between the valence of online reviews and brand attitudes, moderated by several contextual factors

Herr et al. 1991). This lends support to the so-called negativity-bias hypothesis, which posits that negative information is more memorable and thus has a greater impact on decision making (Maheswaran and Meyers-Levy 1990; Rozin and Royzman 2001). Park and Lee (2009), for example, find that credibility is higher for negative online reviews, in that consumers consider such reviews more often in future purchase decisions. Liu et al. (2010) also postulate that whenever consumers make purchase decisions, negative information has a greater impact than positive information; they specifically refer to the usefulness and diagnostic effect of negative information. According to this stream of research, consumers pay more attention to negative reviews and perceive them as more credible in their online purchase decision processes (see also Sen and Lenman 2007). This contradiction led to a meta-analysis conducted by Purnawirawan et al. (2015), which found the positive reviews had a greater impact on product choice than negative reviews. Neutral valence also influences product choice, depending on whether a statement is mixed (equal number of positive and negative claims) or indifferent (neither positive nor negative claims) (Tang et al. 2014).

Volume as a moderator Volume refers to the number of online comments or ratings about a specific product or brand (Chintagunta et al. 2010; Floyd et al. 2014). Higher review volume is related to greater product awareness and, in turn, higher sales (Anderson and Salisbury 2003; Archak et al. 2011; Bowman and Narayandas 2001). Consumers are more persuaded by products or brands with a high volume of online

reviews, as an opinion shared by a large number of consumers increases the perceived correctness of that opinion. Furthermore, consumers can become more informed about a product with a high number of online reviews, which in turn influences product sales (Godes and Mayzlin 2004; Salganik and Watts 2008). Liu (2006, p. 76) finds that volume has an “informative effect on awareness.” However, several studies find no significant effect of volume on awareness or purchase intentions. For example, Chintagunta et al. (2010) reveal that the main driver of movie box-office performance is online review valence, not volume. Building on these findings, Kostyra et al. (2016) demonstrate that volume does not directly affect consumer choice, but serves only as a moderator of the valence of online reviews. Thus, as noted, we treat volume, a characteristic of online reviews, as a moderator of valence in the proposed model.

Variance as a moderator Variance captures reviewers’ disagreement about a product or service, as reflected in a range of positive and negative statements (Minnema et al. 2016). Variance has a negative effect on customers’ purchase decisions (Floyd et al. 2014; Rosario et al. 2016), as it decreases expectations and increases the associated uncertainty due to a broader range of positive and negative opinions (Chen and Lurie 2013; Khare et al. 2011). Zhu and Zhang (2010) show that high variance decreases sales of unpopular products. According to Wang et al. (2015), consumers show a tendency to exclude a product from consideration if it is set in a context of high variance, as they fear that this particular product might

not fit their needs and preferences. There is a correlation between the volume (number of reviews) and variance of reviews, in that a higher number of reviews also lead to higher variance in opinions (Moe and Schweidel 2012). Kostyra et al. (2016) show that variance operates as a moderator of valence. Negatively rated products apparently benefit from high variance, in that high variance increases product-choice probability. By contrast, high variance within online reviews decreases product-choice probability for positively rated products. Langan et al. (2017) note that the influence of variance depends on the product category: high variance within online reviews decreases purchase intentions for utilitarian but not hedonic products; conversely, when variance is low, no significant differences occur in purchase intentions.

Content The content of online reviews includes reasons for purchasing a product (e.g., “Battery performance is compelling”), feelings toward a product (e.g., “I love this smartphone”), or figurative wording (e.g., “This smartphone is like a Porsche”). Content can influence helpfulness ratings, product evaluations, and product choice (Cao et al. 2011; Kronrod and Danziger 2013; Moore 2012); it can also be an important predictor of individuals’ attitudes and behavior (Fishbein and Ajzen 1981). However, content has not attracted as much research attention as volume and valence in online reviews, even though this construct offers promising results. Yin et al. (2014), for example, find that consumers perceive reviews containing an element of concern as more helpful than those expressing anger. Similarly, entertaining elements such as humor, positive and concrete content, and moderate length increase perceived helpfulness, while spelling and grammatical errors and abstract content have the opposite effect (Li et al. 2013; Schindler and Bickart 2012). Credibility is helped more by product-specific content (objective review) than by personal experience accounts (subjective review) (Lee and Koo 2012); the latter often refer to hedonic product categories, such as wine, restaurants, or travel experiences, while objective or product-specific content often applies more to rational factors, such as price or product attributes.

When content is investigated at the language level, figurative language in online reviews, such as metaphors, leads to different attitudes. For example, consumers reading an online review may appreciate figurative expression more for hedonic than utilitarian products (Kronrod and Danziger 2013). Such language can better express complex issues, such as feelings or emotions, and therefore can be more meaningful when products serve emotional needs, as in hedonic consumption. Moore (2015) follows a similar approach by dividing the content of online reviews into ‘actions’ and ‘reactions’. ‘Actions’ refer to online communication about what consumers have bought and why (e.g. ‘I purchased the smartphone because of the outstanding camera performance’). ‘Reactions’, are online comments about how consumers feel about their

purchases (e.g. ‘I love the camera of my smartphone’). Moore also shows that reactions have a greater impact on attitudes toward hedonic products. Furthermore, positive affective content increases the volume of online reviews, but beyond a certain point, this effect decreases; however, this does not seem to apply to negative affective content (Ludwig et al. 2013).

Moore (2015) and Folse et al. (2016) are among the few scholars who treat the construct of attitudes as an outcome for product categories; most studies still focus on product sales or sales forecasts as an outcome. Table 1 provides an overview of the studies conducted on UGC, eWOM (or online WOM), online reviews, and online recommendations and the corresponding outcome variables.

Brand types and source of review as potential moderators in the context of online reviews

Prior research has mostly investigated the constructs of online communication (e.g., online reviews) discussed so far in terms of product categories and sales. A few exceptions address the concept of brands in the field of online communication. For example, Mafael et al. (2016) consider brand attitudes an independent variable that influences consumers’ reactions to online reviews. Ho-Dac et al. (2013) investigate brand strength (weak vs. strong) as a moderator that influences the relationship between online reviews and product sales. Liu et al. (2017) analyze brand-related tweets by choosing five industries (i.e., fast-food restaurants, department stores, footwear companies, consumer electronics products, and telecommunication carriers) and four brands in each industry to investigate industry-specific similarities and differences. Baker et al. (2016) investigate the influence of WOM conversations on purchase intentions for several brand categories, including automotive, beauty/personal care, beverages, children’s products, financial, food/dining, health care, home, household products, media/entertainment, retail/apparel, technology, telecom, and travel; however, these categories are basically product categories. To the best of our knowledge, no study has dealt with brand type, and thus our conceptual model integrates brand type (*functional, emotional, symbolic, and lifestyle*) as a moderator between the characteristics of online reviews and brand attitudes.

In addition, we introduce the source of a review as a moderator. According to previous research, content varies depending on the source with whom individuals are communicating (Huston and Houts 1998). Most studies within the online environment focus on the difference between reviews written by experts and those written by average consumers (e.g., Casalo et al. 2015; Folse et al. 2016) or the respective level of expertise (Chen and Xie 2008; Ludwig et al. 2013; Smith et al. 2005), neglecting the difference between strangers and acquaintances. However, research in the context of online

Table 1 Previous research related to user-generated content (UGC), electronic word of mouth, (eWOM or online WOM), online reviews, and recommendations

Authors / Scope of research	Independent variables	Outcomes
User-generated content (UGC)		
Goldenberg et al. (2012)	<ul style="list-style-type: none"> • Recommendations within UGC 	<ul style="list-style-type: none"> • Time spent with content provided on YouTube • Consumer satisfaction with content
Liu et al. (2017)	<ul style="list-style-type: none"> • Tweets about brands of a particular industry (fast-food restaurants, department stores, footwear companies, consumer electronics products, and telecommunication carriers) 	<ul style="list-style-type: none"> • Brand topics • Brand sentiments (positive, negative, neutral)
Ransbotham et al. (2012)	<ul style="list-style-type: none"> • Number of people contributing to a certain topic • Network embeddedness • Content age (time in days) • Relative topic popularity 	<ul style="list-style-type: none"> • Viewership on Wikipedia
Sun et al. (2017)	<ul style="list-style-type: none"> • Monetary rewards • Social connectedness (number of friends, as moderator) 	<ul style="list-style-type: none"> • UGC frequency (UGC operationalized as product reviews)
Tang et al. (2014)	<ul style="list-style-type: none"> • Mixed-neutral UGC (equal amount of positive and negative UGC content) • Indifferent-neutral UGC (neither positive nor negative UGC content) 	<ul style="list-style-type: none"> • Product sales
Tirunillai and Tellis (2012)	<ul style="list-style-type: none"> • Four metrics of UGC (UGC operationalized as online reviews) • Ratings (numerical assessment of products made by consumers) • Chatter (total number of reviews posted by consumers) • Valence (positive vs. negative) 	<ul style="list-style-type: none"> • Stock market performance
Electronic word of mouth (eWOM or online WOM)		
Baker et al. (2016)	<ul style="list-style-type: none"> • Valence (positive vs. negative) • Channel (offline vs. online) • Social tie strength (weak vs. strong) of WOM conversation about a brand 	<ul style="list-style-type: none"> • Purchase intentions • WOM retransmission intentions
Lam et al. (2009)	<ul style="list-style-type: none"> • Hofstede's cultural dimensions (individualism, masculinity, uncertainty avoidance, power distance) 	<ul style="list-style-type: none"> • eWOM engagement with an in-group and out-group
Rosario et al. (2016)	<ul style="list-style-type: none"> • eWOM metrics (volume, valence, variance) • Product characteristics (service vs. tangible good, hedonic vs. utilitarian, new vs. mature, as moderator) • Platform characteristics (social media, review websites, e-commerce, other platforms, as moderator) 	<ul style="list-style-type: none"> • Product sales
You et al. (2015)	<ul style="list-style-type: none"> • Product characteristics (durability, trialability, observability of consumption) • Industry characteristics (industry growth and competition) • Platform characteristics (expertise and trustworthiness of eWOM-hosted platform) • Firm-strategic actions (advertising, price, distribution) 	<ul style="list-style-type: none"> • eWOM volume and valence elasticities (linkage between eWOM and product sales)
Online reviews		
Chintagunta et al. (2010)	<ul style="list-style-type: none"> • Characteristics of online reviews • Valence • Volume • Variance 	<ul style="list-style-type: none"> • Movie box-office performance
Dellarocas et al. (2007)	<ul style="list-style-type: none"> • Marketing budget (advertising before release) • Star power (number of famous actors) • Release strategy (number of theaters) • Genre (Sci-Fi, Thriller, Children, Romance, Comedy, Action, Drama) • Professional critic reviews • User reviews (volume, variance, dispersion) • Box-office revenues 	<ul style="list-style-type: none"> • Sales forecasts for movies
Fan et al. (2017)	<ul style="list-style-type: none"> • Attributes of online reviews • Reviewer ID • Main content of review • Product rating by reviewer • Time reviewer conducted the review • Number of times users browsed the review • Number of users who agreed with the review • Number of users who were opposed to the review • Content of review 	<ul style="list-style-type: none"> • Product-sales forecasts
Floyd et al. (2014)	<ul style="list-style-type: none"> • Review valence (volume or valence of a review) 	<ul style="list-style-type: none"> • Elasticity of retail sales

Table 1 (continued)

Authors / Scope of research	Independent variables	Outcomes
Folse et al. (2016)	<ul style="list-style-type: none"> • Critics' reviews (experts vs. consumers) • Third-party reviews (third-party vs. seller websites) • Product benefits (important product or not) • Frequency of purchase (durable product or not) • Negative emotional content of online review • Reviewer rationality • Reviewer trustworthiness • Reviewer expertise (novice vs. expert, as a moderator) 	<ul style="list-style-type: none"> • Attitudes toward products • Review helpfulness
Ho-Dac et al. (2013)	<ul style="list-style-type: none"> • Online reviews (positive vs. negative) • Brand strength (weak vs. strong, as moderator) 	<ul style="list-style-type: none"> • Product sales
Kostyra et al. (2016)	<ul style="list-style-type: none"> • Interaction between the valence of online reviews and information form product attributes (brand, price, and technical attributes), moderated by volume and variance 	<ul style="list-style-type: none"> • Product choice
Mafael et al. (2016)	<ul style="list-style-type: none"> • Pre-existing brand attitudes • Review valence (positive vs. negative, as moderator) • Perceived persuasiveness of review (as mediator) 	<ul style="list-style-type: none"> • Consumer processing of online reviews / Behavioral intentions
Minnema et al. (2016)	Characteristics of online reviews <ul style="list-style-type: none"> • Valence (and interaction effects of price and previous product purchases on DVs) • Volume • Variance • Ratings (low, middle, high) 	<ul style="list-style-type: none"> • Product purchase probability • Probability of product returns
Moore (2015)	<ul style="list-style-type: none"> • Content of online reviews separated into actions ("I chose this product because...") and reactions ("I love this product because...") 	<ul style="list-style-type: none"> • Attitudes toward hedonic and utilitarian product categories
Zhang et al. (2013)	<ul style="list-style-type: none"> • Review ratings • Number of reviews • Camera price • Camera characteristics (optical zoom number, LCD display) 	<ul style="list-style-type: none"> • Camera sales
Zhu and Zhang (2010)	<ul style="list-style-type: none"> • Online reviews • Internet expertise (as moderator) • Product popularity (as moderator) 	<ul style="list-style-type: none"> • Product sales
Online recommendations		
Cascio et al. (2015)	<ul style="list-style-type: none"> • Recommendations of peer group • Capturing neural processes associated with making recommendations to others 	<ul style="list-style-type: none"> • Adjustment of recommendations
Koo (2015)	<ul style="list-style-type: none"> • Valence of recommendations (positive vs. negative) • Tie strength (strong vs. weak) • Service type (search vs. experience) 	<ul style="list-style-type: none"> • Attitudes toward the recommended service • Purchase intentions of the recommended service
Senecal and Nantel (2004)	<ul style="list-style-type: none"> • Online recommendations • Types of websites (as moderator) • Recommendation source (as moderator) • Product type (as moderator) 	<ul style="list-style-type: none"> • Product choices

reviews shows that the influence of negative reviews on attitudes depends on the source (Folse et al. 2016). Accordingly, in our conceptual model we differentiate between reviews written for and from strangers and reviews written for and from acquaintances.

Table 2 provides a summary of the findings in terms of valence, volume, variance, and content of online reviews as well as brand type and source of review. As the table indicates, mixed findings persist in terms of valence, volume, and variance but not the content of online reviews. Consequently, we do not consider content in the proposed conceptual model, as research provides sufficiently consistent findings on that

particular online review characteristic. Instead, our contribution aims to shed light on the mixed patterns of valence, volume, and variance and provide additional evidence in terms of brand types in combination with sources of review.

Conceptualization of brand attitudes as an outcome

Attitudes refer to the sum of evaluations of people, (psychological) objects, or issues (Ajzen and Fishbein 2000; Petty and Cacioppo 1986) and operate as an association between objects and the evaluation of those objects (Fazio et al. 1989). Attitudes consist of three dimensions:

Table 2 Findings on the valence, volume, variance, and content of online reviews, on brand types and source of review

Underexplored issues in the context of brand attitudes					
Consistent or mixed findings in the context of online reviews and product choices			Source of review		
Valence	Volume	Variance	Content	Brand type	
Conceptualization “Evaluative direction of the review, and can be positive, neutral or negative” (Purnawirawan et al. 2012, p. 245)	Number of online comments or ratings about a specific product or brand (Floyd et al. 2014)	Reviewers’ disagreement on a product or service, such that opinions vary from positive to negative statements (Minnema et al. 2016)	Reasons for purchasing a product, feelings toward a product, or figurative wording (Kronrod and Danziger 2013)	Companies can apply different brand types in their brand-positioning strategy, such as functional, emotional, symbolic, or lifestyle (e.g., Park et al. 1986)	Strangers versus small number of close friends (e.g., Relling et al. 2016)
Findings • Positive and negative valence influences product choices (e.g., Yoo et al. 2013)	• Volume has (no) significant influence on product choice (e.g., Chintagunta et al. 2010) • Possible approach: volume as a moderator of valence (Kostyra et al. 2016)	• Interaction between the volume (number of reviews) and variance of reviews (Moe and Schweidel 2012) • Possible explanation: variance operates as a moderator of valence (Kostyra et al. 2016)	• Consistent findings: emotional (rational) impact has a greater impact on attitudes toward hedonic (utilitarian) products (Moore 2015)	• Limited evidence on how online reviews and their characteristics influence attitudes toward different brand types • Instead, research focuses mostly on product choices (e.g., Godes and Mayzlin 2004)	• Greater self-disclosure in online environment than in offline settings (Choi et al. 2013), • Scant research on attitude formation

- The influence of the emotions related to the attitude object on the consumer (*affective component*);
- The assessment based on previous knowledge, beliefs, thoughts, and opinions about the advantages and disadvantages associated with the attitude object (*cognitive component*) (Ajzen 2001; Breckler and Wiggins 1989; Fishbein and Ajzen 1975; Millar and Tesser 1986); and
- A *behavioral (or conative) component*, reflecting the influence of attitudes on an individual’s behavior (Fishbein and Ajzen 1974, 1975).

Attitudes inform whether (psychological) objects or people are good or bad, complex or simple, and so forth, indicating an approach/avoidance function for individuals (Fazio 1986; Katz 1960). A wealth of research has investigated the conditions under which attitudes can lead to a certain behavior (e.g., Petty and Cacioppo 1986). For reasons of clarity, we exclude the behavioral component from the model; instead, we focus exclusively on affective and cognitive brand attitudes as a prerequisite for purchase intentions (Czellar 2003).

Brand attitude, or an individual’s internal evaluation of a branded product (Mitchell and Olson 1981), reflects the belief that using the brand will lead to some consequences, evaluated along a good/bad dimension (Lutz 1975). Brand attitudes comprise an affective and a cognitive component as well (Brown et al. 1998). The affective component refers to emotional associations with a brand (Boush and Loken 1991; Loken and John 1993), such as excitement or sadness (See et al. 2008). The cognitive component refers to brand awareness and the knowledge consumers have about brands (Duffett 2015), which might be product-related (functional and experiential) or non-product-related (symbolic and self-expressive) associations (Keller 1993). Cognitive brand attitudes also include beliefs, judgments, or thoughts about the attitude object (Drolet and Aaker 2002). Affective attitudes lead to more emotionally based decisions (emotional responses), while cognitive attitudes imply a more rational analysis of a decision-making situation (Schaller and Malhotra 2015). In general, attitudes influence brand consideration and, in turn, brand choice (Fazio and Petty 2007; Priester et al. 2004).

It is well established that affect and cognition have distinct influences on attitudes (Breckler and Wiggins 1989). Attitudes are more likely to be changed when the content of messages fits the structure of the attitude, meaning that emotional (rational) messages tend to trigger changes in the affective (cognitive) component (DeBono and Harnish 1988; Edwards 1990; Edwards and von Hippel 1995; Fabriger and Petty 1999; Petty and Wegener 1998). Within the consumption context, Moore (2015) illustrates that cognitive explanations in reviews influence attitudes toward utilitarian products while emotional explanations influence attitudes toward hedonic products. Langan et al. (2017) propose that negative

reviews will decrease purchase intentions for utilitarian products while positive reviews will increase purchase intentions for hedonic products. As hedonic (utilitarian) products are evaluated on a more emotional (rational) level, two propositions derive from the relationship between valence in online reviews and brand attitudes:

- P1: Consumers processing positive online reviews will develop stronger favorable affective brand attitudes than cognitive brand attitudes.
- P2: Consumers processing negative online reviews will develop stronger unfavorable cognitive brand attitudes than affective brand attitudes.

In order to process information, consumers can choose either a peripheral or a central route. Information processing on the peripheral route occurs when consumers are not highly involved and lack motivation. In this state, they rely on peripheral cues, such as the length of arguments, pictures, or music, and develop weak attitudes. By contrast, on the central route consumers consider the quality and content of arguments and develop strong attitudes (Cacioppo and Petty 1986). In online reviews, cues such as volume and variance might function as peripheral cues, while content might operate as a central cue in information processing. Consequently, consumers who read online reviews carefully develop stronger attitudes toward the brand to which the reviews refer. However, the motivation to process online reviews via the central route may decrease when the number of online reviews increases, to avoid information overload. Consequently, a high volume of online reviews may lead to weaker attitudes, as information processing occurs on the peripheral route.

- P3: Positive online reviews will significantly increase favorable affective brand attitudes when the volume of online reviews is low.
- P4: Negative online reviews will significantly decrease favorable cognitive brand attitudes when the volume of online reviews is low.

Consumers strive for consistency between their attitudes, beliefs, and behavior (Heider 1946). Inconsistent relationships between these aspects lead to cognitive dissonance, which consumers aim to avoid, as dissonance leads to a negative state of stress (Festinger 1957). As a high variance in online reviews indicates an inconsistency of opinions among consumers sharing reviews about a particular brand, consumers who process those reviews are likely to avoid this inconsistent information when developing their attitudes.

- P5: The effect of positive online reviews on favorable affective brand attitudes will be stronger when the variance among online reviews is low.

- P6: The effect of negative online reviews on favorable cognitive brand attitudes will be stronger when the variance among online reviews is low.

Conceptualization of brand types as a moderator

Brands can be positioned along a functional, emotional, symbolic, and lifestyle typology (e.g., Park et al. 1986). The benefits of functional brands come from product attributes (Orth and De Marchi 2007), product quality (Domzal and Kernan 1992), and problem solving (Park et al. 1986), and these brands tend to be evaluated on a highly rational–cognitive level (Strahilevitz and Meyers 1998). Online interactions about a particular functional brand include the exchange of information (Bagozzi and Dholakia 2002), topics on problem solving, and evaluation (Davis et al. 2014). Emotional brands help establish an emotional connection between the consumer and the brand (Roberts 2004; Thompson et al. 2006). Strong affective bonds are central to this branding strategy, in which emotional brands become part of consumers' life stories and memories. By focusing on attachment and affective bonds, these brands act as a strong link in consumers' social networks and virtual communities (Atkin 2004). Online interactions regarding emotional brands tend to be enjoyable and are based on experiences with the brand (Davis et al. 2014). Symbolic brands focus on non-product-related (vs. product-related) attributes, such as consumers' needs for social approval, personal expression, and self-image and the desire to show off their self-esteem (Orth and De Marchi 2007). Thus, such brands relate to consumers' self-concept (Solomon 1983) and social identification (Park et al. 1986) and, as such, overlap with lifestyle brands, which also work to establish and confirm consumers' self-concept and identity (Belk 1988; Fournier 1998). Consequently, consumers feel a need to support the principles or beliefs dominant in their lifestyles (Kleine et al. 1993). As Fournier (1998, p. 367) states, "Consumers do not choose brands, they choose lives." Note, however, that in most cases, a brand is not purely emotional or symbolic, but can offer a mixture of images (Park et al. 1986); for example, as Bhat and Reddy (1998) show, one product category (e.g., watches, hair cream) can be positioned as functional (watches: Timex; hair cream: Suave) or symbolic (watches: Rolex; hair cream: Paul Mitchell).

Both emotions and cognitions can change attitudes in decision-making processes (Chaiken and Trope 1999). Positive emotions signal that the consumer has enough information to make an appropriate judgment (*mood-as-input approach*) (e.g., Hirt et al. 1996) and perceives the situation in which the decision is to be made as safe (*affect-as-information approach*) (Bless 2000; Schwarz 1990). Negative emotions, however, are perceived as irrational

(Kim and Gupta 2012). Therefore, consumers tend to search for information that makes them feel good (Adaval 2001).

P7: For emotional brands, the influence of positive online reviews on favorable affective brand attitudes will be significantly stronger than the influence of negative online reviews.

By contrast, emotions have little effect on evaluations based on utilitarian criteria (Adaval 2001; Pham 1998). Consumers who make decisions on such criteria tend to focus on negative reviews (Sen and Lerman 2007). Thus, for predominantly functional brand types, we put forth the following proposition in terms of online review valence:

P8: For functional brands, the influence of negative online reviews on cognitive brand attitudes will be significantly stronger than the influence of positive online reviews.

Consumers also communicate their membership in social groups (Escalas and Bettman 2005; Wicklund and Gollwitzer 1981). People evaluate social groups according to their desirability, and in general, they seek to become associated with positively evaluated social groups to enhance their self-esteem (Tajfel et al. 1971; Tajfel and Turner 1985). Consequently, we predict that for lifestyle brands, positive reviews will outperform negative reviews, as consumers strive for social approval of their identity (Brewer 1991; Ryder et al. 2000), which may be expressed by certain brands more than others. Symbolic brands are also consumed to create a sense of self-identity (Belk 1988; Schau and Gilly 2003). Conceptually, these brands are embedded in the theory of social identity developed by Tajfel and Turner (1985), who argue that individuals evaluate the social groups to which they belong (in-groups) positively but perceive other social groups (out-groups) as less desirable. To demonstrate their affiliation to a certain in-group, individuals tend to wear or consume symbols that are in line with the characteristics of that group. The in-group offers a feeling of belonging, while distinction from the out-group gives a feeling of uniqueness (Jenkins 1996).

Moreover, consumers aspire to have a good and meaningful life, which generates specific goals. For products and especially brands, they also develop certain goals, which again shape the knowledge they have about a product or brand (Huffman and Houston 1993). In accordance with these goals, consumers choose brands that express a desired lifestyle (O'Shaughnessy 1987). Such lifestyle brands communicate consumers' social status, group membership (Braun and Wicklund 1989), and, in turn, identity (Berger and Heath 2007). The self-expressive function of lifestyle brands is related to conspicuous consumption, a term that describes the consumption of products mainly for the purpose of attaining or maintaining social status (Berger and Ward 2010).

Typically, conspicuous consumption involves brands that reflect income or wealth.

In both cases, consumers strive to fulfill their expressive needs. As symbolic and lifestyle brands reveal hidden aspects of self-identity (Dolich 1969), consumers develop strong personal relationships with such brands (Aaker et al. 2004). Therefore, we assume that a high emotional component is encoded in the relationship between symbolic/lifestyle brands and consumers. Consumers use those brands to reflect a certain in-group belonging, to distinguish themselves from out-groups, and to reflect a certain lifestyle, which in turn is also a reflection of group membership. Therefore, when consumers search for these brands, a low variance in reviews will likely have a positive effect on their attitudes, as consumers desire brands for which other consumers provide online reviews with a high opinion consistency. Especially when many consumers share this group opinion, this high volume is likely to strengthen the influence of positive online reviews on attitudes toward symbolic and lifestyle brands.

P9a: For symbolic and lifestyle brands, the influence of positive online reviews on affective brand attitudes will be significantly stronger than the influence of negative online reviews.

P9b: A low variance and a high volume of online reviews will enhance this effect.

Conceptualization of source of review (stranger vs. acquaintance) as a moderator

Consumers can share reviews about brands on a public forum with a large online audience of strangers (e.g., Amazon.com, Yelp). Alternatively, they can share reviews on a private online medium with a small number of close friends in social network brand communities (e.g., Facebook) (Bagozzi and Dholakia 2006; Belk 2013; Cascio et al. 2015; Eisingerich et al. 2015; Mandel 2003; Meuter et al. 2013; Relling et al. 2016; Simonson and Rosen 2014). Research knows little about the influence of online reviews on consumers' attitudes in terms of who has written them (i.e., friend or stranger). As most reviews are written by strangers, research understandably focuses on the perceived credibility of anonymous consumers. However, on a growing number of online communication platforms, consumers can share their opinions with people they know (Meuter et al. 2013). Therefore, we distinguish between online reviews adopted or shared in public with strangers (labeled *stranger*) and those adopted or shared in private with friends (labeled *acquaintance*) and predict that an individual's self-disclosure, defined as the "act of revealing personal information about oneself to another" (Collins and Miller 1994, p. 457), will differ as a function of the review source. Research on offline communication shows that people

consider emotions very personal (Hogg and Vaughan 2008; Simonson and Rosen 2014), and authentic expression comes through mutual knowing (Kiely 2005); friends share more laughter (Smoski and Bachorowski 2003), happiness (Kimura and Daibo 2008), and amusement (Bruder et al. 2012). In the presence of strangers, people feel inhibited in expressing their emotions (Buck et al. 1992) and keep some emotional distance (Hogg and Vaughan 2008; Huston and Houts 1998).

In the online environment, a different pattern occurs. People self-disclose more to out-group members than in-group members (Choi et al. 2013), unlike in offline communication. Brunet and Schmidt (2008) find that in online settings, individuals have a greater tendency to self-disclose in anonymous forums and are not inhibited in sharing sensitive information about their lives with strangers (Knoll and Bronstein 2013). Apparently, the lack of facial expressions and gestures in online communication leads to greater self-disclosure, as individuals must translate non-verbal information into written words (Nguyen et al. 2012). Consistent with the insights into online communication patterns, reviews shared with strangers will likely differ from reviews shared with acquaintances in terms of content, insofar as emotional content outpaces rational content. As emotional messages shape affective attitudes, we propose the following:

P10: When reviews are shared with strangers, the influence of positive online reviews on affective brand attitudes will be significantly stronger than the influence of negative online reviews.

Discussion

Theoretical contributions

We aim to extend the influence of the characteristics of online reviews (valence, volume, and variance) on brand attitudes and to develop theory-driven propositions. While research widely acknowledges the influence of these characteristics for product categories and sales (Floyd et al. 2014), it has largely neglected their influence on brand attitudes. Conceptualizing brand attitudes as a prerequisite for purchase intentions and behavior, the proposed model contributes to a better understanding of consumers' decision-making processes based on brand attitudes and others' opinions in the form of online reviews. We advance the literature in this area by first reviewing the different types of online communication (i.e., UGC, eWOM/online WOM, online reviews, and online recommendations) (Cascio et al. 2015; He and Bond 2015; Hennig-Thurau et al. 2004; Chevalier and Mayzlin 2006; Tang et al. 2014), as these have previously been used

interchangeably without clear boundaries. Thus, we offer an approach that shows that UGC is rather a broad term involving many aspects of online communication. These aspects range from online reviews to the more narrowly defined online recommendations. Therefore, our proposed model is based on online reviews to achieve a clear and distinctive development of the model.

As a second step, we incorporate the characteristics of online reviews, including valence, volume, and variance, in a conceptual model. Prior research has recognized the importance of these characteristics in the area of online reviews. Extensive research has explored how positive and negative online reviews (*valence*) (Ye et al. 2009), a high or low number of online reviews (*volume*) (Archak et al. 2011), and different opinions (*variance*) (Rosario et al. 2016) in online reviews influence product sales or purchase intentions. However, similar studies on how the characteristics of online reviews influence brand attitudes are lacking. Thus, the proposed model incorporates the relationship between the valence of online reviews and brand attitudes as an outcome. Volume and variance are conceptualized as moderators, which in turn weaken or strengthen the posited relationship between valence and attitudes.

Given that brands are valuable in terms of profits, revenues, and customer relationships (e.g., Keller 1993, 2016), it is important to have a clearer understanding of how the proposed characteristics of online reviews shape brand attitudes in the online environment. Consumers with positive attitudes toward a brand tend to become loyal and attached consumers, contributing to brand equity and, in turn, the financial performance of a company. The rise of the Internet has had a significant effect on brand attitudes, as consumers tend to trust what other consumers say in online reviews more than marketing messages of companies. As companies create brand types serving different consumer needs, it is essential to consider the particular brand types we study (i.e., *functional*, *emotional*, *symbolic*, and *lifestyle*; Park et al. 1986), as type influences the information-search behavior of consumers and what information they incorporate into their decision-making processes. As functional brands are evaluated on utilitarian criteria, negative reviews feature strongly. Emotional, symbolic, and lifestyle brands are evaluated on an emotional level, which leads to a preference for positive reviews. For symbolic and lifestyle brands, this effect occurs only when the variance of online reviews is low. Such brands are created to reflect a certain group belongingness and lifestyle for purchasers, and as a consequence, the in-group (other consumers with whom the consumer seeks association) needs to have a consistent positive opinion. A high variance indicates that too many different opinions exist, undermining any consistent group opinion.

Third, this paper identifies the source of review as a moderator critical for brand-attitude formation. Consumers can

share online reviews with strangers or acquaintances (*source of review*). To date, research has explored how communication with strangers versus acquaintances influences self-disclosure. Consumers appear to self-disclose more to strangers than acquaintances in the online environment (Choi et al. 2013), which in turn also influences the content they share about brands in online reviews. The tendency toward greater self-disclosure increases emotional content in online reviews shared with strangers. We presume that this, in turn, has a stronger impact on affective than cognitive attitudes.

Marketing consequences

For marketing managers, the conceptual model provides insights into the conditions under which the valence of online reviews might influence affective and cognitive brand attitudes, depending on (1) volume, (2) variance, (3) type of brand, and (4) source of reviews. Companies can position brands in various ways. Consumers considering functional brands aim to satisfy utilitarian needs. According to the model, negative valence in online reviews about predominantly functional brands will decrease cognitive attitudes, especially in combination with low volume and low variance. For emotional brands, positive reviews are beneficial, as affective attitudes are likely to increase. This effect becomes stronger when the variance of all reviews is low. Consequently, marketing managers should encourage consumers to write positive reviews with similar opinions for emotional brands. For functional brands, marketing managers should provide more reviews with a range of opinions to alleviate the influence of negative reviews on cognitive attitudes. For symbolic and lifestyle brands, marketing managers should provide reviews with consistently positive opinions to satisfy consumers' desire for group belongingness by purchasing a brand that is accepted among "significant" other consumers (perceived as in-group members). That most online reviews circulate among consumers who are strangers to each other is an additional benefit, as conversations with strangers increase the influence of positive reviews on affective brand attitudes. As a result, we encourage marketing managers dealing with emotional, symbolic, and lifestyle brands to consider, in their marketing strategy, online platforms on which consumers can share their opinions. Nonetheless, they should avoid focusing on so-called brand communities, in which consumers perceive other brand fans as acquaintances, as the impact of positive reviews on affective attitudes diminishes when online reviews are shared among consumers who know each other.

Future research and limitations

Though conceptual in nature, this paper aims to add new insights to the relationship between the characteristics of online reviews (*volume* and *variance* as moderators) and their effects

on brand attitude. To advance this work, further research could explore the propositions by applying an experimental approach that exposes groups to different experimental conditions by manipulating the corresponding variables. To test for valence, participants would be exposed to either positive or negative reviews. Volume is reflected in the number of reviews, meaning that some groups would read fewer and others more reviews. To ensure variance, participants would receive similar or dissimilar reviews. For content, reviews would differ according to actions, reactions, figurative language, and objective and subjective content. Last, the effect of strangers versus acquaintances should be captured. To become acquainted, participants could interact with other participants before the experiments take place. During the experiment, participants would exchange reviews with unknown review sources and those they have met before. In addition, participants would be informed that personal interaction will occur after the experiment. To measure brand attitudes, research could apply established scales (e.g., Voss et al. 2003). Each experimental group could be either compared with a control group or asked to indicate attitudes before and after the experimental condition. To assess potential changes in brand attitudes due to manipulation, previous brand attitudes would need to be measured or fictitious brands used.

From a theoretical perspective, our model tries to capture a comprehensive spectrum of important constructs. Nonetheless, several limitations offer potential avenues for future research. First, the model is limited to brand attitudes as an outcome and, for simplicity, ignores other factors contributing to brand equity, such as brand awareness, brand associations, brand attachment, and brand activity (Keller 2010). Nevertheless, the characteristics of online reviews might also have a bearing on these factors, as they are also part of brand equity and therefore influence online purchase intentions. Therefore, future research should consider the conditions under which brand awareness is increased (decreased), associations are strengthened (weakened), attachment becomes stronger (weaker), and brand activity is high (low) under the influence of online reviews. Furthermore, we suggest integrating the behavioral component as a consequence of certain brand attitudes to uncover when positive brand attitudes actually lead to online purchases.

Going beyond the developed conceptual model, future research might also investigate how the relationship between attitudes (or other dimensions of consumer-based brand equity) and the characteristics of online reviews varies depending on the perceived credibility (in terms of reviews shared with strangers or acquaintance) of online reviews or the level of expertise. Consumers who are experts in a specific domain differ in information-processing activities such as problem solving, reasoning, judgments, and recognition of presented information (e.g., Larkin et al. 1980) from novices. Thus, we consider consumer knowledge or expertise another potential

moderator offering fruitful insights into the postulated relationship between the main constructs, providing more space for consumer characteristics within the context of online reviews. Another variable in terms of the consumer is review participation. Online reviews can be actively written by consumers after or passively adopted during their purchase decision (Belk 2013). In both cases, consumers show different levels of investment (e.g., higher for consumers who actively share online reviews). Thus, attitude changes might be higher for such consumers than for those who only adopt reviews in their decision-making process. Existing knowledge about certain brands might be influential as well, in that attitudes for less-known brands might be affected more strongly by reviews than well-known brands, for which consumers have already developed strong brand associations (Keller 2010).

Finally, we excluded the different types of neutral online reviews for reasons of clarity. Therefore, we encourage researchers to extend our model by incorporating the two proposed types of neutral statements (mixed-neutral and indifferent-neutral; Tang et al. 2014) and develop hypotheses on their impact on brand attitudes.

References

- Aaker, D. A. (1996). *Building strong brands*. New York: The Free Press.
- Aaker, D., Fournier, S., & Brasel, S. A. (2004). When good brands do bad. *Journal of Consumer Research*, 31(1), 1–16.
- Adaval, R. (2001). Sometimes it just feels right: The differential weighting of affect-consistent and affect-inconsistent product information. *Journal of Consumer Research*, 28(1), 1–17.
- Aggarwal, R., Gopal, R., Gupta, A., & Singh, H. (2012). Putting money where the mouths are: The relation between venture financing and electronic word-of-mouth. *Information Systems Research*, 23(1), 976–992.
- Ahluwalia, R., & Shiv, B. (2002). How prevalent is the negative effect in consumer environments. *Journal of Consumer Research*, 29(2), 270–280.
- Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology*, 52(1), 27–58.
- Ajzen, I., & Fishbein, M. (2000). Attitudes and the attitude-behavior relation: Reasoned and automatic processes. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (pp. 1–33). Chichester: Wiley.
- Anderson, E., & Salisbury, L. (2003). The formation of market-level expectations and its covariates. *Journal of Consumer Research*, 30(1), 115–124.
- Archak, N., Ghose, A., & Ipeirotis, P. G. (2011). Deriving the pricing power of product features by mining consumer reviews. *Management Science*, 57(8), 1485–1509.
- Atkin, D. (2004). *The culting of brands: When customers become true believers*. New York: Portfolio.
- Bagozzi, R. P., & Dholakia, U. M. (2002). Intentional social action in virtual communities. *Journal of Interactive Marketing*, 16(2), 2–21.
- Bagozzi, R. P., & Dholakia, U. M. (2006). Antecedents and purchase consequences of customer participation in small group brand communities. *International Journal of Research in Marketing*, 23(1), 45–61.
- Baker, A. M., Donthu, N., & Kumar, V. (2016). Investigating how word-of-mouth conversations about brands influence purchase and re-transmission intentions. *Journal of Marketing Research*, 53(2), 225–239.
- Bambauer-Sachse, S., & Mangold, S. (2011). Brand equity dilution through negative online word-of-mouth communication. *Journal of Retailing and Consumer Services*, 18(1), 38–45.
- Belk, R. W. (1988). Possession and the extended self. *Journal of Consumer Research*, 15(2), 139–168.
- Belk, R. W. (2013). Extended self in a digital world. *Journal of Consumer Research*, 40(3), 477–500.
- Benkler, Y. (2006). *The wealth of networks: How social production transforms markets and freedom*. New Haven: Yale University Press.
- Berger, J., & Heath, C. (2007). Where consumers diverge from others: Identity signaling and product domains. *Journal of Consumer Research*, 34(2), 121–134.
- Berger, J., & Ward, M. K. (2010). Subtle signals of inconspicuous consumption. *Journal of Consumer Research*, 37(4), 555–569.
- Bhat, S., & Reddy, S. K. (1998). Symbolic and functional positioning of brands. *Journal of Consumer Marketing*, 15(1), 32–43.
- Bless, H. (2000). The interplay of affect and cognition: The mediating role of general knowledge structures. In J. P. Forgas (Ed.), *Feeling and thinking: The role of affect in social cognition*. Cambridge: Cambridge University Press.
- Boush, D. M., & Loken, B. (1991). A process-tracing study of brand extension evaluation. *Journal of Marketing Research*, 28(1), 16–28.
- Bowman, D., & Narayandas, D. (2001). Managing customer-initiated contacts with manufacturers: The impact of share of category requirements on word-of-mouth behavior. *Journal of Marketing Research*, 38(3), 281–297.
- Braun, O. L., & Wicklund, R. A. (1989). Psychological antecedents of conspicuous consumption. *Journal of Economic Psychology*, 10(2), 161–187.
- Breckler, S. J., & Wiggins, E. C. (1989). Affect versus evaluation in the structure of attitudes. *Journal of Experimental Social Psychology*, 25(3), 253–271.
- Brewer, M. B. (1991). The social self: On being the same and different at the same time. *Personality and Social Psychology Bulletin*, 17(5), 475–482.
- Brown, S. P., Homer, P. M., & Inman, J. J. (1998). A meta-analysis of relationships between ad-evoked feelings and advertising responses. *Journal of Marketing Research*, 35(1), 114–126.
- Bruder, M., Domsukhambetova, D., & Nerb, J. (2012). Emotional signals in nonverbal interaction: Dyadic facilitation and convergence in expressions, appraisals, and feelings. *Cognition and Emotion*, 26(3), 480–502.
- Brunet, P. M., & Schmidt, L. A. (2008). Are shy adults really bolder online? It depends on the context. *Cyberpsychology & Behavior*, 11(6), 707–709.
- Buck, R., Losow, J. I., Murphy, M. M., & Costanzo, P. (1992). Social facilitation and inhibition of emotional expression and communication. *Journal of Personality and Social Psychology*, 63(6), 962–968.
- Cacioppo, J. T., & Petty, R. E. (1986). *The elaboration likelihood model of persuasion*. New York: Springer.
- Cao, Q., Duan, W., & Gan, Q. (2011). Exploring determinants of voting for the ‘helpfulness’ of online user reviews: A text mining approach. *Decision Support Systems*, 50(2), 511–521.
- Casalo, L., Flavian, C., Guinaliu, M., & Ekinci, Y. (2015). Avoiding the dark side of positive online consumer reviews: Enhancing reviews’ usefulness for high risk-averse travelers. *Journal of Business Research*, 68(9), 1829–1835.
- Cascio, C., O’Donnell, M., Bayer, J., Tinney, F. J., & Falk, E. B. (2015). Neural correlates of susceptibility to group opinions in online word-of-mouth recommendations. *Journal of Marketing Research*, 52(4), 559–575.

- Chaiken, S., & Trope, Y. (1999). *Dual-process theories in social psychology*. New York: Guilford Press.
- Chakravarty, A., Liu, Y., & Mazumdar, T. (2010). The differential effects of online word-of-mouth and critics' reviews on pre-release movie evaluation. *Journal of Interactive Marketing*, 24(3), 185–197.
- Chang, H. H., & Wu, L. H. (2014). An examination of negative e-WOM adoption: Brand commitment as a moderator. *Decision Support Systems*, 59, 206–218.
- Chen, Z., & Lurie, N. H. (2013). Temporal contiguity and negativity bias in the impact of online word of mouth. *Journal of Marketing Research*, 50(4), 463–476.
- Chen, Y., & Xie, J. (2008). Online consumer review: Word-of-mouth as a new element of marketing communication mix. *Management Science*, 54(3), 477–491.
- Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. *Journal of Marketing Research*, 43(3), 345–354.
- Chintagunta, P. K., Gopinath, S., & Venkataraman, S. (2010). The effects of online user reviews on movie box office performance: Accounting for sequential rollout and aggregation across local markets. *Marketing Science*, 29(5), 944–957.
- Choi, Y. K., Yoon, S., & Lacey, H. P. (2013). Online game characters' influence on brand trust: Self-disclosure, group membership, and product type. *Journal of Business Research*, 66(8), 996–1003.
- Christodoulides, G., Michaelidou, N., & Argyriou, E. (2012). Cross-national differences in e-WOM influence. *European Journal of Marketing*, 46(11/12), 1689–1707.
- Collins, N. L., & Miller, L. C. (1994). Self-disclosure and liking: A meta-analytic review. *Psychological Bulletin*, 116(3), 457–475.
- Cui, G., Lui, H. K., & Guo, X. (2012). The effect of online consumer reviews on new product sales. *International Journal of Electronic Commerce*, 17(1), 39–58.
- Czellar, S. (2003). Consumer attitude toward brand extensions: An integrative model and research propositions. *International Journal of Research in Marketing*, 20(1), 97–115.
- Davis, R., Piven, I., & Breazeale, M. (2014). Conceptualizing the brand in social media community: The five sources model. *Journal of Retailing and Consumer Services*, 21(4), 468–481.
- DeBono, K., & Hamish, R. (1988). Source expertise, source attractiveness, and the processing of persuasive information: A functional approach. *Journal of Personality and Social Psychology*, 55(4), 541–546.
- Dellarocas, C., Zhang, X. M., & Awad, N. F. (2007). Exploring the value of online product reviews in forecasting sales: The case of motion pictures. *Journal of Interactive Marketing*, 21(4), 23–45.
- Dolich, I. J. (1969). Congruence relationships between self images and product brands. *Journal of Marketing Research*, 6(1), 80–84.
- Domzal, T. J., & Kernan, J.-B. (1992). Reading advertising: The what and how of product meaning. *Journal of Consumer Marketing*, 9(3), 48–64.
- Drolet, A., & Aaker, J. (2002). Off-target? Changing cognitive-based attitudes. *Journal of Consumer Psychology*, 12(1), 59–68.
- Duffett, R. G. (2015). The influence of Facebook advertising on cognitive attitudes amid generation Y. *Electronic Commerce Research*, 15(2), 243–267.
- East, R., Hammond, K., & Lomax, W. (2008). Measuring the impact of positive and negative word of mouth on brand purchase probability. *International Journal of Research in Marketing*, 25(3), 215–224.
- Edwards, K. (1990). The interplay of affect and cognition in attitude formation and change. *Journal of Personality and Social Psychology*, 59(2), 202–216.
- Edwards, K., & von Hippel, W. (1995). Hearts and minds: The priority of affective versus cognitive factors in person perception. *Personality and Social Psychology Bulletin*, 21(10), 996–1011.
- Eisingerich, A. B., Chun, H. H., Liu, Y., Jia, H., & Bell, S. J. (2015). Why recommend a brand face-to-face but not on Facebook? How word-of-mouth on online social sites differs from traditional word of mouth. *Journal of Consumer Psychology*, 25(1), 120–128.
- Escalas, J. E., & Bettman, J. R. (2005). Self-construal, reference groups, and brand meaning. *Journal of Consumer Research*, 32(3), 378–389.
- Fabriger, L. R., & Petty, R. E. (1999). The role of affective and cognitive bases of attitudes in susceptibility to affectively and cognitively based persuasion. *Personality and Social Psychology Bulletin*, 25(3), 363–381.
- Fan, Z.-P., Che, Y.-J., & Chen, Z.-Y. (2017). Product sales forecasting using online reviews and historical sales data: A method combining the bass model and sentiment analysis. *Journal of Business Research*, 74, 90–100.
- Fazio, R. H. (1986). How do attitudes guide behavior? In R. M. Sorrentino & E. T. Higgins (Eds.), *The handbook of motivation and cognition: Foundations of social behavior* (pp. 204–243). New York: Guilford Press.
- Fazio, R. H., & Petty, R. E. (2007). *Attitudes: Their structure, function, and consequences*. New York: Psychology Press.
- Fazio, R. H., Powell, M. C., & Williams, C. J. (1989). The role of attitude accessibility in the attitude-to-behavior process. *Journal of Consumer Research*, 16(3), 280–288.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Fishbein, M., & Ajzen, I. (1974). Attitudes toward objects as predictors of single and multiple behavior criteria. *Psychological Review*, 81(1), 59–74.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research reading*. Boston: Addison-Wesley.
- Fishbein, M., & Ajzen, I. (1981). Acceptance, yielding, and impact: Cognitive processes in persuasion. In R. E. Petty, T. M. Ostrom, & T. C. Brock TC (Eds.), *Cognitive responses in persuasion*. Hillsdale: Lawrence Erlbaum.
- Floyd, K., Freling, R., Alhoqail, S., Cho, H., & Freling, T. (2014). How online product reviews affect retail sales: A meta-analysis. *Journal of Retailing*, 90(2), 217–232.
- Folse, J. A., Porter, M. D., Godbole, M. B., & Reynolds, K. E. (2016). The effects of negatively valenced emotional expressions in online reviews on the reviewer, the review, and the product. *Psychology and Marketing*, 33(9), 747–760.
- Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of Consumer Research*, 24(4), 343–373.
- Gensler, S., Völckner, F., Egger, M., Fischbach, K., & Schoder, D. (2016). Listen to your customers: Insights into brand image using online consumer-generated product reviews. *International Journal of Electronic Commerce*, 20(1), 112–141.
- Godes, D., & Mayzlin, D. (2004). Using online conversations to study word of mouth communication. *Marketing Science*, 23(4), 545–560.
- Goldenberg, J., Oestreicher-Singer, G., & Reichman, S. (2012). The quest for content: How user-generated links can facilitate online exploration. *Journal of Marketing Research*, 49(4), 452–468.
- Gruen, T. W., Osmonbekov, T., & Czapslewski, A. J. (2006). eWOM: The impact of customer-to-customer online know-how exchange on customer value and loyalty. *Journal of Business Research*, 59(4), 449–456.
- Gupta, P., & Harris, J. (2010). How e-WOM recommendations influence product consideration and quality of choice: A motivation to process information perspective. *Journal of Business Research*, 63(9), 1041–1049.
- He, S., & Bond, S. (2015). Why is the crowd divided? Attribution for dispersion in online word of mouth. *Journal of Consumer Research*, 41(6), 1509–1527.
- Heider, F. (1946). Attitudes and cognitive organization. *Journal of Psychology*, 21(1), 107–112.

- Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: What motivates consumers to articulate themselves on the internet? *Journal of Interactive Marketing*, 18(1), 38–52.
- Herr, P. M., Kardes, F. R., & Kim, J. (1991). Effects of word-of-mouth and product-attribute information on persuasion: An accessibility-diagnostics perspective source. *Journal of Consumer Research*, 17(4), 454–462.
- Hirt, E. R., Melton, R. J., McDonald, H. E., & Harackiewicz, J. W. (1996). Processing goals, task interest, and mood-performance relationship: A mediational analysis. *Journal of Personality and Social Psychology*, 71(2), 245–261.
- Ho-Dac, N. N., Carson, S. J., & Moore, W. L. (2013). The effects of positive and negative online customer reviews: Do brand strength and category maturity matter? *Journal of Marketing*, 77(6), 37–53.
- Hogg, M. A., & Vaughan, G. M. (2008). *Social psychology*. Essex: Pearson.
- Hong, I. B., & Cha, H. S. (2013). The mediating role of consumer trust in an online merchant in predicting purchase intention. *International Journal of Information Management*, 33(6), 927–939.
- Huffman, C., & Houston, M. J. (1993). Goal-oriented experiences and the development of knowledge. *Journal of Consumer Research*, 20(2), 190–207.
- Huston, T. L., & Houts, R. (1998). The psychological infrastructure of courtship and marriage: The role of personality and compatibility in romantic relationships. In T. Bradbury (Ed.), *The developmental course of marital dysfunction* (pp. 114–151). New York: Cambridge University Press.
- Jenkins, R. (1996). *Social identity*. London: Routledge.
- Jimenez, F. R., & Mendoza, N. A. (2013). Too popular to ignore: The influence of online reviews on purchase intentions of search and experience products. *Journal of Interactive Marketing*, 27(3), 226–235.
- Katz, D. (1960). The functional approach to the study of attitudes. *Public Opinion Quarterly*, 24(2), 163–204.
- Keller, K. L. (1993). Conceptualizing, measuring and managing customer-based brand equity. *Journal of Marketing*, 57(1), 1–22.
- Keller, K. L. (2010). Brand equity management in a multichannel, multimedia retail environment. *Journal of Interactive Marketing*, 24(2), 58–70.
- Keller, K. L. (2016). Reflections on customer-based brand equity: Perspectives, progress, and priorities. *AMS Review*, 6(1/2), 1–16.
- Khare, A., Labrecque, L. L., & Asare, A. K. (2011). The assimilative and contrastive effects of word-of-mouth volume: An experimental examination of online consumer ratings. *Journal of Retailing*, 87(1), 111–126.
- Kiely, J. A. (2005). Emotions in business-to-business service relationships. *Service Industries Journal*, 25(3), 373–390.
- Kim, J., & Gupta, P. (2012). Emotional expressions in online user reviews: How they influence consumers' product evaluations. *Journal of Business Research*, 65(7), 985–992.
- Kim, J., Naylor, G., Sivadas, E., & Sugamaram, V. (2015). The unrealized value of incentivized eWOM recommendations. *Marketing Letters*, 27(3), 411–421.
- Kimura, M., & Daibo, I. (2008). The study of emotional contagion from the perspective of interpersonal relationships. *Social Behavior and Personality*, 36(1), 27–42.
- Kleine, R., Kleine, S. S., & Kernan, J. B. (1993). Mundane consumption and the self. *Journal of Consumer Psychology*, 2(3), 209–235.
- Knoll, M., & Bronstein, J. (2013). An examination of the information disclosure behavior of infertility bloggers: Patterns of self-disclosure and anonymity. *Journal of Information Management*, 66(2), 175–201.
- Koo, D.-M. (2015). The strength of no tie relationship in an online recommendation: Focused on interactional effects of valence, tie strength, and type of service. *European Journal of Marketing*, 49(7/8), 1163–1183.
- Kostyra, D. S., Reiner, J., Natter, M., & Klapper, D. (2016). Decomposing the effects of online customer reviews on brand, price, and product attributes. *International Journal of Research in Marketing*, 33(1), 11–26.
- Kronrod, A., & Danziger, S. (2013). “Wii will rock you!” the use and effect of figurative language in consumer reviews of hedonic and utilitarian consumption. *Journal of Consumer Research*, 40(4), 726–739.
- Lam, D., Lee, A., & Mizerski, R. (2009). The effects of cultural values in word-of-mouth communication. *Journal of International Marketing*, 17(3), 55–70.
- Langan, R., Besharat, A., & Varki, S. (2017). The effect of review valence and variance on product evaluations: An examination of intrinsic and extrinsic cues. *International Journal of Research in Marketing*, 34(2), 414–429.
- Larkin, J. H., McDermott, J., Simon, D. P., & Simon, H. A. (1980). Expert and novice performance in solving physics problems. *Science*, 208, 1335–1342.
- Lee, K. T., & Koo, D.-M. (2012). Effects of attribute and valence of e-WOM on message adoption: Moderating roles of subjective knowledge and regulatory focus. *Computers in Human Behavior*, 28(5), 1974–1984.
- Li, M., Haung, L., Tan, C.-H., & Wei, K.-K. (2013). Helpfulness of online product reviews as seen by consumers: Source and content features. *International Journal of Electronic Commerce*, 17(4), 101–136.
- Liu, Y. (2006). Word of mouth for movies: Its dynamics and impact on box office revenue. *Journal of Marketing*, 70(3), 74–89.
- Liu, T. C., Wang, C. Y., & Wu, L. W. (2010). Moderators of the negativity effect: Commitment, identification, and consumer sensitivity to corporate social performance. *Psychology and Marketing*, 27(1), 54–70.
- Liu, X., Burns, A. C., & Hou, Y. (2017). An investigation of brand-related user-generated content on twitter. *Journal of Advertising*, 46(2), 236–247.
- Loken, B., & John, D. R. (1993). Diluting brand beliefs: When do brand extensions have a negative impact? *Journal of Marketing*, 57(3), 71–84.
- Ludwig, S., Ruyter, K., Friedman, M., Brueggen, E. C., Wetzels, M., & Pfann, G. (2013). More than words: The influence of affective content and linguistic style matches in online reviews on conversion rates. *Journal of Marketing*, 77(1), 87–103.
- Lutz, R. (1975). Changing brand attitudes through modification of cognitive structure. *Journal of Consumer Research*, 1(4), 49–59.
- Mafael, A., Gottschalk, S. A., & Kreis, H. (2016). Examining biased assimilation of brand-related online reviews. *Journal of Interactive Marketing*, 36, 91–106.
- Maheswaran, D., & Meyers-Levy, J. (1990). The influence of message framing and issue involvement. *Journal of Marketing Research*, 27(3), 361–367.
- Mandel, N. (2003). Shifting selves and decision making: The effects of self-construal priming on consumer risk-taking. *Journal of Consumer Research*, 30(1), 30–40.
- Mayzlin, D. (2006). Promotional chat on the internet. *Marketing Science*, 25(2), 155–163.
- Meuter, M. L., McCabe, D. B., & Curran, J. M. (2013). Electronic word-of-mouth versus interpersonal word-of-mouth. Are all forms of word-of-mouth equally influential? *Services Marketing Quarterly*, 34(3), 240–256.
- Millar, M. G., & Tesser, A. (1986). Effects of affective and cognitive focus on the attitude-behavior relation. *Journal of Personality and Social Psychology*, 51(2), 270–276.
- Minnema, A., Bijmolt, T. H. A., Gensler, S., & Wiesel, T. (2016). To keep or not to keep: Effects of online customer reviews on product returns. *Journal of Retailing*, 92(3), 253–267.

- Mishra, A., & Satish, S. M. (2016). eWOM: Extant research review and future research avenues. *Journal for Decision Makers*, 41(3), 222–233.
- Mitchell, A. A., & Olson, J. C. (1981). Are product attribute beliefs the only mediator of advertising effects on brand attitude? *Journal of Marketing Research*, 18(3), 318–332.
- Moe, W. W., & Schweidel, D. A. (2012). Online product opinions: Incidence, evaluation, and evolution. *Marketing Science*, 31(3), 372–386.
- Moore, S. G. (2012). Some things are better left unsaid: How word of mouth influences the storyteller. *Journal of Consumer Research*, 38(6), 1140–1154.
- Moore, S. G. (2015). Attitude predictability and helpfulness in online reviews: The role of explained actions and reactions. *Journal of Consumer Research*, 42(1), 30–44.
- Mudambi, S. M., & Schuff, D. (2010). What makes a helpful online review? A study of customer reviews on Amazon.com. *MIS Quarterly*, 34(1), 185–200.
- Neelamegham, R., & Chintagunta, P. (1999). A Bayesian model to forecast new product performance in domestic and international markets. *Marketing Science*, 18(2), 115–136.
- Nguyen, M., Bin, Y. S., & Campbell, A. (2012). Comparing online and offline self-disclosure: A systematic review. *Cyberpsychology, Behavior, and Social Networks*, 15(2), 103–111.
- Orth, U. R., & De Marchi, R. (2007). Understanding the relationships between functional, symbolic, and experiential brand beliefs, product experiential attributes, and product schema: Advertising-trial interactions revisited. *Journal of Marketing Theory and Practice*, 15(3), 219–233.
- O'Shaughnessy, J. (1987). *Why people buy*. New York: Oxford University Press.
- Park, C., & Lee, T. M. (2009). Information direction, web site reputation and e-WOM effect: A moderating role of product type. *Journal of Business Research*, 62(1), 61–67.
- Park, C. W., Jaworski, B. J., & MacInnis, D. J. (1986). Strategic brand concept-image management. *Journal of Marketing*, 50(4), 135–145.
- Park, C. W., MacInnis, D. J., Priester, J., Eisingerich, A. B., & Iacobucci, D. (2010). Brand attachment and brand attitude strength: Conceptual and empirical differentiation of two critical brand equity drivers. *Journal of Marketing*, 74(6), 1–17.
- Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 123–205). New York: Academic Press.
- Petty, R. E., & Wegener, D. T. (1998). Matching versus mismatching attitude functions: Implications for scrutiny of persuasive messages. *Personality and Social Psychology Bulletin*, 24(3), 227–240.
- Pham, M. T. (1998). Representativeness, relevance, and the use of feelings in decision making. *Journal of Consumer Research*, 25(2), 144–160.
- Priester, J. R., Nayakankuppam, D., Fleming, M. A., & Godek, J. (2004). The A2SC2 model: The influence of attitudes and attitude strength on consideration and choice. *Journal of Consumer Research*, 30(4), 574–587.
- Purnawirawan, N., Pelsmacker, P., & Dens, N. (2012). Balance and sequence in online reviews: How perceived usefulness affects attitudes and intentions. *Journal of Interactive Marketing*, 26(4), 244–255.
- Purnawirawan, N., Eisend, M., De Pelsmacker, P., & Dens, N. (2015). A meta-analytic investigation of the role of valence in online reviews. *Journal of Interactive Marketing*, 31, 17–27.
- Ransbotham, S., Kane, G. C., & Lurie, N. H. (2012). Network characteristics and the value of collaborative user-generated content. *Marketing Science*, 31(3), 387–405.
- Relling, M., Schnittka, O., Sattler, H., & Johnen, M. (2016). Each can help or hurt: Negative and positive word of mouth in social network brand communities. *International Journal of Research in Marketing*, 33(1), 42–58.
- Roberts, K. (2004). *Lovemarks: The future beyond brands*. New York: Powerhouse Books.
- Rosario, A., Sotgiu, F., De Valck, K., & Bijmolt, T. H. A. (2016). The effect of electronic word of mouth on sales: A meta-analytic review of platform, product, and metric factors. *Journal of Marketing*, 53(3), 297–318.
- Rozin, P., & Royzman, E. B. (2001). Negativity bias, negativity dominance, and contagion. *Personality and Social Psychology Review*, 5(4), 296–320.
- Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of Personality and Social Psychology*, 79(1), 49–65.
- Salganik, M. J., & Watts, D. J. (2008). Leading the herd astray: An experimental study of self-fulfilling prophecies in an artificial cultural market. *Social Psychology Quarterly*, 71(4), 338–355.
- Schaller, T. K., & Malhotra, N. K. (2015). Affective and cognitive components of attitudes in high-stakes decisions: An application of the theory of planned behavior to hormone replacement therapy use. *Psychology and Marketing*, 32(6), 678–695.
- Schau, H. J., & Gilly, M. C. (2003). We are what we post? Self-presentation in personal web space. *Journal of Consumer Research*, 30(3), 385–404.
- Schindler, R. M., & Bickart, B. (2005). Published word of mouth: Referable, consumer-generated information on the internet. In C. P. Haugtvedt & K. A. Machleit (Eds.), *Online consumer psychology: Understanding and influencing consumer behavior in the virtual world* (pp. 32–58). Mahwah: Lawrence Erlbaum.
- Schindler, R. M., & Bickart, B. (2012). Perceived helpfulness of online consumer reviews: The role of message content and style. *Journal of Consumer Behavior*, 11(3), 234–243.
- Schlosser, A. E. (2009). The effect of computer-mediated communication on conformity vs. nonconformity: An impression management perspective. *Journal of Consumer Psychology*, 19(3), 374–388.
- Schwarz, N. (1990). Feelings as information: Information and motivational function of affective states. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition* (pp. 527–561). New York: Guilford.
- See, Y., Petty, R. E., & Fabriger, L. R. (2008). Affective and cognitive meta-bases of attitudes: Unique effects on information interest and persuasion. *Journal of Personality and Social Psychology*, 94(6), 938–955.
- Sen, S., & Lerman, D. (2007). Why are you telling me this? An examination into negative consumer reviews on the web. *Journal of Interactive Marketing*, 21(4), 76–94.
- Senecal, S., & Nantel, J. (2004). The influence of online product recommendations on consumers' online choices. *Journal of Retailing*, 80(2), 159–169.
- Simonson, I., & Rosen, E. (2014). *Absolute value: What really influences customers in the age of (nearly) perfect information*. New York: Harper.
- Skowronski, J. J., & Carlston, D. E. (1989). Negativity and extremity biases in impression formation: A review of explanations. *Psychological Bulletin*, 105(1), 131–142.
- Smith, D., Menon, S., & Sivakumar, K. (2005). Online peer and editorial recommendations, trust, and choice in virtual markets. *Journal of Interactive Marketing*, 19(3), 15–37.
- Smoski, M. J., & Bachorowski, J. (2003). Antiphonal laughter between friends and strangers. *Cognition and Emotion*, 17(2), 327–340.
- Solomon, M. R. (1983). The role of products as social stimuli: A symbolic interactionism perspective. *Journal of Consumer Research*, 10(3), 319–329.
- Strahilevitz, M., & Meyers, J. G. (1998). Donations to charity as purchase incentives: How well they work may depend on what you are trying to sell. *Journal of Consumer Research*, 24(4), 434–446.

- Sun, Y., Dong, X., & McIntyre, S. (2017). Motivation of user-generated content: Social connectedness moderates the effects of monetary rewards. *Marketing Science*, 36(3), 329–337.
- Tajfel, H., & Turner, J. C. (1985). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Chicago: Nelson-Hall.
- Tajfel, H., Billig, M., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behavior. *European Journal of Social Psychology*, 1(2), 149–178.
- Tang, T., Fang, E., & Wang, F. (2014). Is neutral really neutral? The effects of neutral user-generated content on product sales. *Journal of Marketing*, 78(4), 41–58.
- Thompson, C. J., Rindfleisch, A., & Arsel, Z. (2006). Emotional branding and the strategic value of the doppelgänger brand image. *Journal of Marketing*, 70(1), 50–64.
- Tirunillai, S., & Tellis, G. J. (2012). Does chatter really matter? Dynamics of user-generated content and stock performance. *Marketing Science*, 31(2), 198–215.
- Voss, K. E., Spangenberg, E. R., & Grohmann, B. (2003). Measuring the hedonic and utilitarian dimensions of consumer attitude. *Journal of Marketing Research*, 40(3), 310–320.
- Wang, F., Liu, X., & Fang, E. (2015). User reviews variance, critic reviews variance, and product sales: An exploration of customer breadth and depth effects. *Journal of Retailing*, 91(3), 372–389.
- Wicklund, R. A., & Gollwitzer, P. M. (1981). *Symbolic self-completion*. Hillsdale: Lawrence Erlbaum.
- Ye, Q., Law, R., & Gu, B. (2009). The impact of online user reviews on hotel room sales. *International Journal of Hospitality Management*, 28(1), 180–182.
- Yin, D., Bond, S., & Zhang, H. (2014). Anxious or angry? Effects of discrete emotions on the perceived helpfulness of online reviews. *MIS Quarterly*, 38(2), 539–560.
- Ying, Y., Feinberg, F., & Wedel, M. (2006). Leveraging missing ratings to improve online recommendation systems. *Journal of Marketing Research*, 43(3), 355–365.
- Yoo, C. W., Sanders, G. L., & Moon, J. (2013). Exploring the effect of e-WOM participation on e-loyalty in e-commerce. *Decision Support Systems*, 55(3), 669–678.
- You, Y., Vadakkepatt, G. G., & Joshi, A. M. (2015). A meta-analysis of electronic word-of-mouth elasticity. *Journal of Marketing*, 79(2), 19–39.
- Zhang, L., Ma, B., & Cartwright, D. K. (2013). The impact of online user reviews on cameras sales. *European Journal of Marketing*, 47(7), 1115–1128.
- Zhu, F., & Zhang, X. (2010). Impact of online consumer reviews on sales: The moderating role of product and consumer characteristics. *Journal of Marketing*, 74(2), 133–148.