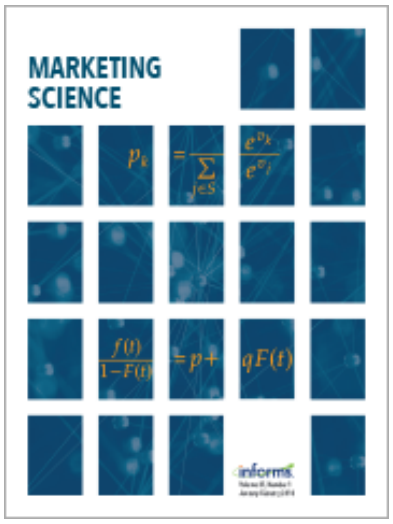

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Invited Commentary

Modeling Opportunities in Service Recovery and Customer-Managed Interactions

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1. Introduction

Rust and Chung (2006) have done a nice job of chronicling marketing science's past and potential contributions to the fast-growing service sector. Their insightful article (a) provides a succinct overview of the evolution of marketing models in the domain of service and relationships, (b) classifies that domain into four interrelated categories, (c) overviews the nature and types of modeling and research efforts under each category, and (d) offers a rich agenda for future research in this domain. A refreshing aspect of their article is that their research agenda focuses on future trends, rather than merely relying on the extant literature, to identify exciting new areas that are especially promising research avenues for marketing scientists. Although necessarily speculative to some degree, their research agenda stems from the reasonable assumption that the three complementary trends that have heretofore intensified the importance of service and relationships—namely, more powerful computing, more extensive data storage, and more pervasive communications—will continue to grow in the coming years.

Providing a comprehensive historical *and* futuristic perspective about marketing models of service and relationships in an article-length manuscript is a monumental task. Rather than quibbling about any debatable details in Rust and Chung's (2006) article, this commentary will build on and extend their research agenda by focusing on two important topics that are fertile, wide-open research territories for marketing scientists to explore: *service-recovery strategies*, a well-known topic but one that has not been the target of rigorous or comprehensive model-building efforts (Zhu et al. 2004), and *customer-managed interactions*, an emerging, futuristic topic (Watson 2004, Watson et al. 2005). The four categories developed by Rust and Chung (2006) for classifying past research on service and relationships—managing service, customizing service, customer satisfaction and relationships, and financial impact of customer relationships—are also relevant to service-recovery strategies and customer-managed interactions because future modeling research on these topics will cut across and contribute to all four categories. Moreover, the accelerating upward trajectories in computing power, data-storage capacity, and communications technologies predicted by Rust and Chung will also enhance the need and opportunities for rigorous modeling efforts on both topics.

2. Service-Recovery Strategies

Service recovery is a topic that has already received considerable attention in the academic literature (e.g., Davidow 2003, McCollough et al. 2000, Tax et al. 1998) and in the popular press (e.g., Brady 2000, Quick 2000). However, virtually all of the academic studies in this area are based on survey-based or experimental data and focus on customer evaluations of service failure and recovery experiences (e.g., Smith et al. 1999). Moreover, these studies, albeit in depth in nature, only address specific facets such as delays and waiting times (e.g., Hui and Tse 1996, Taylor 1994). Extant research on service recovery is, by and large, characterized by a conspicuous dearth of analytical modeling efforts, especially in terms of providing insights that could inform the design of optimal-recovery strategies. The meager analytical-modeling research on this topic consists of a somewhat abstract mathematical model that requires additional work

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for implementation (Zhu et al. 2004) and a few studies focusing on just one facet of service failure and recovery—complaint management (see Rust and Chung 2006, Table 2).

Analytical modeling and optimization techniques are eminently suitable for addressing and resolving a host of "trade-off" issues implicit in designing effective service-recovery systems. The issues outlined below are illustrative and augment the research agenda Rust and Chung (2006) propose for future modeling efforts.

2.1. Benefits vs. Costs of Service Recovery

Past empirical research offers insights for providing effective service recovery. However, "effectiveness" in such research typically takes the customer's perspective (e.g., customer satisfaction) and rarely considers companies' costs of service recovery. There is a need for comprehensive analytical models that explicitly incorporate company costs and balance them against customer benefits. In addition, second-order benefits to companies (e.g., positive word of mouth, repeat purchase, etc.) from customers receiving excellent service recovery—and second-order costs due to poor service recovery—could be incorporated into such models to increase their realism and accuracy.

2.2. Allocation of Recovery Resources

Current literature on service failure and recovery covers different types of recovery that can be classified broadly into *outcome* recovery (e.g., a refund) and *process* recovery (e.g., an apology). Some studies have compared and contrasted the two types of recovery and their relative efficacies (e.g., Miller et al. 2000, Webster and Sundaram 1998). However, issues such as what types of recovery strategies are likely to be optimal under various conditions (e.g., different cost structures for—and customer receptivity to—different types of recovery) and how best to allocate available resources across customers and failure contexts (e.g., core vs. peripheral service failures) are yet to be understood well and are prime candidates for being addressed through analytical modeling.

A related issue worth exploring is the role of and emphasis to place on employee-delivered service recovery in light of the rapid growth in self-service technologies and e-service. Recent research suggests that the human touch is still needed for effective recovery when failures occur in self-service or e-service contexts (e.g., Parasuraman et al. 2005). Determining the optimum mix of technology-based vs. employee-based recovery investments and understanding whether and how that mix is likely to change across different contexts are important avenues for additional research.

2.3. Customization of Recovery Strategies

Rust and Chung (2006) predict increasing customization in the provision of service. The same technological forces contributing to their prediction should also make it feasible for companies to offer customized recovery service tailored to individual customers (or customer types). Analytical models that take into account customers' past history with the company (e.g., purchases, returns, complaints) and future potential (e.g., customer lifetime value), as well as the company's costs of providing different types and levels of recovery service, will offer valuable guidance for customizing recovery strategies. The richness of such models can be enhanced by overlaying on them some of the features implied in Rust and Chung's (2006) discussion of several of their research agenda items: real-time marketing, dynamic customer satisfaction management, dynamic interaction, and customization.

2.4. Optimal Mix of Reliability vs. Recovery Investments

A contentious topic in the service-recovery literature is the so-called "recovery paradox," which posits that customers who experience problems but receive excellent service during recovery will be even more satisfied than customers who do not experience any problems (e.g., Hart et al. 1990). However, empirical evidence supporting the paradox's prediction is at best mixed (cf. Andreassen 2001, Smith and Bolton 1998). An issue related to the recovery paradox, but broader in scope, is how much to invest in delivering reliable service (i.e., problem prevention) vis-à-vis providing superior recovery service when problems occur. Achieving 100% service reliability will be cost prohibitive, if not impossible. At the same time, a company's ability and financial means to deliver truly "knock-the-customer's-socks-off" service when a problem arises—the type of superior service necessary for the recovery paradox's prediction to hold—are contingent on the incidence of service problems. The lower the service problem frequency (i.e., greater the service reliability), the greater is the company's ability to execute excellent service recovery.

What, then, is the optimal mix of reliability and recovery investments? What contextual and customer-related characteristics are likely to influence the optimal mix? These and related questions remain unaddressed and are eminently suitable for examination though analytical modeling.

3. Customer-Managed Interactions

Rust and Chung (2006) suggest several promising research avenues that marketing scientists could pursue for generating managerial insights pertaining to nurturing and enhancing customer relationships.

These research avenues (e.g., real-time marketing, dynamic interaction and customization, personalized pricing), which can be viewed as falling under the broad domain of customer relationship management (CRM), can offer valuable guidelines for enhancing the effectiveness of CRM strategies. However, the accelerating growth in computing power, data-storage capacity, and communication efficiency, coupled with growing concerns about privacy and the increasing recognition by customers that information about their transactions with companies has value (e.g., Hagel and Rayport 1997), are now sowing the seeds for a new phenomenon—customer-managed interactions (CMI)—that will increasingly complement conventional CRM. In CMI, "customers retain complete control over data about their past transactions and their future needs, and share this information when appropriate with a selected group of firms with which they are interested in doing business" (Watson et al. 2005, p. 319). CMI, in addition to enhancing privacy protection, mitigates a key weakness of conventional, firm-centric CRM strategies: namely, lack of data about customers' transactions with the focal firm's competitors and about the customers' future needs and preferences. Such data incompleteness may lead to inaccurate or inappropriate company-to-customer communications, promotions, and recommendations (Watson et al. 2005).

Under CMI, customers would (a) transmit an electronic record of their past purchases—across all competitors and channels for a given product or service category (e.g., music CDs or airline travel)—along with their personal profiles and future needs/preferences to a chosen set of firms, and (b) request the firms to bid for the customers' future business—that is, submit proposals containing product/service recommendations and pricing. Emerging technologies, such as the ones for efficiently storing and communicating vast amounts of customer data (e.g., smart cards), call for new lines of research that could inform managers about how best to capitalize on and leverage those technologies (Shugan 2004). Along the same lines, the following are CMI-specific topics that are especially suitable for investigation by marketing scientists.

3.1. Responding to CMI-Initiated Requests

Automated response systems are necessary for companies to cost effectively formulate customized responses to requests for bids from large numbers of individual customers. Extant modeling work for designing and evaluating Internet recommendation systems (e.g., Ansari et al. 2000) can serve as the starting point for developing automated systems for formulating the optimal response to each request—including deciding whether to bid and, if so, determining the most appropriate product/service mix to recommend and the price to charge for the mix. However, because CMI transactions are initiated by customers rather than companies, as in CRM, customers will expect—and companies need to be able to provide—recommendations that are much more tailored to each individual request than in the case of company-initiated communications. Thus, the quality of the recommendations will be at least as important as price in winning the customers' business. In other words, high-quality recommendations can command a price premium. Determining the optimum product-price combination to offer in response to each request is a particularly interesting and challenging problem for researchers to address.

3.2. Role of Intermediaries in Facilitating CMI

CMI could open up opportunities for intermediate agents (a) to serve as facilitators for transmitting requests from customers to multiple potential suppliers and proposals back from the suppliers to customers and (b) to protect the customers' identities by assigning anonymous codes to their electronic records before transmitting them to the potential suppliers (Watson et al. 2005). Such intermediaries could also play other roles, such as maintaining and updating the customers' electronic profiles, helping customers narrow the choice of potential suppliers, and so forth. Promising avenues for research include investigating the conditions under which CMI intermediaries will be profitable, examining alternative pricing mechanisms for compensating the intermediaries, and determining optimal pricing strategies for their services.

3.3. Relationships in a CMI Environment

The very nature of CMI implies a transaction orientation on the part of customers; that is, they choose to interact with multiple companies rather maintain loyalty to a single company: And in situations where an intermediary serves as a gatekeeper, the suppliers will not know who the customers are.

What, then, is the role of relationships in a CMI environment? One possibility is that customers may develop relationships with trusted intermediaries even as they continue to maintain arm's-length interactions with multiple companies. Which types of customers, under what circumstances, will be receptive to building relationships with intermediaries while preferring to engage in anonymous transactions with multiple vendors? What do constructs such as customer lifetime value and customer equity mean in the domain of CMI, and how can they be estimated? Can decision rules be developed to help companies determine whether to compete in the CMI domain at all and, if so, to what extent? Marketing science has the potential to offer important analytical and practical insights concerning questions such as these.

4. Conclusion

Based on a thoughtful review and synthesis of extant models of service and relationships, and on predictions about accelerating growth in computing power, data-storage capacity, and pervasive communications, Rust and Chung (2006) offer a rich and exciting variety of topics for marketing scientists to explore. This commentary extends their research agenda by highlighting a variety of issues worthy of further exploration and analytical modeling under two important topics: a well-known topic that has heretofore not been subjected to rigorous modeling efforts—service recovery—and a somewhat futuristic topic—customer-managed interactions.

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