



# The Impact of New Media on Customer Relationships

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## Abstract

Recent years have witnessed the rise of new media channels such as Facebook, YouTube, Google, and Twitter, which enable customers to take a more active role as market players and reach (and be reached by) almost everyone anywhere and anytime. These new media threaten long established business models and corporate strategies, but also provide ample opportunities for growth through new adaptive strategies. This paper introduces a new “pinball” framework of new media’s impact on relationships with customers and identifies key new media phenomena which companies should take into account when managing their relationships with customers in the new media universe. For each phenomenon, we identify challenges for researchers and managers which relate to (a) the understanding of consumer behavior, (b) the use of new media to successfully manage customer interactions, and (c) the effective measurement of customers’ activities and outcomes.

## Keywords

new media, customer relationships, electronic word-of-mouth, online communities, recommendation systems, mobile technologies

The internet with Twitter, Facebook, YouTube or MySpace, but also mobile phones have completely changed how we perceive and understand our environment.

Michael Lynton, 2009, CEO & Chairman, Sony Pictures Entertainment<sup>1</sup>

## Introduction

The ways consumers communicate with each other have been changing dramatically over the last decade, and the same is true for how consumers gather and exchange information about products and how they obtain and consume them. The rise of a plethora of new media has provided consumers with extensive options for actively providing information on services and products: “The digital innovations of the last decade made it effortless, indeed second nature, for audiences to talk back and talk to each other” (Deighton and Kornfeld 2009, p. 4). New media have also empowered them to promote and distribute their own offers – consumers today serve as retailers on eBay, media producer-directors on YouTube, authors on Wikipedia, and critical reviewers on Amazon and Tripadvisor; they do all of this and more on Facebook and MySpace. And they no longer require their computer to do so – through high-tech mobile phones, portable computers and portals such as Twitter, real-time information exchange has become an integral element

of consumer behavior anywhere and anytime. User-generated content has become a mass phenomenon, with Facebook, MySpace, YouTube, Wikipedia, and Twitter all being listed among the Top 15 websites, accounting for more than 11 percent of global internet traffic, as of April 2010 (Alexa 2010).

This development threatens established business models. Printed newspapers and magazines are facing a major crisis (Edgecliffe-Johnson 2008), as consumers move from print to digital media, and piracy and digital channels have severely hurt the music industry (Financial Times 2009). Media analysts have noticed a decline of TV advertising effectiveness (Maddox 2008), resulting from new digital options for viewing TV content (e.g., digital video recorders, online portals). Critical websites (e.g., untied.com for United Airlines) and brand spoofs

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<sup>1</sup>Lynton (2009).

watched by millions via YouTube (Elberse 2009) challenge the building of brands.

At the same time, the rise of new media also creates extensive opportunities for new business models. In the new media universe of user-generated content, brands still play a pivotal role – consumers share their enthusiasm about their favorite brand via Twitter, YouTube, and Facebook. Some of them even help other consumers solve product-related problems for free, which reduces service costs and increases quality (Mathwick, Wiertz, and De Ruyter 2008). New media offers companies multifarious ways to reach consumers, communicate with them, and measure their communication, browsing or purchase-related behaviors. These options are valuable for marketing in general, but should be of particular relevance for customer relationship management, which employs knowledge on individual customers for crafting individualized marketing activities.

Making use of the opportunities provided by new media (and avoiding its dangers) requires a thorough understanding of why consumers are attracted to these new media and how they influence consumers' affect and behavior. New strategic and tactical marketing approaches must be developed, which are in line with the characteristics of new media and their effects on customers. This article summarizes the major challenges that new media bring for managing customer relationships – we argue that marketing in the era of new media resembles the art of “pinball playing” and illustrate this in a conceptual framework. We identify ten key new media phenomena affecting marketing instruments and discuss how each phenomenon affects (a) consumer behavior, (b) the successful management of customer interactions, and (c) measuring customers' activities and relationship outcomes, highlighting areas for future research.

## What is New Media?

New media are websites and other digital communication and information channels in which active consumers engage in behaviors that can be consumed by others both in real time and long afterwards regardless of their spatial location. We now discuss the defining characteristics of new media.

### Digital

The digital character of new media implies that there are virtually no marginal costs for producing extra copies of digital products and that individuals can easily distribute their creations to a global audience without having to pass through traditional “gate keepers” such as publishers. Anybody with an internet connection can blog, write reviews, report on news events both big and small, or share a song, video or even novel with the world.

### Pro-active

Consumers use new media to contribute to all parts of the value chain, ranging from superficial articulation (reviews on retail or fan sites) to extensive co-creation (testing new “beta”

products and reporting flaws to the company, or even collectively developing open-source products such as the Firefox browser; Hoyer et al. 2010; Krishnamurthy 2009).

### Visible

Consumers' new media activities can be seen by others. Entries made by a consumer in forums, blogs, and social communities can be tracked by other consumers as well as companies. Mobile services use information on consumers' spatial position as reported by GPS, 3G, and IP addresses for generating location-sensitive messages, offers, and market differentiation (e.g., different offers and prices for film downloads).

### Real-time and memory

New media can be accessed by consumers at the time they are produced, allowing consumers to share experiences in real-time with Twitter, chats, and blogs. Such comments and reviews are often also available indefinitely, so that potential customers may be reading about negative (and positive) customer experiences for years into the future (e.g., the 2001 Houston Doubletree incident; Snopes 2006). Memory is also crucial for personalizing future interactions.

### Ubiquitous

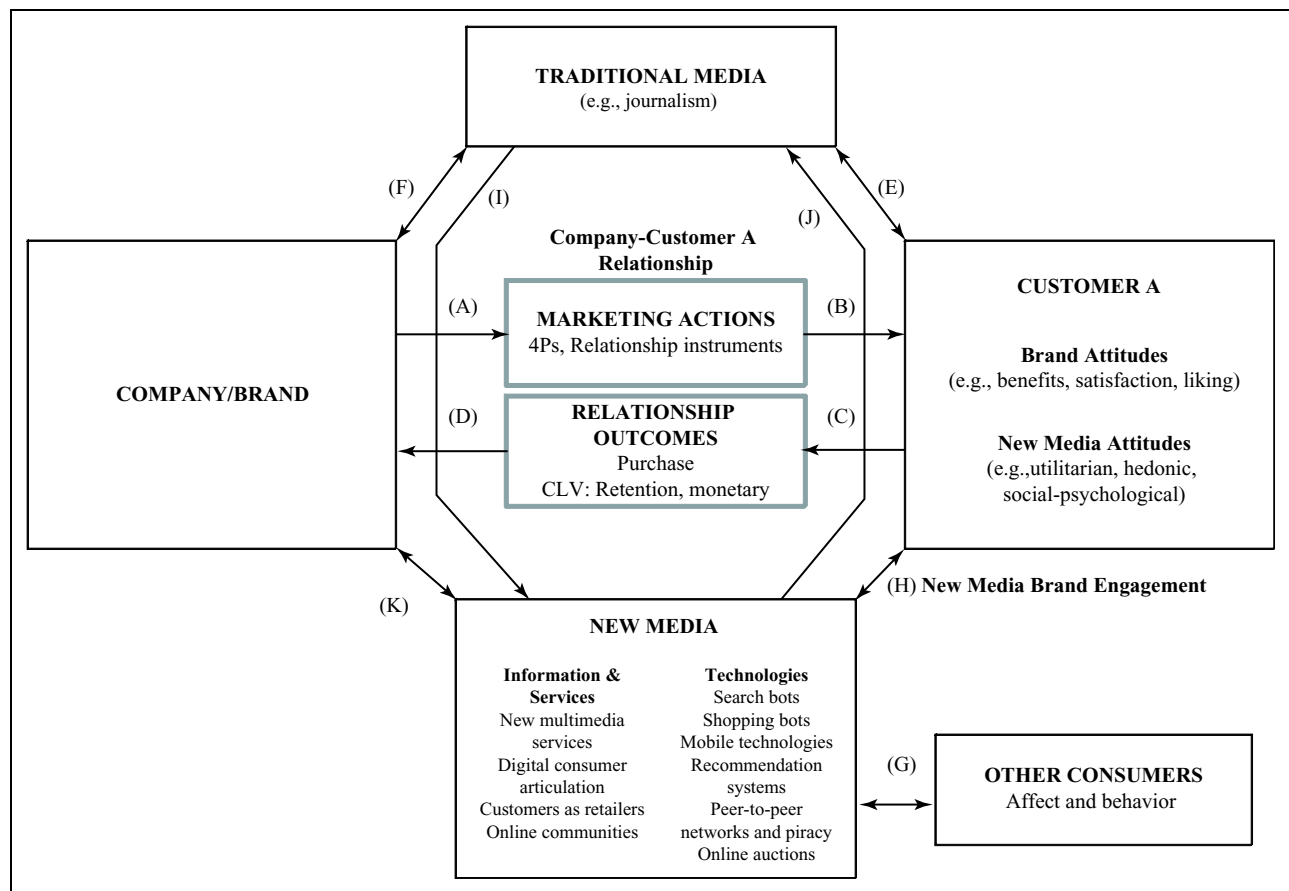
New media allow consumers to reach (and be reached by) other consumers and companies almost anywhere at any time through their mobile devices. They can read reviews of a product when shopping in a retail store, and can post reviews of a new movie when the credits are still rolling in the movie theater on opening night.

### Networks

Consumers use new media to participate in social networks, which enable them to create and share content, communicate with one another, and build relationships with other consumers (Gordon 2010; Libai et al. 2010). While Facebook and MySpace are most prominent, communities are allotropic and include massively multiplayer online games (MMOGs) such as World of Warcraft and sites for exchanging everything from knitting techniques (e.g., ravelry.com) to statistical advice (e.g., s-news).

## Playing Pinball: A Conceptual Framework of New Media's Impact

Figure 1 shows the conceptual framework of the role of new media for customer relationships. Traditionally, companies actively influence customer relationships through their marketing actions including relationship instruments such as loyalty programs (arrow A) and, both active and reactive, through public relation (bidirectional arrow F). Customers were predominantly passive “receivers” of marketing and media information (unidirectional arrows B and E), with companies



**Figure 1.** Conceptual pinball framework: effects of new media on customer relationships

who were able to avoid negative mass media coverage having almost complete control over the brand-shaping messages and, as a result, relationship outcomes such as customer retention (arrow C) through their own actions.

The bottom portion of Figure 1 illustrates how the rise of new media changes the marketing environment. Today, the flow of information about a brand has become multidirectional, interconnected, and difficult to predict. Marketers have lost control over their brands, but now participate in a “conversation” about the brand (Deighton and Kornfeld 2009). In the era of new media, managing customer relationships is like playing pinball – companies serve up a “marketing ball” (brands and brand-building messages) into a cacophonous environment, which is then diverted and often accelerated by new media “bumpers,” which change the offering’s course in chaotic ways. After the marketing ball is in play, marketing managers continue to guide it with agile use of the “flippers,” but the ball does not always go where it is intended to and the slightest miscue can be amplified into a catastrophic crisis.

In the new media era, companies continue to serve up products, services and messages through traditional channels (arrows A, F), but also through new media channels (arrow K). Consider Dove’s “Campaign for Real Beauty” (Deighton 2007), where Unilever decided to reposition its 45-year-old

(when the campaign began) Dove brand around women’s self esteem. Rather than pushing brand messages at consumers as they would have done in the past, Unilever engaged consumers in a conversation about self esteem, combining traditional and new media channels. In addition to buying every billboard in the Grand Central Train Station in one campaign, and Super Bowl ads in another (arrows A and F), they also used new media such as extended YouTube videos (arrow K). All have been designed to provoke the conversation.

While Dove’s “ball” has often gone exactly where it was intended, generating coverage on hundreds of TV News programs, including the Today Show and an entire episode of Oprah, this was not always the case. Consumers (and organizations such as Greenpeace) made their own parodies of the YouTube videos and ads (arrow G), which were then picked-up by late-night TV comedians (arrow J). These parodies (as well as their traditional media variations – see arrow I) have spread quickly and have been viewed millions of times. A central question is how all of these reverberations within the new-media environment affect what Dove’s relational partner Customer A thinks and feels (arrow H) and how he or she acts with regard to the Dove brand, both in terms of buying the brand (arrow C) and communicating about it through new media (arrow H). Returning to pinball, does this “add points to the board?”

The focus of this paper is on arrows K, H, G and C. Our objective is to propose a research agenda for understanding how companies and customers interact with each other through new media, and how these interactions affect what customers think (contents of Customer A and Other Consumers boxes) and how they behave in a relationship with a brand (Relationship Outcomes box). With regard to Customer A, we study brand attitudes, which include the thoughts and feelings that a consumer has about the focal brand, as well as new media attitudes, as consumers' thoughts and beliefs about the roles of media vehicles in their lives. Brand attitudes are conceptualized here as an umbrella concept for heavily studied relationship states such as customer satisfaction, liking, motivations and perceived benefits. Its counter-part, new media attitudes, result from gratifications consumers derive from media, with main types of gratifications being utilitarian, social, and psychological, as can be derived from uses and gratifications theory (e.g., Calder, Malthouse, and Schädel 2009; McQuail 1983).

Consumers that score high on both kinds of attitudes will exhibit high new media brand engagement – non-purchase customer behaviors that involve new media, such as creating and watching YouTube videos about the brand, blogs, web sites, reviews, etc. Relationship outcomes considered in this research include short-term (e.g., purchase) and long-term (e.g., customer lifetime value and its components including retention rates and monetary value) measures.

## Key New Media Phenomena: A Review and Research Agenda

We now discuss the impact of what we believe are the most prevalent new media phenomena. In the “New Media” box of our framework, we have organized phenomena into two broad categories, *Information and Services* and *Technologies*. The first category refers to digital content and the new kinds of consumer behavior that results from it; the second category is about new media infrastructure.

Table 1 overviews the new media phenomena and research implications we consider as particularly relevant for each phenomenon.

### New Media Information and Services

**New multimedia services.** Consumers today dedicate substantial time producing and consuming new multimedia content, which includes video sharing platforms such as YouTube, music streaming services such as Pandora, online video games and MMOGs, and “virtual worlds” such as Second Life. A lot of what is going on in these services has to do with brands and companies; consumers upload advertisements and their own so-called spoofs and mash-ups (see the Dove example above – a particularly successful video was titled “Slob Evolution”, showing the *deterioration* of a consumer by using the Dove ad design; The Inspiration Room 2008) and participate in brand-hosted events in Second Life.

**Understanding consumers.** Very little is known about consumer behavior with regard to new multimedia products. Kaplan and Haenlein (2009b) conduct qualitative interviews with Second Life users and identify key motivations for participation; they conclude that users consider Second Life not as a mere computer game, but as an “extension of their real life.” Bakshy, Karrer, and Adamic (2009) show that social networks within Second Life also determine consumers' adoption behavior. Hinz et al. (2009) find that specific decision-making patterns exist in the MMOG “World of Warcraft,” with the consumers' avatars (and particularly their feeling of presence) being important.

As advertising constitutes the backbone of many brand relationships, marketers should be interested in learning how new multimedia content affects the consumption of traditional media such as TV. Waldfogel's (2009) study hints at a reduction of TV viewing as a result of the consumption of YouTube and related sites, but also at an increase in time spent on network websites; other studies also suggest cannibalization between new media and TV (e.g., OECD 2007). Research needs to account for the different kinds of new multimedia and potential positive spillover effects with other channels (e.g., DVDs). The same is true for streamed music; does listening to Pandora influence radio consumption and music purchases?

With new media becoming an important advertising channel itself, relationship managers also need to understand consumers' demand for new multimedia content. Elaborate predictive models exist for TV and theatrical channels (e.g., Hennig-Thurau, Houston, and Walsh 2006; Litman 1979), but we don't know what makes a video a hit on YouTube – is it the video itself or the social network process? As a first step, Oh, Susarla, and Tan (2008) model diffusion patterns of YouTube videos by extending the Bass model for a social network component (see also the individual-level approach by Stephen and Berger 2009).

As a substantial number of user-generated videos are modifications of brand advertisements, relationship marketers should also be interested in learning whether and, if they do, how such modifications impact consumers' brand perceptions. Who are the consumers that engage in the creation of such parodies and other modifications, and what drives them? What are the conditions under which modifications can affect brand perceptions, and do increases in brand awareness dominate changes in brand image?

**Customer interactions.** A fundamental issue is understanding what types of business models will succeed for multimedia sites. Understanding consumers' willingness to pay in these new media environments would be an important start. Regarding advertising, new multimedia site operators and advertisers are interested in learning how advertisements can be effectively placed in the different multimedia services. Research suggests that online advertisements can be as effective as offline ads (e.g., Gallagher, Foster, and Parsons 2001), and that synergies can be realized between the two contexts (Naik and Peters 2009). Haenlein and Kaplan (2009) analyze the effect of virtual

**Table 1.** New Media Phenomena and Key Research Implications

Phenomenon	Understanding Consumers	Customer Interactions	Measuring Customers/Customer Outcomes
<b>Information and Services</b>			
New multimedia services	Effect of new media consumption on traditional media consumption Success factors of new media Impact of modified adverts on brand perceptions Who creates brand modifications and what motivates them?	Consumer willingness to pay in new media environments Effective placement of advertisements in different multimedia sites What kind of advertising is most persuasive on new multimedia sites? Reactions to public criticism on multimedia sites Successful brand development via new multimedia Appropriate strategies for managing negative EWOM Appropriate ways to interact with consumers who articulate negative EWOM	How can behavioral data generated on multimedia sites be employed? Long-term advertising effectiveness and clickstream data Prediction accuracy of virtual world data for real-world predictions Effect of new multimedia on customer and brand equity
Digital consumer articulation	Consumers' selection of individual articulation out of a multitude of existing ones Pre-release EWOM Impact of real-time EWOM on diffusion patterns		Measurement approaches to EWOM Modeling EWOM's impact on behaviors Link between EWOM and behavioral outcomes Conditions under which uninformed cascades dominate informed cascades
Consumers as retailers	Under which conditions do consumers prefer used products? Which influence has re-selling on decision making? Does the purchase of used products affect brand perceptions? Effects of relationship broadening Impact of a active participation on other consumer behaviors Overlap between consumers' activities in online and offline communities Conditions under which communities can influence brand perceptions	How do online second-hand markets affect the value of new products? For which industries and products are second-hand markets relevant? Balancing of customer/retailer orientation Best environment for consumers who act as retailers How can communities be used for brand management? How can a brand acquire virtual consumer "friends"? Reaction to independently operated brand communities Conditions to successfully run service-support communities Role of service personnel in service-support communities	How much to invest in EWOM management? Use of data for other purposes Can data be embedded in segmentation models? How does customers' dual role influence satisfaction and retention
Online social communities			How can companies obtain usable information from communities? Consumers' willingness to provide data Integration of community data with company database Effects of marketing in communities on customer relationships Incremental value of engaging activities

(continued)



**Table 1 (continued)**

Phenomenon	Understanding Consumers	Customer Interactions	Measuring Customers/Customer Outcomes
<b>Technologies</b>			
Search bots	Influence of search on consumer decision making Consumers' choice of search terms Influence of visibility in searches on brand perceptions	Understanding the interactions between organic listing and targeted ad placements Balancing new and existing customers with search advertising	How well does search predict market phenomena and consumer trends? Relative effectiveness of banner advertising vs. keyword search advertising Effectiveness of search advertising for different customer segments and products Search advertising and customer loyalty How can price comparison data be used to improve pricing?
Shopping bots	Who are users and for which products do they consult shopping bots? Is information shared with others? Perception of partitioned prices Importance of retailer-related information	How to adapt to price comparisons? What are "ideal" partitioned prices? Payment mechanisms Effectiveness of price concealment strategies	Effectiveness of experiments Effects of bots on customer outcomes and moderating role of relationship quality Quality of data collected from mobile devices Which consumers are willing to participate in mobile marketing research?
Mobile technologies	Relative importance of utilitarian, hedonic and social value of mobile devices Conditions under which consumers are willing to accept permission-based services	Economic potential of location-based services Which services have commercial potential? Tradeoff between push and pull marketing with respect to location-based services Business models for location-based services Economic potential of bar codes Usability and design of recommenders Optimal amount of information obtained from consumer	Types and measures amenable for measurement via mobile devices Effect of location-based services on customer equity How can recommender data be used for other marketing issues? How to treat new users Performance of recommendations compared to other information
Recommendation systems	Integration of consumer preferences in recommenders Consumer acceptance of recommenders Recommenders' role in consumer decision making, particularly for group consumption	Effectiveness of anti-piracy strategies Use of peer-to-peer networks for commercial distribution Transformation of "pirates" into paying customers Distribution of media products in a pirated world Design of interactive pricing mechanisms Through which auction type should products be sold?	Impact of recommenders on profits How can recommenders make use of the long tail? Monetization of privacy costs Usage of peer-to-peer networks to explore cultural trends and identify niche products Effects of anti-piracy actions on "healthy" relationships Do bids allow determining price-response functions or willingness-to-pay? How can bidding behavior be integrated with customers' purchase history?
Peer-to-peer networks and piracy	How do consumers justify illegal behavior? How do consumers decide what is worth paying for? Consumers' balancing of risks and benefits of illegal behavior		
Online auctions	Conditions under which consumer prefer auctions Choice when "Buy it Now" option exists Perception of active participation		

flagship brand stores on Second Life and find such stores to positively influence consumers' brand attitudes and real-life purchase intentions toward the brand. What kind of advertising is most persuasive on multimedia sites? How should budgets be allocated between different new multimedia sites?

In terms of brand management, how should companies react when consumers criticize them publically via the new multimedia channels, as musician Dave Carroll did on YouTube with United Airlines after experiencing a severe service failure (his song "United breaks guitars" even hit the music charts; Harvey 2009)? Domino's Pizza's revenues declined and its brand image suffered after two employees uploaded a video on YouTube showing them doing disgusting things to pizza (Beaubien 2009). Their response might offer initial ideas on how to handle such a crisis situation caused by new multimedia content, stressing the role of regaining consumer trust in such situations which can occur and spread wildly in the new multimedia channels. The Dove case provides initial ideas how new multimedia services can be successfully used by a company for brand development (Deighton 2007), but questions on how to do so remain.

*Customer measurement and relationship outcomes.* New multimedia services offer ample opportunities for measuring consumers' brand attitudes and brand engagement. But how can the abundance of behavioral data generated on multimedia sites through registered members be employed? Existing studies discuss rather generally a possible extension of narrative analysis for video sharing sites (Pace 2008) and how virtual worlds can be used for marketing research (Kaplan and Haenlein 2009a). Regarding advertising, how can managers avoid neglecting long-term effects required for brand building and relationship development when using click-stream data, which focuses on short-term consumer behavior (e.g., Qui and Malthouse 2009)? Can consumers' behavior in virtual worlds be used for "real-world" predictions? At this point, it is also unclear how existing brand relationships are affected by new media services. To what extent can customer and brand equity be influenced by YouTube campaigns, events and stores in virtual worlds, and placement in MMOGs?

*Digital consumer articulation.* Consumers use new media for sharing comments and reviews about services and products and the companies that produce them. The channels which are used for such articulations are multifarious and include portals such as ciao.com, retail websites such as amazon.com, online travel agents sites such as orbitz.com. and whistle blowing websites such as untied.com. New media makes such articulations – which have been labeled electronic word-of-mouth (EWOM; Hennig-Thurau et al. 2004) – accessible to online and even offline shoppers, as consumer can use mobile devices to reading restaurant reviews while out on the town. EWOM can easily be "forwarded" to others (a practice that has led to the prominence of the "Doubletree incident", where an uploaded Powerpoint complaint prepared by an individual consumer was shared numerous times via email), usually has no terminal date,

and is now available in real-time through Twitter and similar instant-messaging services. As demonstrated by Dave Carroll's complaint video about United Airlines, EWOM is not restricted to text, but can be multimedia.

*Understanding consumers.* Research has shed some light on the motivations that drive EWOM and its consumption, finding that social-psychological, identity, and utilitarian motives are among the most relevant ones for posting EWOM (Brown, Broderick, and Lee 2007; Hennig-Thurau et al. 2004), while consuming EWOM is strongly driven by utilitarian motives such as getting purchase- or consumption-related advice (Hennig-Thurau and Walsh 2004). As most existing research ignores the heterogeneity of EWOM about a product, we consider consumers' selection of reviews and their subsequent evaluation as an exciting area for future research. Initial findings indicate that consumers seem to value review texts more than summary statistics (e.g., stars; Chevalier and Mayzlin 2006), and consider the author's expertise (Sen and Lerman 2007) and credibility (Brown, Broderick, and Lee 2007; Mayzlin 2006). In an interactive forum context, perceived information value depends on other consumers' evaluations of the author's previous postings and the author's response speed and breadth of responses (Weiss, Lurie, and MacInnis 2008). Extreme and deep reviews are considered more helpful by consumers, but this differs between products (Mudambi and Schuff 2010).

The role of EWOM timing also deserves a better understanding. While most EWOM research focuses on consumer statements about products that are already on the market, substantial "buzz" exists months, sometimes even years before some hedonic products such as movies are released. What are the determinants of such early consumer articulations and how do they affect decision making and, eventually, product success? Finally, for products such as movies, music, and games a substantial share of revenues is usually generated before quality information is available. Now that consumers can post reviews when the end credits of a movie are still rolling, EWOM effects might unfold faster and significantly hinder the diffusion of poor products (and help good ones). Managers and journalists posit this effect (e.g., Sragow 2009), but empirical evidence is lacking.

*Customer interactions.* A major challenge for companies is to develop appropriate response strategies to negative EWOM (e.g., Roehm and Tybout 2006; Stauss 2000). How should hosts manage chat sites, e.g., censoring or filtering content, moderating discussion (Gordon 2010)? Does it make sense to internalize consumer articulation, i.e., by offering an organization's own website as an open forum? Godes and Mayzlin (2009) analyze the creation of EWOM by the company itself and find that such firm-initiated EWOM has a stronger effect on less loyal customers and noncustomers than on loyal ones, and Kozinets et al. (2010) distinguish different "social media communication strategies." What are appropriate ways to interact with consumers who have posted negative reviews?

*Customer measurement and relationship outcomes.* A major limitation of existing research on EWOM is the lack of consistent measurement approaches, with existing measures coming from different platforms (e.g., blogs, Yahoo, Barnes & Noble, Usenet), industries, (e.g., movies, books, software), and—for EWOM valence—coding approaches (e.g., stars, text analysis). So, more work on the measurement of EWOM is needed (Das and Chen 2007; Dwyer 2007). The same is true for modeling approaches; we expect modeling differences to account for some of the reported inconsistencies reported above. A key problem is the potentially endogenous role of EWOM (Duan, Gu, and Whinston 2008a; Godes and Mayzlin 2004).

Regarding the effects of EWOM on relationship outcomes, findings are still somewhat unclear, probably because of the differing measurement and modeling approaches. Most of the existing research has taken an aggregate-level perspective and studied hedonic products. While Liu (2006) finds that the volume, but not the valence of EWOM explains the success of new movies, Duan, Gu, and Whinston (2008a) report that both EWOM valence *and* volume drive movie box office revenues, and Chintagunta, Gopinath, and Venkataraman (2010) find valence to be the major driver. Dhar and Chang (2009) find that the volume of blog posts is positively correlated with future sales of music albums, while Chevalier and Mayzlin (2006) show that, for a book retailer, an improvement in EWOM valence leads to an increase in sales. Luo's (2009) results indicate that certain kinds of negative EWOM affect cash flows and stock prices.

In addition to consistent measurement and modeling, more theoretical explanations are needed to reconcile these conflicting findings. Dellarocas, Zhang, and Awad (2007) analyze diffusion pattern for movies and find that while early volume increases forecasting accuracy, valence predicts the word-of-mouth parameters of the diffusion model. Zhu and Zhang (2010) point at the moderating role of product and consumer characteristics for the EWOM-sales relationship, and Chakravarty, Liu, and Mazumdar (2010) also show differing effects of EWOM for frequent and infrequent movie goers. Also, Duan, Gu, and Whinston (2008b) use information-cascading theory and find that user reviews only have an impact on software sales for lower-ranking products, not the most popular ones. Their study raises a related, but more general question: under which conditions do uninformed cascades (e.g., sales or box office charts) dominate informed cascade (i.e., EWOM) and vice versa? Understanding the impact of EWOM on customer outcomes is essential for companies to decide on how much to invest in EWOM management.

*Customers as retailers.* New media provide consumers with extensive opportunities to become retailers themselves. While flea markets and garage sales have a long tradition, their economic impact has been rather marginal because of the requirement to meet personally. The internet enables consumers to sell used and vintage goods via websites like Amazon Marketplace and offer their handmade products (e.g., jewelry) through platforms like Etsy.com to other Internet users all over the world.

As a result, online consumer sales dwarfs traditional offline sales (Chu and Liao 2007). Also services (e.g., repairing TV sets) are increasingly being sold over the internet by individuals via the use of specialized portals.

*Understanding consumers.* Some studies have looked at consumers' interest in used products, often browsing at flea markets and taking a consumer culture theory perspective (Sherry 1990). However, extant research considers such behavior as a "funny" niche activity, while new media has transformed it into a mass phenomenon. So, do flea market-related findings hold for new media consumer retailing? Under which conditions do consumers prefer used products to new ones? Furthermore, does the possibility to easily resell products via the internet change consumers' purchase behavior (e.g., are consumers more willing to buy certain products if they see the possibility to resell them later)? And does the purchase of used (and usually less valuable) products affect consumers' brand perceptions? In contrast to new products, the brand's appearance cannot be controlled by the producing company.

Interesting research questions also arise from the broadening of customer-company relationships that occur when a customer acts as a retailer. How do consumers who hold a positive attitude to eBay's customer service balance this attitude with a negative perception of eBay's treatment of them as sellers?

*Customer interactions.* The presence of online second-hand mass markets poses the threat of cannibalizing the sales of new goods. But it could also be argued that second-hand markets increase the value of products that demonstrate low obsolescence and a long product life cycle. In a business-to-business context, Ghose, Telang, and Krishnan (2005) investigate the implications of electronic second-hand markets on supply-chain profits and new goods prices, and find that an increase in the availability of used products decreases the prices of new products and, thus, harms suppliers. Does this finding also hold for consumer markets? Also, for which industries and product categories is the growth of second-hand markets important, and what roles do brands play in this respect?

How does customer-oriented behavior affect customers that also act as retailers? How should customer orientation be balanced with retailer orientation by companies that maintain dual relationships with consumers? Can stakeholder management (e.g., Freeman 1984) be used for successfully managing such dual relationships? Marketing research might also want to take the perspective of the consumer as a seller of products. What is the best environment for generating profits, and what is the respective value of the platforms (e.g., Amazon Marketplace) and the network of other retailers? Stephen and Toubia (2010) reveal initial insights by studying the value of the social network between individual (consumer) sellers on a large platform.

*Customer measurement and relationship outcomes.* Data on online resale markets is widely available and might be useful for multiple parties. How can companies use such information



to gain insights into the consumer's quality perception of the product over time and its life cycle? Does the sale of a branded product constitute the ending of the brand relationship or the beginning of a new life cycle phase (maybe with an improved version of the product)? Can such information be embedded in existing segmentation models? And can companies motivate consumers that sell and buy products to share information with the company, as this would be required for future personalized communication? Regarding relationship outcomes, retailers like Amazon and platform providers like eBay that host multiple relationships would benefit from learning how customers' dual roles affect customer satisfaction and retention

*Online social communities.* Consumers spend a substantial share of their social life on websites such as MySpace and Facebook, which host so-called "online communities" – consumer groups that interact online to achieve personal as well as shared goals of their members (e.g., Dholakia, Bagozzi, and Klein Pearo 2004). Online communities complement their real-world counterparts (e.g., Schau, Munitz, and Arnould 2009) and serve as forums for consumers exchanging thoughts and ideas. Firms are increasingly trying to use online communities to enhance their customer relationships (McAlexander, Schouten, and Koenig 2002). For example, in online communities of information technology firms such as Hewlett-Packard and Microsoft experienced customers support peer customers who face product-related problems ("consumer support forums"; e.g., Mathwick, Wiertz, and De Ruyter 2008).

*Understanding consumers.* Previous research mostly focuses on reasons why consumers participate in online communities and how active participation among community members can be maintained (e.g., Koh et al. 2007; Wiertz and De Ruyter 2007). For consumer support forums, Nambisan and Baron (2009) provide empirical evidence for the critical role of four consumer benefits (learning/cognitive, social, hedonic, and status) for active community participation, and Dholakia et al. (2010) support the relevance of functional and social benefits in the same context. Both results mirror the general motivations for new media usage derived from uses and gratifications theory above. Related, Sledgianowski and Kulviwat (2009) study user adoption of social network sites and find that (perceived) playfulness and critical mass attract consumers most.

Less attention has been dedicated to the effects that consumers' active participation in online communities has on consumer behavior (e.g., Ansari, Koenigsberg, and Stahl 2008; De Valck, van Bruggen, and Wierenga 2009). Does personal communication become less important the more consumers actively participate in online communities, and how does this affect consumers' commitment and contribution to offline social communities? As with virtual worlds, it would be valuable to know how much overlap exists between consumers' activities in virtual and offline communities – do consumers have the same roles and identities as in offline communities? How about sharing feelings and knowledge with other community members – a potentially powerful way that creates

solidarity and bonding. Does it play a similar (or even stronger) role in online communities? Research suggests that online communities can shape consumers' brand perceptions through EWOM (e.g., Jansen et al. 2009), but we need to know more about the conditions under which online communities can exert such effects.

*Customer interactions.* Marketers are showing a growing interest in organizing and managing online communities (Bagozzi and Dholakia 2002). Given that communication within communities can affect brand perception, how can "general" communities such as Facebook be used for brand management? And what kind of brand communication is most promising – what benefits must a brand offer community members to turn them into their "virtual friends"? How should brand owners react to the development of brand communities that are operated independently? What are the risks of such communities (e.g., "hijacking" of community by competitor brand)?

Regarding service-support forums, it is crucial to understand the conditions under which such communities work. Wiertz et al. (2010) study governance mechanisms and find that normative and meritocratic governance interact in a complex way. Research is desired on the role in which companies that run such a community should dedicate service personnel when customers provide incomplete, wrong or offending answers to other customers' questions. And should consumers be stimulated to contribute via economic incentives, or do such stimuli crowd-out consumers' intrinsic motivation, leading to lesser engagement instead of increasing it, as suggested by self-determination theory (e.g., Deci and Ryan 1985)?

*Customer measurement and relationship outcomes.* Virtual communities usually collect a tremendous amount of data. A major measurement-related challenge refers to how companies can obtain usable information on consumer activities and communications generated in such communities. Although it is relatively easy to collect information about what community members say about a brand, it would be valuable to also capture the structure of communication processes within the community; social network analysis (e.g., Berkowitz 1982) has been introduced as a promising methodological approach. Another issue is consumers' willingness to provide personal data to companies (e.g., Nene 2009; Peltier, Milne, and Phelps 2009), more information is needed on the conditions under which consumers are willing to reveal such information. Finally, data integration will cause challenges, as data generated in online communities and a firm's transaction data usually are separate information sources, which have to be merged.

Regarding relationship outcomes, existing research has shown that referral in online communities enhances customer acquisition (Trusov, Bucklin, and Pauwels 2009). Firms also want to know whether marketing activities in online communities affect relationships with existing customers and their retention, cross-buying, and lifetime value. Likewise, it is desirable to quantify the incremental customer value of a

consumer engaging in brand-related activities in an online community, such as registering as a “friend” of the brand, joining a group of brand fans, or supporting other customers in their use of the brand through helpful comments.

### **New Media Technologies**

**Search bots.** Next to email, search is the most common online activity. The use of search engines or “bots,” which is now possible from almost anywhere and at any time, has changed the way consumers obtain information about products, services, people, and firms. Search is a primary vehicle for “pull,” where consumers seek information almost anywhere and at any time of their choice rather than being passive receivers.

**Understanding consumers.** Extant research has studied consumers’ online information search (e.g., Degeratu, Rangaswamy, and Wu 2000; Ward and Ostrom 2003), expert-novice differences (e.g., Jaillet 2003; Wu and Rangaswamy 2003), and the role of decision aids (e.g., Häubl and Trifts 2000; Montgomery et al. 2004) in influencing search behavior. Researchers have also investigated the breadth and depth (Johnson et al. 2004) as well as frequency and duration (Bhatnagar and Ghose 2004) of searches.

Additional research is needed on how exactly search influences the process of consumer decision making. Under what conditions do online search activities augment the decision making capabilities of consumers? Also, because online search is a low-cost activity, it has diminished consumers’ need to classify and organize information about products and markets and to store them in their internal memories. Thus, are consumers more willing to include smaller brands in their consideration sets? It is also unclear how consumers decide what terms to search. Are different categories of search terms linked with different consumer decision-making stages (e.g., awareness, consideration, intent)? How does the visibility of brands and companies in search bot outputs influence brand perceptions?

**Customer interactions.** Marketers should develop search-related strategies and tactics that enable their targeted customers to find the content and products they provide (Ghose and Yang 2009). To do so, companies must understand the complex interactions between organic listings (generated for specific keyword queries) and targeted ad placements (e.g., Drèze and Hussherr 2003). Initial research has studied the effects of banner advertising and keyword search advertising on consumers’ purchase behavior (e.g., Ghose and Yang 2009; Manchanda et al. 2006; Sherman and Deighton 2001). How do the different advertising strategies affect consumers’ brand attitudes? As most search advertising is targeted at potential new customers, it would be important to understand its effects on existing customers. How can both segments be optimally balanced with search advertising campaigns?

**Customer measurement and relationship outcomes.** A major benefit of online search advertising is its measurability. Research to date has not fully explored the potential value of the “database of intentions” being catalogued by search engines, or elaborated on the possibilities of using keyword search volume patterns to forecast future behavior of customers (e.g., Batelle 2005; Rangaswamy, Giles, and Seres, 2009). How well do volume-based search forecasts compare to other types (e.g., judgmental), and how well can we forecast future market trends by monitoring consumers’ search behavior?

The question of how to allocate budgets between search and other advertising activities such as banner ads is important. As of April 2010, the market value of Google is more than 5 times that of Yahoo!, mainly because of the greater value placed by investors on keyword advertising, as compared to banner advertising. Is this justified, and can the effectiveness of banner advertising be improved? Does search advertising benefit niche or mainstream products? Regarding relationship outcomes, it is important to understand how search behavior in general and search advertising in particular affect outcomes such as customer loyalty.

**Shopping bots.** Shopping bots are price comparison services that enable consumers to easily and instantly compare prices for a product at multiple retailers. They increase price transparency and thereby provide utilitarian consumer benefits. While initial research argued that this increase in price transparency would eventually lead to a market with a single price (Bakos 1997; Brynjolfsson and Smith 2000), evidence shows that price dispersion remains substantial in online markets (e.g., Ancarani and Shankar 2004).

**Understanding consumers.** Insight is needed on how consumers use price comparison sites – who are the users and for which products do they consult such sites? Is information generated through such sites shared with other consumers via EWOM? Price comparison sites usually report so-called “partitioned prices,” splitting the gross product price into a net product price and shipping costs. While previous research (e.g., Hamilton and Srivastava 2008; Morwitz, Greenleaf, and Johnson 1998) already showed that consumers perceive partitioned and unpartitioned prices as different, their results do not point to a clear direction, and interaction effects between product categories and the amount of shipping costs in partitioned prices are likely.

When using price comparisons, the main criterion for differentiation is the retailer brand. How do consumers process retailer-related information in addition to the price itself? Which role does the rank in the search results play for consumers, and how important is the retailer’s rating in relation to the price rank?

**Customer interactions.** For management, the key question is whether and how companies should adapt their pricing policy to the results generated by price comparisons. Given that consumers perceive combinations of partitioned prices that lead to

the same gross price as differently attractive, what are the “ideal” shipping costs and how should they be displayed?

Companies whose products are listed on the price comparison site usually have to pay the site owner for each click. How do companies avoid too many clicks from consumers that ultimately do not buy their products? Are pay-per-click prices superior to pay-per-conversion prices? What are the best combinations of pay-per-click and pay-per-conversion prices? Companies will also be interested in learning whether price concealment strategies are successful – in other words, does it pay off for retailers to hide the “true” price by using bundled products or varying package sizes and descriptions?

*Customer measurement and relationship outcomes.* Price comparisons generate extensive information. How can such information be used to improve pricing and increase profitability? Price comparisons can be used for behavioral experiments that vary prices for products that are offered exclusively via such sites. Research that investigates the effectiveness of such experiments is needed.

Regarding relationship outcomes, retailers (particularly those who offer full service) will need to understand the effects the higher price transparency generated by shopping bots has on their customers. To what extent does a high level of relationship quality with a retailer prevent customers from buying from the store that offers the lowest price on the internet? And to what degree does such behavior affect the customer’s long-term relationship with the retailer? Can the relationship between customer equity and the price difference between the retailer and the competitor that offers the lowest price be modeled? Do other customers’ judgments of the retailer’s (and its competitors’) reliability influence customers’ decision to maintain loyal?

*Mobile technologies.* There has been considerable growth in recent years both in the adoption of portable and wireless mobile devices and in the various ways to use those devices (e.g., text, email, video, navigation, camera). Mobile phones which are more powerful than previous generations of desktop computers are becoming traveling companions for consumers, accompanying them wherever they go. These trends enable marketing to reach large numbers of consumers on their most personal communication device. To do so, they must identify situations where mobile marketing complements, or substitutes for, their traditional marketing programs (Shankar and Balasubramanian 2009; Shankar et al. 2010).

*Understanding consumers.* A general research question resulting from the multipurpose character of modern mobile phones refers to the relative importance of utilitarian, hedonic, and social value in consumers’ adoption and use of mobile devices. Past research provides some insights on this issue (e.g., Kleijnen, De Ruyter, and Wetzels 2007; Mort and Drennan 2007; Sultan, Rohm, and Gao 2009), but many questions remain, especially in view of the newer capabilities of smart phones and the hype surrounding Apple’s iPhone.

Important marketing applications for mobile devices are so called “permission-based services,” which require customers to agree to receive information from a company on their mobile device (e.g., about regional services such as restaurants based on the spatial location of a consumer). A key challenge will be to understand the conditions under which customers are willing to give service providers such permissions. As with online communities, privacy is a major concern – how do consumers tradeoff privacy against the potential value of services available via their mobile devices?

*Customer interactions.* Location-based services are an exciting research topic (Balasubramanian, Peterson, and Jarvenpaa 2002; Pura 2005). For example, a popular application on the iPhone is “AroundMe,” which enables consumers to locate nearby restaurants, banks, police stations, or gas stations. With Google’s geography-based search results, consumers can “see better with their mobile device than with their own eyes;” the same refers to phone providers who can also know their customers’ locations. Companies have only begun to understand the economic potential that comes with location-based services; research is needed to find out what services offer substantial benefits to target consumers. Initial studies have explored the delighters and barriers for consumers in adopting and using location-based services (e.g., Pura 2005), but more work is needed. What is the tradeoff between push and pull marketing with respect to location-based services? Where will revenues come from for location-based services – are customers willing to pay for them, or is revenue-sharing between content provider and network a more viable business model?

Bar codes also can offer opportunities for growth. Service provider (e.g., museums, movie theaters) can provide extensive information through such codes, which are scanned by consumers’ smart devices. QR bar codes, which are displayed on products in Japan, can connect the user to a web site where additional actions can be initiated (e.g., find stores with the lowest price for a specific product). For what types of products and services do such codes offer business opportunities?

*Customer measurement and relationship outcomes.* Mobile devices offer potential data collection benefits and capabilities for marketers to connect with consumers and get their feedback (e.g., engaging with consumers at a football game or reality TV show). For example, ImpactRX, a marketing research provider collects information via mobile devices from a panel of physicians about detailing visits by pharmaceutical companies, which has helped the company to compete better against larger data services by providing more fine-grained data about the effectiveness of pharmaceutical sales efforts. We need to learn about the quality of data collected from mobile devices, as compared to traditional data collection vehicles. Which consumers are willing to participate in marketing research via mobile devices? What types of issues and constructs (e.g., attitude, behavior, intent) are most amenable for measurement via mobile devices?

Costs for location-based services have to be weighed against economic benefits. How much does a location-based service influence customer acquisition as well as relationship outcomes such as customer loyalty for bank, hotel, and restaurant brands? We expect the effectiveness of such services to strongly differ between industries, and modeling the link between such services and customer equity is required to judge their profitability effects.

*Automated recommendation systems.* New media allows companies to make use of collaborative filtering (Goldberg et al. 1992) and related techniques that unlock “swarm intelligence.” Companies can use such tools for providing highly individualized services and products based on what “similar” customers have enjoyed. Annual conferences on automated recommenders are now held by the Association for Computing Machinery (ACM), and almost all online retail sites offer a recommendation system (although systems differ widely).

*Understanding consumers.* The majority of existing research on recommenders has focused on understanding and predicting user preferences. Many advanced statistical approaches have been developed (e.g., Ansari, Essegai, and Kohli 2000), most of which constitute variations of item-based or user-based collaborative filtering (e.g., Koren 2009; Li et al. 2007). Deriving preferences primarily from users’ evaluations, current models ignore other kinds of (product-related) preference information, which we expect to further increase the understanding of (and prediction accuracy for) consumer preferences (see also Adomavicius and Tuzhilin 2005)

A deeper understanding is also desired with regard to consumers’ acceptance of recommenders. Herlocker, Konstan, and Riedl (2000) argue that an “explanation facility” as part of a recommender system increases acceptance and user involvement. Other studies show that the agreement between a consumer rating and the recommendation rating influence the acceptance of the recommender; Fitzsimons and Lehmann (2004) find that recommendations contradicting initial consumer impressions might even cause consumer reactance. This effect is strengthened by agreement with extreme opinions, and stronger for extreme positive than extreme negative agreement (e.g., Gershoff, Mukherjee, and Mukhopadhyay 2007). Leino and Riih  (2007) show that the availability of customer reviews in addition to recommendations increases trust in and social value of the site.

Other fundamental questions refer to recommenders’ role in decision making. H ubl and Trifts (2000, p. 4) state that recommender systems own the potential “to drastically transform the way in which consumers search for product information and make purchase decisions.” But how? Senecal and Nantel (2004) report that recommenders are capable of altering and building up the customers evoked set. Existing research focuses on consumption by individuals, but several products are predominantly consumed by groups of consumers (e.g., movies). How can recommender systems maximize the gratification of a group? Initial research points at the ability of group-related

algorithms to increase decision quality under certain conditions (Hennig-Thurau, Marchand, and Marx 2009), but we need to know much more.

*Customer interactions.* Firms should also know the role usability plays compared to the algorithm (Murray and H ubl 2009). Leino and Riih  (2007) indicate that the way recommendations are shown affects the choice process. Jones and Pu (2007) compare the music recommenders Pandora and Last.fm and find that, in addition to perceived recommendation quality, a simple interface design and a small initial effort requirement influence the consumer’s adoption most strongly. How much information can be asked from the consumer without requesting too much (De Bruyn et al. 2008)?

*Customer measurement and relationship outcomes.* Very limited use has been made of recommender data for purposes other than generating recommendations. Advanced analyses could be performed to uncover desired product characteristics, which could then be used to create new product offerings. Data could potentially be used for shopping trends, temporal and seasonal analysis, advertising, forecasting of future demand etc. Other measurement issues include how to treat new users (for whom little information exists) and which evaluation criteria to be used (see the overview by Herlocker et al. 2004). Also, it is largely unclear how “good” recommendations actually are, compared to other information such as advertising, charts, and personal word-of-mouth. The only study on this topic (Krishnan et al. 2008) finds that a substantial number of individuals outperform recommendations, although recommendations on average outperform consumers

Regarding relationship outcomes, it is of core interest how recommender systems impact buying behavior of existing and new customers and profits. Fleder and Hosanagar (2009) report both negative and positive effects – although recommender can increase individual consumer’s choice diversity, they tend to decrease overall diversity. Bodapati (2008) argues that recommenders should not focus on those items which are likely to be bought, but items whose selling rate increases if they are recommended. This raises the question of the ideal target function – while offering recommendations that meet consumer preferences might be optimal for consumer satisfaction, other targets might lead to higher profitability, at least in the short term. But how would sales-oriented vs. preference-oriented recommendations affect profits in a long-term perspective?

Finally, recommendation systems enable online retailers to make use of the so-called “long tail” – profit increases through enhancing existing consumer relationships and developing new ones by stimulating sales of niche products which can be stored at minimal costs (Anderson 2006). However, the economic effects underlying the long tail and how recommender can make use of it have to be understood better (Elberse and Oberholzer-Gee 2007).

*Peer-to-peer networks and piracy.* Digital compression technologies have made it possible to distribute many kinds of



products, including movies, computer software, and music to consumers through the internet. Active consumers are using peer-to-peer networks (e.g., BitTorrent) to share digital content and products, often bypassing legal purchases and payments of these goods. The Recording Industry Association of America (RIAA) estimates that global music piracy costs \$12.5 billion per year, and academic research corroborates such effects (Bhattacharjee et al. 2007; De Vany and Walls 2007; Hennig-Thurau, Henning, and Sattler 2007).

*Understanding consumers.* Understanding the factors that motivate consumers to engage in illegal file sharing (as well as those which might prevent it) is crucial. Hennig-Thurau, Henning, and Sattler (2007) identify five factors that determine consumer file sharing of movies and find that, among others, the perceived degree of substitution, the original's transaction costs, perceived moral and search costs, and consumers' file-sharing knowledge influence behavior (see also Chiang and Assane 2007; Taylor, Ishida, and Wallace 2009). But we also need to know how consumers, who otherwise behave legally, justify illegal behavior. As the same consumers who illegally download movies sometimes pay for ring-tones and daily jokes, research that helps to understand how consumers decide what is worth paying for and what they think should be free is desired. How do consumers balance risks and benefits of such illegal behavior?

*Customer interactions.* The music and movie industry have executed several strategies, such as pursuing lawsuits against firms and consumers that facilitate music piracy. One strategy is Digital Rights Management (DRM), a technology that reduces the possibility for end-consumers to reproduce and distribute their legally purchased music files (Sinha, Machado, and Sellman 2009). Research so far has come up with inconsistent judgments of the different strategies and DRM in particular – while Waterman, Ji, and Rochet (2007) stress its potential to limit legal file sharing, Sinha, Machado, and Sellman (2009) argue that firms can actually benefit from removing DRM because of increased demand for legal music files and willingness to pay. Findings by Sinha and Mandel (2008) stress that such inconsistencies might be attributed to consumer heterogeneity and argue for tailored anti-piracy approaches

Other research questions affect transformation processes. Can peer-to-peer infrastructure be used for commercial distribution of products? Recently, media companies have tried to make commercial use of peer-to-peer networks, using them as distribution channels for their products (e.g., Warner used BitTorrent to distribute movies in Germany between 2006 and 2008). Although these approaches have been unsuccessful for films, what can be done to make them successful? Can “pirates” be transformed into legal (paying) customers? This strongly depends on whether consumers can be sensitized toward the copyright of digital products. Are free, advertising-based distribution channels (such as YouTube) viable alternatives for film distribution in the era of piracy?

Overall, if we assume that piracy cannot be abolished, how should media products be distributed in a pirated world?

*Customer measurement and relationship outcomes.* Measurement questions refer to the monetization of piracy costs. Existing estimates vary widely, but accepted numbers would help to raise public awareness and sensitize consumers. Also, it would be interesting if peer-to-peer networks can be used to better understand cultural trends. Can niche products be identified that can then be profitably released through legal channels such as DVD or CD?

Regarding relationship outcomes, industries that offer digital products have to understand how anti-piracy measures (such as suing pirating consumers and DRM) affect “healthy” customer relationships. For example, adding an anti-piracy trailer to DVDs customers are required to watch might be considered by them as a violation of their free choice and cause reactance, threatening customers' loyalty with a movie studio or music label. Which relationships are affected most by those actions? Studies such as Hennig-Thurau, Henning, and Sattler (2007) have identified an anti-industry benefit of piracy which suggests that companies should focus not only on “healthy relationships,” but also consider that some consumers maintain a “negative relationship” with them, gaining benefits from hurting them economically (instead of purchasing from them).

*Internet auctions.* While offline auctions have existed for more than two millennia (Krishna 2002), their digitalized online counterparts have experienced tremendous growth in the new media era, with eBay having become an instant internet legend. Today, a wide variety of online auctions can be found, including “name-your-own-price” auctions (e.g., Priceline.com; Spann, Skiera, and Schäfers 2004; Terwiesch, Savin, and Hann 2005) and bidding fee auctions (e.g., Swoopo.com). As Bapna, Goes, and Gupta (2003) argue, findings from offline auction research cannot be transferred to the online auction context, as to the multiunit nature of online auctions.

*Understanding consumers.* Researchers have addressed several facets of auction-related consumer behavior. Ding et al. (2005) provide evidence that emotions experienced at auctions influence future bidding behavior, and Spann and Tellis (2006) show that consumers' decisions do often not qualify as rational (i.e., price-minimizing). Chandra and Morwitz (2005) find that consumers with a high perception of control when shopping tend to purchase in auctions rather than in fixed-priced environments, and Haws and Bearden (2006) report that consumers find auction prices fairer than fixed prices as a result of internal attribution. Dholakia and Simonson (2005) show that explicit reference points influence the frequency and height of placed bids.

Simonsohn and Ariely (2008) find that bidders herd to auctions with existing bids despite of the possibility to win a low-starting-price auction. Brown and Morgan (2006) argue that trust and reputation of sellers are crucial for their success on eBay, and that the feedback system installed by the platform



has been essential for its success. Consistently, Cheema (2008) shows how bidding behavior is influenced by seller reputation.

Interesting research questions remain. eBay and other sites offer both auctions and fixed priced products – under which circumstances do consumers prefer one of the two alternatives? How is their choice determined in the presence of a “Buy it now” option? As participation in interactive pricing mechanisms via auctions requires customers to take an active role and to provide additional cognitive input – do they perceive such participation as transaction costs when making choices? On a market level, we would like to learn whether interactive pricing mechanisms lead to rather efficient markets, i.e., markets in which prices fluctuate only moderately.

**Customer interactions.** Auctioneers as well as companies that sell their products via auctions want to know the best design for those interactive pricing mechanisms. Does the bid elicitation interface influence consumers’ bids? Initial findings by Bradlow and Park (2007) indicate that auction design variables such as product images influence the number of latent entrant bidders. Li, Srinivasan, and Sun (2009) identify auction features that influence customers’ quality perception of a seller, and Häubl and Popkowski Leszczyc (2003) suggest that the starting price also influences consumers’ willingness-to-pay (see also Ariely and Simonson 2003). A more general question for companies who distribute products via auction sites is which auction type is most suited for selling products.

**Customer measurement and relationship outcomes.** As only a fraction of interested bidders actually place a bid, Bradlow and Park (2007) offer a method to number the *latent* bidders of an auction. Furthermore, it would be interesting to see if the information companies get from their customers during the interactive process of those pricing mechanisms is useful. For example, do the bids in auctions allow for determining price response functions or willingness-to-pay (Barrott et al. 2010)?

Finally, how can bidding behavior be combined with a customers’ purchase history? And if this can be accomplished, how can such integrated information be used to generate individualized pricing offers that positively impact the customer’s loyalty with the company as well as other relationship outcomes?

## Summary and Conclusions

We have illustrated that the enormous rise of new media is highly disruptive for the management of relationships with customers, something which becomes evident in the conceptual framework that underlies our discussion of new media effects in this article. The framework illustrates that new media require a shift in marketing thinking – consumers have become highly active partners, serving as customers as well as producers and retailers, being strongly connected with a network of other consumers. Managing customer relationships in the era of new media resembles pinball playing, with extensive information

being available on brands and products which can multiply, but also interfere with the companies’ marketing messages (such as bumpers do when playing pinball) and make it more complex to control brand images and relationship outcomes such as customer equity.

Based on a detailed analysis of the specific characteristics of new media, we identify 10 new media phenomena. For each new media phenomenon, we summarize the existing literature and highlight important areas for future research that refer to marketing’s understanding of consumers, the management of customer interactions, and the measurement of customer data and relationship outcomes. Researchers are encouraged to use this pinball framework as a road map that can help to shed light on exciting new research questions, while managers might benefit from the article through its analysis of new media trends and their potential impact on traditional marketing models.

## Note

1. New media brand engagement is part of the broader concept of customer engagement, which also covers brand-related behaviors which are not related to new media. See van Doorn et al. (2010) for a discussion of customer engagement.

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