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Introduction to the Special Issue on the Emergence and Impact of User-Generated Content

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The growth of the "social" Web has resulted in the enormous growth of what is referred to as user-generated content, or UGC. UGC takes the form of product reviews, descriptions of product usage, "homemade advertising," blogs, and other consumer-initiated contributions. Following a research competition cosponsored by the Marketing Science Institute and the Wharton Interactive Media Initiative (now known as the Wharton Customer Analytics Initiative), a call for papers for a special issue of *Marketing Science* resulted in 69 submissions. Of these, eight papers were accepted, covering a range of issues such as how and why people make UGC contributions, the impact of UGC contributions, and new methods for analyzing UGC data.

Key words: user-generated content

Motivation

The Internet of the 1990s featured the development of e-commerce as a new retail channel. Start-ups such as Amazon, eBay, and Webvan that were Internet "pure plays" were joined by well-established "brick-and-mortar" companies such as J.C. Penney, Barnes & Noble, and Southwest Airlines to create a channel that today is worth over $200 billion in sales in the United States and multiples of that globally (eMarketer 2012). Most of these "e-companies" looked very much like their physical counterparts (either stores or catalogues), offering merchandise for sale to anyone with a credit card and convenience in the form of "last-mile" delivery by Federal Express or UPS.

If the 1990s was the decade of e-commerce, the early part of the 21st century has become the era of social commerce. The basic idea is that customers are no longer passive receivers of information from marketers, whether it is advertising or products featured on an e-commerce site, but they instead interact with each other and the company to influence consumer purchasing and company decision making. These interactions take the form of product reviews, descriptions of product usage, "homemade advertising," blogs, and other consumer-initiated contributions. Taken together, these forms of user interactions on the Web have become known as user-generated content, or UGC.

The growth of UGC has been astounding. It is estimated that the 850 million users of Facebook post, on average, 90 pieces of content each month.[1] About 60 hours of video are uploaded to YouTube every minute,[2] resulting in eight years of new content every day. Several of the most highly rated commercials that ran during the 2012 Super Bowl, one for Chevy Camaro and several for Doritos, were created by consumers as a result of contests run by General Motors and Frito-Lay. Virtually every new Internet start-up has some form of social component based on UGC, and in many cases they create entirely new forms of this emerging medium. As just one recently emerging example, Pinterest (which lets users create online scrapbooks to compile and share images) reached 10 million unique visitors faster than any other start-up in history, according to comScore (Needleman and Tam 2012). Commercial firms have been quick to seize upon UGC as a new way to promote and create engagement with their brands, but whether/how it can drive substantial incremental profits is still an open question.

The huge growth in UGC has, of course, had a simultaneously huge impact on the practice of marketing. One major impact is that brand managers no longer fully control the messaging they use to create brand strategies. Although the tools available to

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[1] Wikipedia contributors. "Facebook." *Wikipedia, The Free Encyclopedia*, http://en.wikipedia.org/wiki/Facebook (accessed March 22, 2012).

[2] Wikipedia contributors. "You Tube." *Wikipedia, The Free Encyclopedia*, http://en.wikipedia.org/wiki/YouTube (accessed March 22, 2012).

brand managers to build brand equity have evolved and expanded, they cannot keep up with everything that is being said in blogs, in comments on sites such as Yelp, or in videos on YouTube. Marketing managers at companies such as United Airlines can still actively develop strategies for their brands, but the impact of nearly 12 million views of the homemade "United Breaks Guitars" video is something that can lay waste to any well-formulated marketing plan.

Beyond its direct impact on commercial practices, the growth in UGC has created tremendous opportunities for marketing researchers and scholars. The huge amount of UGC posted on the Internet has resulted in extraordinary new sources of data for marketing scientists to process and analyze. We now have access not only to purchasing and marketing mix data but also to rich information about how the consumers are interacting with each other and the products/services they consume. This provides a much more complete picture of the influences on buyers and has the potential to substantially improve our modeling efforts and, ultimately, marketing decision making.

However, all this data richness has some associated costs. First, as noted by several papers in this issue, the challenges include the processing of the vast amounts of data generated; second, much of the data are qualitative rather than quantitative in nature, which requires new approaches for analysis and integration with variables that are measured more conventionally; and third, sometimes UGC data can take on a life of their own. As researchers, we are tempted into obsession with new performance metrics such as likes, followers, and views—but we may lose sight of the fact that many of these measures are just a means toward an end. Our goal is to demonstrate how these measures impact profitability either directly or indirectly.

These opportunities and challenges have provided strong motivation for the valuable set of papers that we present in this special issue.

The Call for Papers
The papers submitted to the special issue were initially stimulated by a call for research proposals jointly sponsored by the Marketing Science Institute (MSI) and what was then called the Wharton Interactive Media Initiative (now known as the Wharton Customer Analytics Initiative). The topic for the call for research proposals was the same as the title of this special issue: "The Emergence and Impact of User-Generated Content." Fifty proposals were received by the deadline of January 15, 2009, and 13 received research funds. A number of these projects were presented at a conference held at the Wharton School in the fall of 2009.

As a result of that successful event, a call for papers for this special issue was distributed. A total of 69 submissions were received through the end of February 2010. After a thorough review process, the following eight papers were accepted for publication. Nearly 300 scholars in marketing, information systems, and other related disciplines were involved in this process as authors, reviewers, or area editors (including most of the members of the editorial board of this journal). This, by itself, is a strong indication of how mainstream the topic of UGC has become in the few short years since it first emerged as a new phenomenon in our field.

The Papers
Three of the papers attempt to give us a better understanding of how and why people contribute UGC in various ways. In the paper by Moe and Schweidel, "Online Product Opinions: Incidence, Evaluation, and Evolution," the authors develop a model of an individual's decision to contribute a product rating on an e-commerce platform. Their model attempts to examine the joint questions of whether to contribute as well as what to contribute. In "Network Characteristics and the Value of Collaborative User-Generated Content," Ransbotham, Kane, and Lurie look at UGC contributions for a collaborative forum such as Wikipedia. These efforts are different from individual contributions because of the concurrent editing and the lack of control of the final contribution by any one person. Their paper studies the value and antecedents of this kind of UGC. The paper by Albuquerque, Pavlidis, Chatow, Chen, and Jamal studies online platforms that are sponsored by firms to attract UGC. In "Evaluating Promotional Activities in an Online Two-Sided Market of User-Generated Content," the authors examine efforts by media platforms to attract UGC as well as the activities conducted by content creators to encourage UGC contributions.

Another three papers examine the impact of UGC contributions. In "Content Contributor Management and Network Effects in a UGC Environment," Zhang, Evgeniou, Padmanabhan, and Richard develop a vector autoregressive model to study the financial implications of investments in the retention and acquisition of content contributors and consumers. They highlight the importance of understanding the network dynamics that are the economic foundation of the content contributors. In the paper by Godes and Silva, "Sequential and Temporal Dynamics of Online Opinion," the authors examine and explain the evolution of online ratings over time. They offer new perspectives on one of the first and strongest "empirical generalizations" of the UGC era: Why do ratings tend to get worse over time? They argue that there are two

distinct underlying processes at play, and they use data from Amazon.com to support their arguments. In a somewhat different vein, Mallapragada, Grewal, and Lilien study the impact of UGC contributions to new product development in open source communities. Their paper, "User-Generated Open Source Products: Founder's Social Capital and Time to Product Release," examines two groups of open source participants who collaborate to develop new products: developer users and end users. This paper is an important part of the special issue because it demonstrates that UGC can be just as relevant and vital in the business-to-business world as it is with consumer-oriented products/services.

Two other papers develop new methodologies for analyzing UGC data. In "Designing Ranking Systems for Hotels on Travel Search Engines by Mining User-Generated and Crowdsourced Content," Ghose, Ipeirotis, and Li focus on ranking systems (e.g., number of stars) that provide information to consumers about which products or services to purchase. The authors develop a new ranking system that incorporates UGC directly into the types of product/service rankings that have become ubiquitous in today's marketplace. Finally, in the paper by Netzer, Feldman, Goldenberg, and Fresko, "Mine Your Own Business: Market-Structure Surveillance Through Text Mining," the authors shed new light on a topic that has been popular in our field for several decades. Specifically, they show how UGC can be used to develop information about competitive market structures. The authors develop a new text-mining approach that can be used to create maps that have strong external validity when compared with conventional mapping approaches and can also provide additional information that the more conventional approaches cannot.

Summary

Although these 8 papers represent the best of the 69 submissions we received, there were numerous other excellent and interesting manuscripts—many of which will likely reemerge as new papers in this and other top journals. It has been fascinating for us to watch this emerging research area broaden and start to mature over the three years since this special issue was first conceptualized. Clearly, understanding how and why people contribute UGC, how it works to create sales and other output metrics, and how we can better utilize the different sources of UGC data has sparked significant interest in the marketing science community—and we feel that the best is yet to come. Not only will this area continue to produce a considerable amount of interest among academics and practitioners for years to come, but it will likely be deeply woven into the tapestry of our field so that it may no longer seen as a stand-alone topic. We can foresee a day when some UGC-related elements are a part of almost every paper published in *Marketing Science*—just as UGC has become an integral part of almost every industry. We hope that this special issue is a first step toward this promising future.

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