Social media in product development

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ABSTRACT

With the increasing availability of the internet, a significant amount of data has been generated through social media. Consumer goods companies, scientists, and innovators are competing to find ways to leverage this information. Social media information is considered useful for marketers as they can directly track consumer responses to marketing campaigns, product performance, and the changes in consumer sentiment toward a brand. Many companies have also developed consumer engagement programs through social media. However, the utility of social media learning in product development seems indirect, or perhaps illusive. While many marketers are being challenged to demonstrate return on investment and many sensory and product research professionals are navigating different pathways to leverage social media information, this paper presents a fresh way of conducting the query to generate consumer and product relevant information. Coffee freshness was used as the research topic. The research here confirmed the validity of social media output. It also demonstrated the value of multi-language and cross-sectional queries. Lastly, best practices in social media research were discussed and recommendations were made regarding how to effectively include the social media tool in sensory and the product research toolbox. The authors challenge the sensory product research professionals to include social media data in their future consumer research framework. Failure to leverage social media may result in higher expenses in the cost of product development when compared to using only traditional consumer and product research tools. More importantly, researchers may miss insights that are impractical or difficult to obtain from traditional research tools.

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Introduction

About social media

Social media refers to an array of platforms that allow people to interact, create, share, and/or exchange information and ideas in virtual communities and networks. Early iterations of social media included Bulletin Board System (BBS) where users communicated with one another via text messages. During the 1970s to the mid-1990s, social media was used by hobbyists for uploading and downloading software and data, reading news and bulletins, and exchanging messages with other users. The launch of social media sites such as Friendster, MySpace, LinkedIn and Facebook in the early 2000's signaled the beginning of significant growth in the numbers of consumers engaged in social media, and its entry into the cultural mainstream.

With such a large customer tracking data source for analysts to mine, the rapid data growth in social networking triggered the development and utilization of social media analytics, marketing, and sales tools. Data generated through social networking between 2010 and 2012 accounted for 90% of the total data in history (IBM, 2012). This Big Data era is affecting people's lives in many regards. Marketers have been conducting campaigns via social networks and assembling new social media divisions to manage this relatively new and sustainable large quantity of information. Many social media research tools have been developed, and several books have been published, for example Real Time Marketing and PR (Scott, 2012), and Social Media ROI (Blanchard, 2011). However, most of the developments and discussions have been around brand performance, advertising campaign tracking, and complaint monitoring. Even though many argued that we should move forward from the listening mode to insight generation mode, few looked into utilizing social media for insights related to the development of products. Unlike the marketing field, adoption of social media tools for consumer research has remained questionable as it is more difficult to illustrate a return on investment in this type of application. Researchers are concerned about the reliability of the

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Table 1
Search parameters.

	Query 1	Query 2	Query 3	Query 4
Language	English	French	Spanish	English
Location	Globally	France	Latin America	Globally
Data range	1 Year span of data (The time span varies from 10/2011–12/2012 to 7/2012–7/2013 depending on the time of the search conducted)	1 Year span of data from 7/09/2012 to 7/09/2013	1 Year span of data from 3/9/2012 to 3/9/2013	Two 1 year spans of data 10/19/2011 to 10/19/2011 and 7/28/2012 to 7/28/2013

Table 2
Volume of relevant posts.

	Total mentions
Simple Query—"Fresh Coffee"	**44,004**
Multidimensional Query	**29,558,892**
Fresh Coffee types	23,540,209
Source of beans	127,450
Degree of roast	65,500
RTD	4948
Instant	2167
Coffee grounds	58,961
Coffee chain stores	5,707,517
Coffee machines	52,140

The items in bold type are the total mentions for each type of query. The rows below Multidimernsional Query each contribute to the Multidimensional Query total.

Table 3
Coffee insights from social media Simple Query, Multidimensional Query vs. IFF historical qualitative data.

	Simple	Multi-dimensional	Past IFF data
Aroma			
Great smell	√	√	√
Richer, full of flavonoids penetrating nose, nice chocolate aroma	√		
Regular coffee is strongly associated with smell and taste, while for specialty coffee such as espresso and latte taste was more important. Smell was secondary.		√	
Taste			
Strong/Robust/Rich/deep	√	√	√
Balanced		√	√
Not burnt	√	√	√
No or low bitter	√	√	√
No offnotes	√	√	√
Pleasant aftertaste		√	
Mouthfeel			
Smooth		√	√
Body		√	
Physical property			
Fresh grounds	√	√	√
Fresh brewed		√	
Quality bean		√	
Hot temperature	√	√	

Fig. 1. Word cloud on different types of coffee.

spans across many brands and to broad product categories. Specifically, we are more interested in product performance rather than individual brand performance. IFF's SCI researchers carried out social media research with the following questions in mind:

- How do we conduct a search to form meaningful category information?
- What are the strengths and weaknesses of results derived from social media as compared to traditional qualitative methods?
- What are the best practices for conducting social media searches?
- How can social media research be leveraged and mixed with traditional research tools to generate meaningful returns to the business?

About the research topic

With the above research questions in mind, the IFF team conducted social media research into the topic of "coffee freshness". Coffee was selected for a variety of strategic reasons. First, coffee is the largest non-alcoholic beverage by volume in the world (Euromonitor, 2011). Coffee sales are showing steady growth. Instant coffee, ready to drink (RTD) and single-serve, especially, are gaining momentum (International Coffee Council, 2012). The coffee industry has genuine interest in preserving "fresh" coffee taste. Second, IFF has conducted extensive research on coffee analytically, sensorially, and hedonically, and has been continuously collecting data to refresh knowledge in this area. Existing internal knowledge could be used as a triangulation point for the social media outcome. For example, it is believed that coffee freshness is linked to aroma analytically (Yeretzian et al., 2006), and consumers have expressed the hedonic pleasure of smelling freshly brewed

information and many have not identified an effective query to generate relevant insights. Plus, it is not clear how big data may fit into a traditional research paradigm. The challenge for Insight groups is to illustrate how data from social media platforms give a healthy return on investment and that insights derived are reliable when compared to traditional techniques.

IFF's Sensory & Consumer Insights (SCI) team took this challenge and implemented a social media strategy to meet business needs. Unlike marketers who are interested in consumer responses to a campaign or a brand (Kerpen, 2011), IFF's primary interest