

The Revolution Will Not Be Televised: Introduction to the Special Issue on Marketing Science and the Internet

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There is a revolution happening—a startling and amazing revolution that is altering everything from our traditional views of how advertising and communication media work to how people can and should communicate with each other.

That revolution is the Internet—the massive global network of interconnected packet-switched computer networks—and as the most important innovation since the development of the printing press, the Internet has the potential to radically transform not just the way individuals go about conducting their business with each other, but also the very essence of what it means to be a human being in society.

Since the introduction of the first graphically-oriented Web browser, Mosaic, in 1993, the Internet has experienced phenomenal growth, both in terms of the number of computers and devices connected to it and the number of individuals and firms providing and accessing content on it (Hoffman et al. 2000). The first significant commercial activity appeared on the Web by 1994 and in the ensuing five years, the commercialization of the Internet has exploded. There are now very few countries and territories left in the entire world that do not have at least one host computer connected to the Internet (Rutkowski 1999). At the same time, electronic commerce, as a research area, a business, and, indeed, an entire new industry, is still very much in its infancy. There is much confusion and complexity and not nearly enough solid information.

Despite its newness, e-commerce is revolutionizing many aspects of how individuals and firms engage in

the conduct of business both online *and* off, and with remarkable speed. Notable areas such as consumer behavior, media models, distribution channels, economic models, business models and competitive strategy, and performance measurement are experiencing important changes.

But something else is going on that is just as profound.

These new forms of retailing and information sharing/gathering, along with exciting new technologies, are also introducing a whole host of new issues to be addressed. They are also posing exciting new challenges to existing theories of consumer behavior and competition in the marketplace.

These seismic shifts on the competitive landscape are not only changing business practice, but also influencing classic research issues, and creating a whole host of electrifying, new research problems focused around the Web as a virtual marketplace. These include emerging topics like virtual communities, intelligent agents, online navigation, collaborative filtering, clickstream analysis, new metrics for new media, consumer behavior in interactive environments, economics of electronic marketplaces, and “clicks and mortar” strategies.

Against this tumultuous and exhilarating backdrop, this special issue on the Internet got its start. In the fall of 1997, John Little and I came upon the idea to organize a small academic conference around the theme of the Internet and marketing science. We were motivated by two observations: first, that scholarly research on the Internet seriously lagged business practice, and second, that although scholarly research on Internet marketing and e-commerce was beginning to emerge, almost none of it at that time was being conducted

(World Wide Web; Commercialization of the Internet; Internet Marketing)

by marketing scholars. Indeed, most existing efforts seemed for the most part inefficient and necessarily incomplete as computer scientists, engineers and information systems researchers were literally reinventing marketing as they went along, even as they ignored many of its themes and fundamentals.

Our objective was to stimulate significant, publishable research by marketing scientists in this important new area of scholarly inquiry. For this reason, we required a scholarly paper as a condition of attendance at the conference, and felt that this constraint had the additional benefit of maximizing participant interaction and the lively exchange of ideas. At the time, we expected only modest interest in the special mini-conference, and we were quite stunned when each of forty marketing scientists submitted 10-page papers for consideration in the conference. After a mammoth review effort by our heroic program committee (Rashi Glazer, Eric Johnson, Jim Lattin, John Lynch, Tom Novak, and Florian Zettelmeyer), we accepted fourteen papers, twelve of which were presented to an audience of over 40 attendees at the First Annual INFORMS College on Marketing Mini-Conference on Marketing Science and the Internet. The conference was held at MIT from March 6 through 8 in 1998, and by all accounts, it was a rousing success.

I proposed the special issue of *Marketing Science* to complement the mini-conference, with the expectation that a number of accepted conference papers would be submitted to the special issue, along with papers submitted from a general call. My objectives for the special issue were similar to those for the mini-conference. I wished to feature significant research by marketing scientists in this important emerging area of scholarly inquiry. I also hoped that the special issue would not only attract a broader range of people submitting manuscripts and subsequently reading *Marketing Science*, but also encourage additional original research in this new area.

Twenty-six papers were submitted to the special issue, including a number that were originally submitted to or presented at the conference. All papers went through the usual rigorous *Marketing Science* review process except that in a number of cases, I used three reviewers instead of two. I drew my reviewers almost exclusively from the *Marketing Science* editorial board

and regular reviewer pool and offer my deepest thanks to those Area Editors and reviewers whose reviewing efforts went well beyond the call of duty.

It is worth saying a few words about the set of papers submitted. Their authors represented a number of disciplines in addition to marketing and hailed from academic institutions all over the world. Research topics were diverse and often represented a multidisciplinary perspective. Papers analyzed online consumer behavior, modeled the economics of the Internet, conducted Internet advertising experiments, examined Internet channel strategy, investigated new forms of Internet marketing, and delved into Internet policy issues.

In the end, I accepted four papers (Brian Ratchford, the regular editor handled three for which I had a conflict of interest and ultimately accepted one from that set), and now I am very pleased to present the first special issue on the Internet in the pages of *Marketing Science*.

The five papers accepted for the special issue address issues that are among the most important topics in Internet marketing and e-commerce facing scholars and practitioners today. My wish is that readers of this issue will find that these papers stimulate additional research in the field and help focus vital discussion and debate on these issues.

In the first paper, Häubl and Trifts examine the effect of interactive decision tools, including a recommendation agent and a comparison matrix, on consumers' purchase decisions in online shopping environments. In a controlled experiment in a simulated shopping environment, they found that interactively assisting consumers in the initial screening of alternatives and when making in-depth comparisons leads to better, and more efficient, decisions. Their results have important implications for consumer welfare as the number of products available for sale online continues to rise and suggest a whole host of questions for future research in the area of consumer decision making in online environments.

As the Web continues to mature, marketers are building up an arsenal of customer acquisition techniques suitable to the online environment. However, less is known about successful customer retention strategies, though it seems clear that creating exciting

online environments is key to developing loyal customers. The second paper addresses the issue of what makes for a compelling online experience. Novak, Hoffman, and Yung (2000) propose that this experience depends on facilitating a state of "flow" and, in a structural modeling framework, they test and validate a conceptual model that specifies the components and key consumer behavior outcomes of the experience. Their model results expand our understanding of how to develop profitable commercial Web environments.

Given the vast amount of information on the Web, it is no surprise that consumers view search engines as important online tools. In the third paper, Bradlow and Schmittlein develop and validate a model of Web search engine performance. Their research addresses issues of overlap and coverage among the search engines tested and leads to a better understanding of how characteristics of the phrases being searched and the URLs containing them can affect search outcomes. Their paper neatly tackles the simple but important question of what search engine works best.

The Internet is particularly suited to the distribution of digital information such as music, movies, and news, and firms are beginning to discover important strategic benefits from bundling such information in innovative ways. The fourth paper addresses these economies of information aggregation. Bakos and Brynjolfsson model the effects of large-scale bundling of information goods on pricing, profitability, and competition. Their model results have important implications for the online marketing strategies of incumbents and new entrants.

In the final paper Lynch and Ariely examine the effects of differing types of search costs on price sensitivity in online shopping environments. Their experiment examines the trade-offs among price, quality and merchant comparison search costs and allows them to draw the conclusion that online retailers will be better off by providing more, and more useful, information to consumers concerning the products they are considering purchasing.

As these papers clearly demonstrate, the Internet is a fascinating and exciting new frontier. The World Wide Web stands as a working example of an unprecedented communication model where individuals are

active contributors in an interactive exercise of multiple feedback loops and immediate exchange. As such, it offers dynamic potential for growth, development, and indeed a virtual revolution in the way society approaches the varied and interesting struggles that make up the business of everyday life.

But all is not boundless opportunity and unbridled enthusiasm. The Internet represents an increasingly complex marketplace, and coupled with the hype is a tremendous amount of uncertainty. Taking advantage of the enormous potential of the Internet is proving to be difficult. I believe we are at a critical juncture in the commercial development of the Web. At present, we lack the solid base of research on which to base investment and business decisions. Until we have such information, development will be dictated largely by fear, confusion, and a "gold-rush" mentality.

The best research is interdisciplinary and recognizes the *uniqueness* of the Internet as a many-to-many, interactive communication medium and marketplace. This is because research that has cross-functional implications is research that has the best chance to significantly impact practice at the same time that it makes a difference to our emerging globally networked society. My hope is that this special issue will stand as a small step in that direction.

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