HOW SOCIAL COMMUNITY AND SOCIAL PUBLISHING INFLUENCE NEW PRODUCT LAUNCH: THE CASE OF TWITTER DURING THE PLAYSTATION 4 AND XBOX ONE LAUNCHES

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While the traditional marketing literature typically illustrates consumers as passive recipients of products and services, social media enables consumers to actively participate in cocreation during new product launch periods. Building on Tuten and Solomon's Zones of Social Media framework, the authors show how Twitter can be leveraged to create social community and social publishing opportunities. Using an exploratory study investigating the new product launches of the PlayStation 4 and Xbox One video game consoles, the authors show that shared language and personalized communication cultivated through these opportunities can enhance new product launch efforts by facilitating learning and knowledge cocreation.

Due to its ability to convey large amounts of information from multitudes of sources, social media has become ubiquitous in modern society: 57 percent of people talk to people more online than they do faceto-face; 30 billion pieces of content are shared each month on Facebook; 50 million users log in Twitter every day; users spend a total of 2.9 billion hours per month on YouTube; and 43 percent of all online consumers follow or are a fan of a brand (Pring 2012). Despite projections that social media spending may double within the next three to five years, many firms remain overwhelmed with and struggle to understand how to use social media (Hitt, Jin and Wu 2016).

This is especially true for a new product launch (Roberts and Piller 2016). Traditionally, firms injected information about new products into the market through advertising and other forms of firm-centric marketing communications (Benedetto 1999; Chen, Chiang and Yang 2014). Nowadays, with the rise of various social media platforms such as Twitter, Facebook, and Snapchat, new product information is diffusing through the market from consumers themselves. Yet, it is unclear whether consumers can productively engage in word-of-mouth during new

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product launch periods when they have yet to learn, or have little knowledge and/or experience, about the new product (Iyengar, Van den Bulte and Valente 2011).

The purpose of this article is to address the need to clarify how electronic word-of-mouth on Twitter can be drawn upon during new product launch periods. Specifically, this article builds on Tuten and Solomon's (2015) Zones of Social Media framework, which categorizes social media into four different zones based on channel characteristics (social community, social publishing, social entertainment, and social commerce). Of the four zones, we examine how firms can leverage the information sharing nature of social community and social publishing to enhance new product launch success.

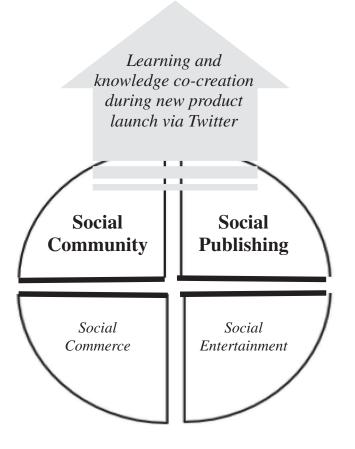
To investigate this research question, we study the new product launches of the PlayStation 4 and Xbox One video game consoles by observing information that is shared on Twitter. The exploratory study findings suggest that Twitter is more than an information transmission service. Similar to other social media channels, new product information can be conveyed and received on Twitter in a social and personalized way during the new product launch. This departs from the standardized one-message-fits-all communications that are attributed to traditional advertising and marketing communications. More important, Twitter can be leveraged to create social community and social publishing opportunities, both of which emerge from information sharing, but yield deeper interactions. Social community and social publishing on Twitter facilitates information



integration in meaningful ways. They enable consumers to actively participate in the cocreation of knowledge regarding new products. Moreover, social community cultivates shared language, while social publishing cultivates personalized communications. As shown in Figure 1, social community and social publishing can influence new product launch success by enhancing knowledge cocreation on Twitter.

The remainder of this article is structured as follows. First, we outline the role of information and learning during the new product launch. Then, we discuss social media and, more specifically, Twitter. We follow with a description of our exploratory study and present the findings. Finally, we discuss how social publishing and social community can be leveraged for effective knowledge cocreation to enhance new product launch success.

Figure 1 The Four Zones of Social Media



CONCEPTUAL BACKGROUND

New Product Launch

During the new product launch, information about new products typically flowed in asymmetric, one-way directions from firms to consumers. Studies show that firmcentric marketing communications, such as advertising or new product announcements (Chen, Chiang and Yang 2014), and critical marketing functions; sales, distribution, promotion, and marketing research (Benedetto 1999), can influence new product performance.

Recently however, there has been an interest in generating network effects during a new product launch (Lee and O'Connor 2003). This entails involving multitudes of nonfirm actors during new product launch periods in order to garner community support for new products. This is especially true for high-technology products in which "the value of a product to its users increases as more people use the same good" (Lee and O'Connor 2003, p. 242). For example, Dell solicits ideas from consumers through its IdeaStorm website, which was created "to give a direct voice to [consumers] and an avenue to have online 'brainstorm' sessions to allow [consumers] to share ideas and collaborate with one another and Dell" (www.ideastorm.com).

The recent launch of Pokémon Go (a location-based smartphone application/video game) illustrates another example of how consumers can become involved with new technology products (Cui and Wu 2016). Pokémon Go offers many new features and capabilities that were previously unknown in the market; it offers an augmented reality experience that pairs with a smartphone's ability to track location. Despite its simple user interface, the *Pokémon Go* game requires an indepth knowledge of its characters, tools, and resources. However, the firm did not issue an instruction book or offer directions for game play; rather, consumers helped one another to learn the game and achieve the game's objectives. Oftentimes, consumers helped to fuel firm performance by posting about the new game on their social media accounts (Tait 2016).

Information and Learning

When making new product decisions, consumers can be influenced by information about the existence, quality, and value of a new product (Horksy and Simon 1983). Consumers can obtain information about new

products in two main ways. First, they can rely on firmcentric marketing communications, such as new product announcements or advertising. While the most important role of new product announcements is to provide information about the new product, they can also be used to modify consumer behavior by increasing switching costs. Specifically, firms may use new product preannouncements to deter consumers from purchasing a competitor's product (Mishra and Bhabra 2001). Advertising can be used to increase product awareness and make claims about product quality, value, and product positioning. For example, different themes can be used to emphasize product category (e.g., professionalism for investment, technology for electronics) or culture (e.g., family values and tradition for Chinese culture, enjoyment and individualism for American culture) (Alden, Steenkamp and Batra 1999; Cheng and Schweitzer 1996; Schmitt, Simonson and Marcus 1995).

Second, consumers can obtain information from their friends and family through word-of-mouth (Horsky and Simon 1983). New product attitudes and decisions of their friends, family and acquaintances, along with their perceptions, interests or desires about features and prices can influence other consumers (Godes and Mayzlin 2004; Liu 2006). Nowadays, using personal mobile devices and computers, consumers easily spread and access new product information through electronic word-of-mouth (eWOM) or chatter that is spread electronically in online environments. Information spread via eWOM typically diffuses faster and wider than information spread via firm-centric marketing communications. As a result, consumers who are unfamiliar with products (including any new features or services) can be "virtually" introduced to new products before actually purchasing or experiencing the product.

Rethinking Social Media and Twitter

One of the most significant forms of eWOM is social media conversation. Social media is defined as an "online means of communication, conveyance, collaboration, and cultivation among interconnected and interdependent networks of people, communities, and organizations enhanced by technological capabilities and mobility" (Tuten and Solomon 2015, p. 4). In short, social media is published content that can be generated and shared by all users. It enables users to transmit and acquire information, engage in discussions, and form communities (Finin et al. 2008). Social media can play a fundamental role during a new product launch by enabling consumers to access and process new product information in customized and personalized ways. As a result, information is no longer standardized in a one-size-fits-all message as conveyed in traditional advertising (Chen, Chiang and Yang 2014). Rather, information itself, as well as the transmission or reception of the information, can be customized and personalized. Because of social media, each consumer can choose to receive specific type of content, in a specific type of format, at a specific time of day.

However, exposure to information does not necessarily equate with product acceptance. Information is simply "out there" to be absorbed. In contrast, product acceptance entails experience (either direct or indirect) with the product. Such experiences enable consumers to transform information into new beliefs, or knowledge (Kogut and Zander 1992; Nonaka 1994). Thus, it is important to distinguish between information and knowledge especially during new product launch periods. According to Li and Calantone (1998), information by itself is limited in value until it is processed and endowed with useful meaning— this is when knowledge emerges. From this perspective, one of the most important roles played by social media in modern society is the transformation of consumers from passive recipients of information to active contributors of content (O'Hern and Rindfleisch 2010). Social media enables consumers to create and distribute information that is more personal and meaningful "on their own," away from significant firm influences (Schau and Gilly 2003).

Tuten and Solomon (2015) outline how social media can fulfill different marketing functions by categorizing social media into four zones based on unique channel characteristics. Social community refers to social media channels that are based on social relationships and common interests among consumers. Examples include social networking sites, message boards, forums, and wikis. Social publishing refers to channels that focus on content distribution, such as blogs, micro sharing sites, and media sharing sites. Social entertainment refers to social media channels that offer play and enjoyment, such as social games, social music, and social television. Social commerce refers to social media channels that assist in the online



exchange of products and services, including sites that offer reviews and ratings, shopping deals, and social storefronts. Organizing social media into separate zones is helpful, especially for providing a basic framework outlining how firms and consumers use, or benefit from, particular characteristics of social media. However, we propose that firms leverage the characteristics of each zone in appropriate contexts to create competitive advantage.

Based on information sharing, social community and social publishing are most relevant for new product launch periods. To begin with, social community refers to channels that are used by consumers to communicate, collaborate, share experiences, and develop relationships with other consumers who share similar interests or identification (Tuten and Solomon 2015). Social communities are similar to brand communities, which are communities that form around a specific brand within which consumers share their ownership and consumption experiences (McAlexander, Schouten and Koenig 2002). Members of a community share language, mental models (Moorman and Miner 1997), experiences (Nonaka 1994), and common cognitive ground (Nonaka 1991). These are all critical factors that promote knowledge sharing and learning (Duncan and Moriarty 1998; Hutt, Walker and Frankwick 1995). Since a community cultivates a shared understanding of a new product, there is a stronger, more nuanced knowledge flow that fits with and is molded by its members (Nonaka 1991, 1994). Communities also provide an outlet for consumers to develop strong relationships with the firm, as well as one another. As these relationships strengthen, firms can access detailed, fine-grained, and timely information shared in the community (Granovetter 1992; Kraatz 1998; Mohr and Nevin 1990). As such, social communities enable firms to engage in meaningful interactions with consumers.

Social publishing refers to channels that enable consumers and firms to create and publish content (Tuten and Solomon 2015). Social publishing allows information to diffuse with astounding speed to enormous audiences. In other words, consumers are able to acquire information about new products by accessing the internet or by leveraging information from other consumers through blogs, expert reviews, or interestbased online forums, even in the absence of firm-provided information (Prahalad and Ramaswamy 2000). Consumers can also create and share their own reviews and opinions about products, services, and firms in the hopes of influencing others (Chatterjee 2011). Most important, social publishing enables firms and consumers to engage in online dialogue on a one-to-one level. Such individual interaction facilitates meaningful information exchange and improves the quality of communication overall (Gruner and Homburg 2000; Gustafsson, Kristensson and Witell 2012; Payne, Storbacka and Frow 2008).

Social community and social publishing can also enhance how consumers learn about new products during new product launch periods. They can enable firms to learn about their consumers' needs and wants. Learning occurs when (1) information is transmitted, (2) there is an opportunity for feedback, and (3) each party has the opportunity to question established norms or ask questions about the underlying values and goals of the other party (Argyris and Schön 1974; Tosey, Visser and Saunders 2011). As such, the bi-directional individualized information flow, which is typical in social media, facilitates learning. Enabling real-time interaction and exchange of ideas enables cocreation of knowledge between firms and consumers and collaboration during new product development (NPD) (O'Hern and Rindfleisch 2010; Piller, Vossen and Ihl 2012; Prahalad and Ramaswamy 2000).

The social media channel most relevant for information exchange and learning— as well as social community and social publishing—is Twitter. Twitter is a social networking and microblogging service that enables its users to send and read short messages called tweets. Firms and consumers can engage in conversation using Twitter by posting "tweets," or text-based messages displayed on the user's profile page. Tweets can be up to 140 characters long, which can be original content or "retweeted" content (i.e., reposting or forwarding someone else's content). Tweets can also include special features, such as hashtags, URL links, photos, or videos. By 2011, 77 percent of Fortune Global 100 firms used Twitter (compared to 61 percent for Facebook, 57 percent for YouTube, and 35 percent for corporate blogs) (McNaughton 2011). Currently, Twitter boasts 320 million active users (Rogers 2015).

Examining information that is shared on Twitter can shed light on how social community and social publishing influence new product launch periods. Specifically, Twitter has several features that are relevant for social community and social publishing. First, the hashtag feature can be used to identify social communities that emerge around common interests and



shared language. The hashtag feature (#) can categorize tweets by topic or keyword. These are especially valuable for creating ad-hoc online discussion communities that center on particular information (Chang 2010; Yang et al. 2012). Second, social publishing efforts can be viewed on Twitter because of its public nature and its transparency in allowing direct and unobstructed observation of online communications between firms and consumers. Specifically, the reply feature (@) can help track communication between the firm and an individual consumer. Finally, with both firms and consumers actively sharing information on Twitter, it is a significant social media channel for knowledge cocreation during a new product launch period.

EXPLORATORY STUDY: PLAYSTATION 4 AND XBOX ONE PRODUCT LAUNCH

Research Context

This study centers on social community and social publishing during the new product launches of the video game consoles PlayStation 4 and Xbox One. The context of video game consoles was chosen because video gaming community members are often tech-savvy, avid social media users who participate in online social community discussions to share productrelated information. The new product launches of PlayStation 4 and Xbox One were preceded by launch announcements in early 2013, followed by high levels of anticipation and excitement in the gaming community. Since the previous generation consoles were each introduced seven years (PlayStation 3) and eight years (Xbox 360) ago, the video gaming community was more than eager to release its "pent-up demand." The excitement was perhaps most evident on social media, where Twitter alone generated millions of tweets discussing the new consoles prior to, during, and following the launch.

With respect to the product itself, PlayStation 4 and Xbox One are similar in many ways. For instance, both new consoles were introduced with cutting-edge new technologies that improved and streamlined the gaming experience with impeccable graphics, better resolution, and faster processing speeds. Both consoles are also not backward compatible, which prevents games played on previous generation consoles from being played on these new generation consoles.

However, in terms of the positioning strategy, the two consoles adopted different approaches. Figure 2 shows sample scenes from the online launch advertisements illustrating the positioning strategies of each product. As can be seen, PlayStation 4's launch advertisement was titled "For the Players Since 1995." By emphasizing that the advertisement was inspired by "#PlayStationMemories," the advertisement appealed to viewers' emotion and nostalgia as it showcased the life of a gamer going through each previous generation of PlayStation consoles. PlayStation 4 geared more toward the hard-core gaming community, focusing on a superior gaming experience by offering live-streaming, supporting independent game makers, and redesigning controllers to be more ergonomic and tightly integrated with the hardware.

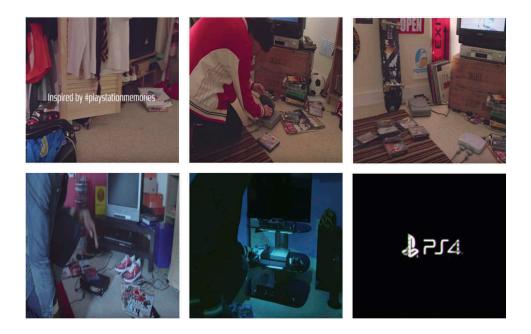
On the other hand, as seen in the Xbox One advertisement pictured in Figure 2, Microsoft targeted the wider nongaming community by positioning the console as an "all-in-one entertainment center" and showcasing its unique applications and features. Specifically, Microsoft heavily promoted the Xbox One Kinect feature, which is a motion-sensing, speech-recognizing accessory. Kinect, which was originally packaged as a bundle with the console, allows users to control everything in the living room using voice commands and hand gestures; this includes turning the TV on and off, raising the volume, changing the channel, watching movies on Netflix, making video phone calls on Skype, and easily switching between watching TV and playing games. The Kinect bundle was not only the biggest differentiating factor between PlayStation 4 and Xbox One in terms of product positioning, but it was also the sole reason behind the price difference between the two consoles (PlayStation 4's \$399 compared to Xbox One's \$499). As expected, the higher price tag for Xbox One created significant conversation among the gaming community.

Data Collection

To observe how Twitter conversation changes during a new product launch, we collected tweets during the pre-launch, launch, and post-launch periods of both consoles. To ensure sufficient collection of data to observe changes, we collected tweets one week prior to the launch date (for the pre-launch period) and one week following the launch date (for the postlaunch period). Based on PlayStation 4's launch date



Figure 2 Launch Advertisements for PlayStation 4 and Xbox One Note: PlayStation 4's online launch advertisement showcasing different generations of the gaming console (online advertisement URL: https://www.youtube.com/watch?v=wZkMdi3XBhw).



Note: Xbox One's online launch advertisement showcasing game titles and the Kinect feature (online advertisement URL: https://www.youtube.com/watch?v=cKeptMVKlsY).





(11/15/2013) and Xbox One's launch date (11/22/ 2013), we collected data from 11/08/2013 to 11/29/ 2013. This three-week period includes the pre-launch, launch, and post-launch periods of both consoles. However, since the last day of data collection fell on Black Friday, we extended our data collection for one additional week to capture Twitter conversation during the Black Friday shopping rush (until 12/05/2013). After filtering non-English tweets, a total of 818,784 tweets were collected and examined for analysis.

To examine how Twitter conversation evolves within social communities, we collected tweets that include hashtags and keywords that reference the two consoles. Variations of console references were considered to represent the central hashtag and keyword. For example, the following variations were collected for Xbox One: XB, XB1, xbone, xbones, xbox, and xboxone. The tweets were collected using Greasemonkey, a Mozilla Firefox extension that allows users to install scripts to scrape and collect content from the web.

To identify important keywords likely to be discussed within the social communities, we collected popular press articles that mentioned PlayStation 4 and Xbox One during the pre-launch, launch, and post-launch periods from the Factiva database. Then, we conducted a content analysis of frequently mentioned keywords from the articles. For the content analysis, the ATLAS.ti program was used. ATLAS.ti is a qualitative data analysis program that facilitates systematic analysis of unstructured, text-based data. Again, for all keywords, variations were aggregated to represent the central keyword. For example, the following variations were considered to represent bundle: bundle, bundles, and bundling.

To observe social publishing and the ways that firms communicate with consumers on Twitter, we identified Twitter accounts managed by each firm. To interact with consumers via Twitter, Sony manages multiple accounts for its products. Sony discussed issues related to PlayStation 4 using the PlayStation account (@PlayStation) and also interacted with consumers through its support account (@AskPlayStation). Similarly, Microsoft also created a unique Twitter account for Xbox (@Xbox) as well as a support account (@XboxSupport). Interestingly, both Sony and Microsoft also interacted with consumers through spokesperson accounts. Shuhei Yosida (@yosp), President of Worldwide Studios, Sony Computer Entertainment, actively communicated with consumers as did Microsoft's Xbox team's Larry Hryb (@majornelson).

SUMMARY OF FINDINGS AND DISCUSSION

Social Community: Cultivating Shared Language

A distinguishing feature of social community is shared language. To better understand how shared language emerges and evolves during a new product launch, we observed keywords that were mentioned in the tweets during the new product launch period. Of the total 818,784 tweets collected between 11/08/2013 and 12/ 05/2013, 437,993 tweets included hashtags or keywords referencing PlayStation 4 and 380,791 tweets included hashtags or keywords referencing Xbox One (see Table 1). For our analysis, we consider consumers who reference PlayStation 4 in their tweets to represent a PlayStation 4 (PS4) social community and consumers who reference Xbox One in their tweets to represent an Xbox One (XB1) social community.

Overall, regardless of social community, consumers discussed games the most, which confirms the well-established fact that video gaming console wars revolve around video game titles. Based on the content analysis, the most discussed keywords were, in order of frequency: games, graphics, bundle, price, kinect, and livestreaming. As shown in Figure 2, these keywords correspond with features emphasized in the launch advertisements, especially for the Xbox One console. Interestingly, the keyword games was mentioned the least on the day before product launch for both consoles. This suggests that while consumers are highly interested in games as advertised, on the day of product launch, they focused more on the console itself.

Following games, the PS4 social community was most interested in graphics while the XB1 social community was most interested in kinect. This shows that the most popular keywords coincide with the differentiating features between the two consoles. Specifically, the differentiating features for PlayStation 4, which targeted the hardcore gamers, were features that improved the gaming experience, such as superior graphics. The differentiating feature for Xbox One was the Kinect, which also created conversation about the Kinect bundle and subsequent price difference. This suggests that advertising during new product launch can successfully inject positioning information into the market.

Further, the PS4 social community discussed graphics the most right after the launch of PlayStation 4. This suggests that consumers were mentioning graphics as



Table 1 Summary of Change in Shared Language During PlayStation 4 and Xbox One Launch Period

	11/08-12/05	11/09-11/14	11/15	11/16-11/21	11/22	11/23-11/28	11/29-12/05
		PlayStation 4 Pre-Launch	PlayStation 4 Launch	PlayStation 4 Post-Launch			Black Friday
				Xbox One Pre-Launch	Xbox One Launch	Xbox One Post-Launch	Black Friday
PS4 Social Co	ommunity						
#PS4	437,993						
xboxone	51,938				+++		
playstation	21,918	+++					
game	36,461	+++					
graphics	4,509			+++			
bundle	3,290				+++		
price	2,305					+++	
kinect	470					+++	
livestreaming	133			+++			
XB1 Social Co	ommunity						
#XB1	380,791						
xboxone	404,378			+++			
playstation	12,689	+++					
game	33,999			+++			
kinect	4,718			+++			
graphics	2,264						+++
price	1,536						+++
bundle	1,338						+++
livestreaming	485						+++

they actually experienced the quality of graphics while playing games. Interestingly, the XB1 social community discussed kinect the most a few days before and after launch of Xbox One. The mentions of the keyword kinect that occurred prior to launch may represent consumers' anticipation of the new feature while the mentions of the keyword that occurred after the launch may represent consumers sharing their actual experience with the feature.

Table 2 summarizes each social community's shared language on launch days. On PlayStation 4's launch day (11/15), the PS4 social community mentioned the following keywords, in order of frequency: games, xboxone, playstation, graphic, bundle, price, kinect, and livestreaming. Meanwhile, the XB1 social community mentioned the following keywords, in order of frequency: xboxone, games, playstation, kinect, graphic, price, bundle, and livestreaming. On Xbox One's launch day (11/22), the PS4 social community mentioned the following keywords, in order of frequency: xboxone, game, playstation, bundle, graphic, price, kinect, and livestreaming. Meanwhile, the XB1 social community mentioned the following keywords, in order of frequency: xboxone, game, playstation, kinect, graphic, livestreaming, price, and bundle.

The difference between the two social communities with respect to shared language on launch days suggests that each social community has different characteristics and behaves differently during product launch. For instance, on each console's launch day, the PS4 social community focused on the console that was launching, as opposed to the XB1 social community which always focused on Xbox One. Interestingly, each community focused on its console's distinguishing feature on the competitor's launch day. On PlayStation 4's launch day, the XB1 social community discussed kinect more than graphic. Similarly, on Xbox One's launch day, the PS4 social community discussed graphic much



		nch Day /15)	XB1 Launch Day (11/22)				
	PS4 Social Community	XB1 Social Community	PS4 Social Community	XB1 Social Community			
xboxone	881	16,062*	5736*	14,955*			
playstation	811	671	739	423			
bundle	116	23	305	20			
game	1,171*	1,265	1528	915			
graphic	140	95	208	62			
kinect	7	155	34	201			
livestreaming	4	3	5	29			
price	63	60	139	27			

Table 2 Summary of Shared Language on PlayStation 4 and Xbox One Launch Davs

more than kinect. This illustrates the importance of social communities since it suggests that information disseminated by firms or popular press may not be the information sought by consumers. For instance, on PlayStation 4's launch day, contrary to the public's focus on PlayStation 4, the XB1 social community focused on Xbox One and the Kinect feature.

Notes: Content and frequency analysis of keywords conducted with ATLAS.ti.

Social Publishing: Cultivating Personalized Communications

As summarized in Table 3, between 11/08/13 and 12/05/13, the PS4 social community reached out to the PlayStation account (@PlayStation) the most followed by the spokesperson account (@yosp). Overall, the PS4 social community reached out to the PlayStation account (@PlayStation) the most on 11/ 18/13, in between the launch days of each console. On both launch days, the PS4 social community also to PlayStation account reached out the (@PlayStation) the most. The spokesperson account (@yosp) was mentioned the most on 11/11/13, a few days before the launch of PlayStation 4 and the support account (@AskPlayStation) was mentioned the most right after the launch on 11/16/13.

During the same time period, the XB1 social community reached out to the Xbox account (@Xbox) the most followed by the support account (@XboxSupport). Similar to the PS4 social community, the XB1 social community reached out to the Xbox account (@Xbox) the most on 11/19/13, in between the launch days of each console. On both launch days, the XB1 social community also reached out to the Xbox account (@Xbox) the most. The spokesperson account (@majornelson) was mentioned the most on 11/19/13, a few days before the launch of Xbox One (also in between the launch days each console) and the support account (@AskPlayStation) was mentioned the most on the launch day (11/22/13) as well as a few days after the launch day (11/24/13).

This suggests that social communities have similar needs as well as different needs for personalized communication. In terms of similarity, each social community reached out to the main console accounts (@PlayStation and @Xbox) the most around the same time (11/18/13 and 11/19/13, respectively). Both social communities also interacted with the spokesperson accounts (@yosp and @majornelson) the most a few days before the launch of the consoles and interacted with the support accounts (@AskPlayStation and @XboxSupport) the most right after the launch of the consoles. However, the two social communities also differed in their use of personalized communication. Overall, the XB1 social community engaged in more interaction with the firm than the PS4 social community. The XB1 social community also interacted with a support account more than the PS4 social community. This may be due to Xbox One introducing a completely new feature, the Kinect. As such, a firm's positioning strategy may also affect the communication needs of their consumers.

MANAGERIAL IMPLICATIONS

One of the most important benefits of social media—from the firm's perspective— is the ability to directly and



Table 3 Summary of Personalized Communication During PlayStation 4 and Xbox One Launch Period

					Р	S4 Socia	al Comn	nunity							
Twitter Accounts	Total	11/8	11/9	11/10	11/11	11/12	11/13	11/14	11/15	11/16	11/17	11/18	11/19	11/20	11/21
@PlayStation	6762	222	91	122	282	223	353	173	251	434	321	569	406	522	201
@AskPlayStation	1456	13	12	9	17	16	8	4	81	173	105	99	48	56	36
@Yosp	3784	90	183	220	434	355	152	162	101	198	187	223	118	144	90
@Xbox	1248	26	33	10	20	40	53	37	48	60	36	91	44	120	93
@XboxSupport	158	4	13	2	10	3	6	1	3	6	6	2	4	8	6
@Majornelson	121	1	10	4	6	2	2	6	1	1	2	6	5	10	16
Twitter Accounts	Total	11/22	11/23	11/24	11/25	11/26	11/27	11/28	11/29	11/20	12/1	12/2	12/3	12/4	12/5
@PlayStation	6762	246	186	155	170	235	269	195	249	180	167	132	177	97	134
@AskPlayStation	1456	45	81	64	65	75	35	9	98	84	59	48	44	21	51
@Yosp	3784	191	78	106	66	93	77	89	66	104	83	68	40	29	37
@Xbox	1248	111	70	47	23	37	128	21	13	10	17	17	10	15	18
@XboxSupport	158	29	6	11	0	8	2	0	4	5	5	2	3	5	4
@Majornelson	121	3	5	9	3	2	7	0	2	2	1	9	5	1	0
					Х	B1 Socia	al Comn	nunity							
Twitter Accounts	Total	11/8	11/9	11/10	11/11	11/12	11/13	11/14	11/15	11/16	11/17	11/18	11/19	11/20	11/21
@Xbox	12260	253	275	184	402	454	327	415	706	509	420	703	872	714	592
@XboxSupport	4452	79	85	43	221	88	51	44	97	89	133	115	114	117	54
@Majornelson	2365	61	116	43	128	87	65	91	95	78	81	90	247	131	89
@PlayStation	769	13	9	14	16	30	45	14	146	28	39	38	29	29	23
@AskPlayStation	22	0	0	0	0	0	1	0	6	2	1	0	1	1	1
@Yosp	98	5	4	9	5	9	3	7	7	3	3	4	3	5	2
Twitter Accounts	Total	11/22	11/23	11/24	11/25	11/26	11/27	11/28	11/29	11/20	12/1	12/2	12/3	12/4	12/5
@Xbox	12260	 516	324	619	415	462	570	325	389	257	379	478	254	227	219
@XboxSupport	4452	366	242	366	207	306	252	171	262	227	214	162	126	107	114
@Majornelson	2365	49	60	57	73	86	97	25	116	67	85	79	60	58	51
@PlayStation	769	11	8	13	14	20	94	18	38	12	25	7	13	14	9
@AskPlayStation	22	0	0	0	3	20	0	0	1	0	1	1	0	0	1
@Yosp	98	0	1	1	4	3	4	1	2	2	3	3	1	3	1

Notes: Content and frequency analysis of keywords conducted with ATLAS.ti.

Values denote number of personalized communication between firm and individual consumer.

continuously interact with consumers in real-time (Dahan and Hauser 2002; Prahalad and Ramaswamy 2004; Sawhney, Verona and Prandelli 2005). Such interaction enables firms to pursue a more nuanced launch strategy based on a social and personalized approach, especially when compared to the typical standardized approach associated with traditional advertising and marketing communications. The findings suggest that Twitter is more than an information transmission platform; it can enhance a firm's new product launch effort by cultivating the information sharing nature of social publishing and social community to facilitate knowledge cocreation.



Next, we outline managerial implications based on our findings. While our exploratory study focuses on insights gained from observing Twitter conversation during the launch of PlayStation 4 and Xbox One, managers should be able to apply the insights gained from this study to other similar product categories and social media platforms.

Track Shared Language to Gain Market Insights

Overall, Xbox One was a hot topic. Both the PS4 social community and XB1 social community mentioned the keyword *xboxone* the most on the launch days for both PlayStation 4 and Xbox One (one exception is that the PS4 social community mentioned the keyword *game* the most on PlayStation 4 launch day). The high level of interest in Xbox One is most likely due to the introduction of the Kinect feature. As a result, an analysis of the keyword *kinect* alone revealed interesting insights.

Our analysis of keywords revealed that different consumers may use different keywords to identify the same feature. For example, when discussing Kinect, the XB1 social community used the keyword *kinect* more, while the PS4 social community used the keyword *bundle* more. This suggests that social communities are unique to the extent that they each have shared language within the social community. While consumers may be interested in competitors' products and features, they may not share the same language (i.e., the commonly used keywords) to describe new products and features.

On the other hand, shared language within one community may also represent different consumer needs and wants. For example, the XB1 social community discussed kinect the most a few days before and after launch of Xbox One. Mentions of *kinect* that occurred prior to the launch of Xbox One may represent consumers' anticipation of the new feature, while mentions of kinect after the launch may represent consumers sharing actual experiences with the new feature. In other words, despite Microsoft's efforts in creating excitement for Kinect prior to launch through announcements, press releases, and expert trial reviews, many consumers waited to discuss Kinect until after they had a chance to experience it. This suggests that shared language may organically evolve as consumers continue to transform information into knowledge as they gain experience. Therefore, it is critical for firms to continuously interact with consumers and track the shared language that evolves within a social community. On a more practical level, this suggests that when introducing new products, it may be effective to allow consumers to experience the product and share their experiences first rather than forcing purchase and trial through a bundled package introduction (Pitta and Fowler 2005).

Analysis of other keywords also revealed interesting insights. During the pre-launch period, consumers discussed game titles the most. However, contrary to consumers' desires to discuss and acquire more information on game titles, both firms only released limited information, such as launch titles (i.e., games that can be played on launch day). A detailed look at the actual consumer conversations revealed that most consumers were planning on making their purchase decisions based on the game titles available on the consoles. Therefore, firms may consider securing exclusive rights to game titles early on so they can provide more information to consumers prior to launch. Alternatively, firms may want to seek alliances with video game publishers, retailers, and other potential partners to increase chatter and conversation in the months (rather than weeks) prior to product launch to increase new product awareness. Studies have shown that advertising alliances between complementary products can enhance new product introduction success (Samu, Krishnan and Smith 1999).

Engage in the Right Personalized Communication at the Right Time

Engaging in personalized communication with consumers can allow firms to exchange meaningful information with consumers. This is because spending time and effort to personalize responses to individuals demonstrate a firm's commitment to consumers, which motivates consumers to become more involved (Gordon, McKeage and Fox 1998) and willing to help (Howard, Gengler and Jain 1995) in return.

Firms can effectively use multiple Twitter accounts to communicate with consumers and provide the right support at the right time to reduce perception of risk. For example, we observed that consumers wanted to communicate with spokesperson accounts the most right before the product launch. Consumers are risk-averse and may seek justification for their purchases, especially for big-ticket items (Akaah and Korgaonkar 1988). With the proliferation of products and services in the market, consumers increasingly rely on the people behind products, rather than the product itself, to obtain information (Berry 1995; Gordon, McKeage and



Fox 1998; Grönroos 1995). Spokesperson accounts can be used to assure consumers that they are speaking with a "real person" and provide emotional support to reduce consumers' anxiety. Once the product launches, firms can switch their efforts to effectively managing their support accounts to enhance consumers' experience with the product.

CONCLUSION

Academic studies have shown that observing social media content can predict real-world outcomes. For example, researchers have shown that analysis of Twitter conversation can effectively predict the stock market (Bollen, Mao and Zeng 2011), replicate consumer confidence and presidential job approval polls (O'Connor et al. 2010), and forecast box-office movie revenues (Asur and Huberman 2010). In this study, observation of social media content followed consumer response to a new product launch. We also gained interesting insights on how social community and social publishing can be leveraged to facilitate knowledge cocreation between firms and consumers during a new product launch period. Specifically, our exploratory study shows that simple tracking of evolution of keywords during the pre-launch, launch, and postlaunch periods of a new product introduction can help firms better understand their consumers' needs and wants. Using this knowledge, firms can effectively interact with consumers by approaching consumers at the right time, with the right information, using the right language, through the right channel to enhance new product launch success.

Although our study builds on Tuten and Solomon's (2015) Zones of Social Media framework (specifically the social community and social publishing zones), future studies can investigate how the other zones, either alone or in combination, may be leveraged to enhance firm performance. Our study also has several limitations, which may be explored with future research. First, the findings and recommendations are based on observation from an exploratory study. An empirical analysis of keywords and their effect on actual firm performance, such as stock prices, can provide in-depth insights on which keywords, or what types of conversation firms should manage to enhance new product success. Second, we only examine one type of social media platform, Twitter. Future studies should also investigate other online platforms, such as

other social media platforms, online brand communities, forums, and discussion boards, to increase the generalizability of this study. This is important since there may be venue effects, which are driven by the type of consumers, platform or content (Schweidel, Moe and Boudreaux 2011). Third, we examined one product category for the study. While studies have shown that online conversation is particularly more important in information-rich product contexts (Vigar-Ellis, Pitt and Berthon 2015), future studies may need to examine more product categories to increase generalizability.

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