Teradata Center *for* Customer Relationship Management *at* Duke University

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A Customer Relationship Management Roadmap: What Is Known, Potential Pitfalls, and Where to Go

The goal of this preface is to describe how the special section on customer relationship management (CRM) was developed. In May 2003, Richard Staelin, Executive Director of the Teradata Center for Customer Relationship Management at Duke University, proposed that *Journal of Marketing* (*JM*) publish a special section. The proposal included activities that were designed to promote interactions among marketing academics and practitioners; the goal was to stimulate dialogue and new research on CRM. I found the proposal attractive because CRM is a broad-based topic that interests many marketers. After extensive discussion, the American Marketing Association (AMA) and the Teradata Center formally agreed to cosponsor the special section. Subsequently, there was a conference on Relationship Marketing and Customer Relationship Management (cochaired by Michael Ehret, Wesley Johnston, Michael Kleinaltenkamp, and Lou Pelton) that took place at Freie Universität Berlin in the summer of 2003;[1] a conference on Customer Management (cosponsored by the Marketing Science Institute and the Teradata Center) that was held at Duke University in March 2004; and two special sessions on CRM that were featured at the AMA Winter Educators' Conference held in San Antonio, Tex., in February 2005. The conferences provided many opportunities for dialogue, and the response from marketers who attended these events was enthusiastic. I also invited Richard Staelin and William Boulding (Executive Codirector of the Teradata Center) to work with me as consulting editors for the special section, and they agreed. A call for papers requested that authors submit their manuscripts to *JM* by May 2004. The consulting editors and I evaluated every submission with the assistance of an expert panel that included Leonard Berry, John Deighton, Michael Ehret, Christian Grönroos, Sunil Gupta, Wayne Hoyer, Wagner Kamakura, Wesley Johnston, Donald R. Lehmann, Charlotte Mason, Carl Mela, Scott Neslin, Roland Rust, Michel Wedel, and Valarie Zeithaml. All submissions underwent *JM*'s standard double-blind review process, and members of *JM*'s editorial review board served as reviewers. I would like to express my appreciation to everyone who participated in the development of the special section. The culmination of our work together is a set of nine articles and two essays that advance the science and practice of CRM. I hope that these articles stimulate new intellectual discoveries.

—Ruth N. Bolton

This article introduces the ten articles that appear in this special section on customer relationship management (CRM). An overarching goal of this article is to provide the reader with a roadmap that places these articles in the context of the CRM landscape. We suggest 11 propositions about what is known about CRM and the potential pitfalls and unknowns that firms face in the implementation of CRM. We also provide six recommendations for further CRM research. We organize our discussion around these themes before offering concluding comments.

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What Is Known About CRM

Before assessing what is known about CRM, we begin by placing the field of CRM in the overall context of marketing thought.[2] Many years ago, economists introduced the concept of value maximization, whereby a firm maximizes

[1]This conference was cosponsored by the AMA Relationship Marketing Special Interest Group.

[2]Space constraints force us to take a 40,000-foot perspective on the field. Thus, we do not provide an exhaustive review of the CRM literature, much less the relevant marketing literature.

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profits and consumers maximize utility. Today, we have the concept of CRM. Theorists in this area still emphasize firm performance and customer value, though they also talk about the dual creation of firm and customer value (Payne and Frow 2005; Rogers 2005; Vargo and Lusch 2004). The question we raise is whether the field's focus on CRM sheds light on the understanding of customer and firm behavior or whether it just creates more "heat." Many vendors argue that CRM requires a paradigm shift in firm behavior. If this is true, CRM is truly a really big new idea. However, others contend that the concepts of CRM are not fundamentally different from what economists put forward many years ago. If this is so, the following questions arise: Is CRM anything other than a repackaging of basic marketing ideas that have extended and built on the classic economic paradigm? Should CRM be viewed simply as one of many jargon-laden fads that have come and gone in the business world? Or is a third explanation possible? Namely, does CRM represent the evolution and integration of marketing ideas and newly feasible and cost-effective technologies? In this view, CRM is neither a fad nor a paradigm shift. After observing the development of the CRM field, we offer the following proposition:

> P_1: CRM is the outcome of the continuing evolution and integration of marketing ideas and newly available data, technologies, and organizational forms.

To support this proposition, we briefly document this evolution.

One of the original big ideas in marketing is that for firms to stay in existence, they should not focus on selling products but rather on fulfilling needs (Levitt 1960). Thus, a drill manufacturer is in the business of providing a customer a hole, and a railroad company is in the business of providing transportation. This is a key component of CRM because the emphasis is not on how to sell the product but rather on creating value for the customer and, in the process, creating value for the firm (staying in existence). In other words, it is a process of dual creation of value. Levitt (1969) introduced the concept of the augmented product, stressing that consumers are interested in the total buying experience, not just the core product. Again, CRM relies on this concept because it tries to find the specific elements of the exchange process that produce value to the customer.

Bagozzi (1974) refocused people's attention on the actual exchange process by reiterating the fundamental economic concept that an exchange occurs only when both parties perceive that they are receiving value. Almost ten years later, Berry (1983) shifted the emphasis to the relationship between the company and the customer. At the time, his interest was in the service sector and the need for the service organization to attract customers and then maintain and enhance these customer relationships. On the basis of his ideas and related conceptual work (Arndt 1979; MacNeil 1978; Morgan and Hunt 1994), the concept of building relationships was expanded to several different domains, such as industrial buyer–seller relationships (Dwyer, Schurr, and Oh 1987) and channels of distribution (Gaski 1984). Others adopted the idea of building relationships and extended it conceptually in various ways (Boulding et al. 1993; Grönroos 1994; Gummesson 1987; Webster 2002). This body of literature discusses concepts that are relevant to CRM, such as the influence of prior experience on future customer expectations, the different treatment of each customer, and the value of long-term relationships.

Concurrently, other marketing scholars turned their attention to the core capabilities of the firm that were necessary to develop and maintain good customer relationships. In some sense, this was a formalization of the concept and processes implied by the "three Cs" (i.e., customer, company, and competitor) analysis. As a result, concepts such as market orientation (Kohli and Jaworski 1990; Narver and Slater 1990), market focus (Day 1994), and market-based learning (Vorhies and Hunt 2005) were developed that emphasized the establishment of good information processes and capabilities within the firm to understand the needs and wants of customers, thus making firms more efficient and effective in managing customer relationships. In addition, there was an evolution from product, or brand, management to customer management (Sheth 2005) and from product portfolio management to customer portfolio management (Johnson and Selnes 2004). These transitions were due in part to work in the area of brand equity, which recognized that equity resides in the minds of consumers (Keller 1993); this shifted the locus of attention from brands and products to customers.

With these developments in marketing as a backdrop, there was an explosion of customer data in the 1980s. Although some attempts were made to organize these data for analytic purposes, many firms were overwhelmed by this onslaught of potentially useful information. In anticipation of hardware and software solutions to these data problems, Peppers and Rogers (1993) introduced the concept of one-to-one marketing, and Pine (1993) introduced the concept of mass customization. Vendors capitalized on these ideas with hardware and software solutions and began using the term CRM to refer to the collection of data and activities surrounding the management of the customer–firm interface. These CRM solutions enabled firms to acquire, warehouse, and analyze data about customer behavior and company actions more easily. Using these data and analyses, firms began to focus on acquiring new customers; retaining their current customers (i.e., building long-term relationships); and enhancing these relationships through such activities as customized communications, cross-selling, and the segmentation of customers, depending on their value to the firm (Payne and Frow 2005). Implementation of these CRM solutions also required firms to have a customer relational orientation (Jayachandran et al. 2005; Srinivasan and Moorman 2005) and to have processes in place to collect, analyze, and apply the acquired customer information (Jayachandran et al. 2005).

Thus, the question is, What is new about CRM? On the basis of our preceding discussion, it could be argued that CRM is the relabeling of a mixture of different marketing ideas in the extant marketing literature. However, we believe that CRM represents an evolution beyond a repackaging of existing ideas. Specifically, we posit that CRM goes beyond extant literature because it "requires a cross-functional integration of processes, people, operations, and marketing capabilities that is enabled through information, technology, and applications" (Payne and Frow 2005, p. 168). Indeed, CRM goes beyond a customer focus. Not only does CRM build relationships and use systems to collect and analyze data, but it also includes the integration of all these activities across the firm, linking these activities to both firm and customer value, extending this integration along the value chain, and developing the capability of integrating these activities across the network of firms that collaborate to generate customer value, while creating shareholder value for the firm.

> P_2: The field of CRM has begun to converge on a common definition.

Payne and Frow (2005) document numerous definitions of CRM in the literature (see their Appendix). These definitions range from CRM as the implementation of specific technology solutions to a holistic approach of managing customer relationships that simultaneously creates both customer and firm value. This plethora of definitions has caused some confusion. Parvatiyar and Sheth (2001) note that a prerequisite for an emerging field to coalesce into an established field is for the discipline to establish an acceptable definition that captures all the major aspects of the concept. Payne and Frow attempt to provide such a definition. It is possible to quibble about the specific wording, but we agree with the basic elements of their definition. Specifically, CRM relates to strategy, the management of the dual creation of value, the intelligent use of data and technology, the acquisition of customer knowledge and the diffusion of this knowledge to the appropriate stakeholders, the development of appropriate (long-term) relationships with specific customers and/or customer groups, and the integration of processes across the many areas of the firm and across the network of firms that collaborate to generate customer value.

In addition to theoretical development, a prerequisite for the applied development of CRM is that it should demonstrably enhance firm performance. This is a necessary quality in the evaluation of any firm or marketing activity (e.g., Lehmann 2004; Rust et al. 2004). With this in mind, note that it is not necessarily a widely held belief that the implementation of CRM activities leads to firm value. To this end, consider the numerous articles that appear in the business press (e.g., Rigby, Reichheld, Schefter 2002; Whiting 2001). Nonetheless, we propose the following:

> P_3: Companies have developed proven CRM practices that enhance firm performance.

Eight of the ten articles in this special section directly address this proposition. These articles use different measures of performance in many different contexts, and they use various research methods. However, all eight articles demonstrate that CRM activities can enhance firm performance. For a field that has come under attack for not meeting this objective, we believe that this is a powerful result.

Using a case study approach, Ryals (2005) shows that one of the business units she studied was able to achieve a 270% increase in business unit profits (above target) by implementing several straightforward CRM measures. Using a multifirm (cross-sectional) database, Srinivasan and Moorman (2005) show that firms that invest more in CRM activities and technology have greater customer satisfaction. Using another multifirm database, Mithas, Krishnan, and Fornell (2005) show that the use of CRM applications is associated with increased customer knowledge, which in turn is associated with greater customer satisfaction. Using yet another multifirm database, Jayachandran and colleagues (2005) show that firm performance measured in terms of retention and customer satisfaction is greater for firms that have good relational information processes in place.

Cao and Gruca (2005), Lewis (2005), Thomas and Sullivan (2005), and Gustafsson, Johnson, and Roos (2005) all use data collected within a single firm over time. Cao and Gruca, Lewis, and Thomas and Sullivan use data from both the firm and its customers to develop specific CRM applications to increase the firm's performance. Cao and Gruca center their attention on acquiring the "right" customers; Lewis provides a process that identifies and considers dynamic customer behavior, thus enabling a pricing scheme that increases long-term profits; and Thomas and Sullivan develop a decision support system using an enterprise database that allows the firm to modify its communication message depending on where particular customers live and how they shop. In each case, the authors show how firm profits can be increased. Gustafsson, Johnson, and Roos (2005) examine customer behavior over time and show that some of the intermediate relationship performance measures that emerge from the business-to-business literature (e.g., satisfaction, calculative commitment) directly and positively influence actual behavior in the form of retention within a business-to-consumer setting.

We must emphasize four points here. First, the eight empirical articles in this special section demonstrate the positive impact of CRM in a wide variety of industry settings. Thus, success with CRM is not contingent on being a part of a particular industry (e.g., financial services). Second, we note that all of the application articles are narrow rather than comprehensive. Thus, they find local improvements in profits. We can only speculate about what could be accomplished with a more comprehensive systems approach; we also express some concern that local solutions can sometimes be suboptimal in the long run. Third, only Ryals's (2005) study directly measures both the costs and the revenues associated with the CRM activities to assess overall profits. Lewis (2005) and Cao and Gruca (2005) examine profits, but because of data unavailability, they must make assumptions about costs to generate these numbers. All the other studies use proxies for profits. Because several of the studies use customer satisfaction for their performance measure, it is of interest that Gustafsson, Johnson, and Roos (2005) show that customer satisfaction is negatively associated with observed customer churn, thus providing strong evidence that customer satisfaction is a useful precursor of downstream outcomes. However, it is important to note that this same research indicates that satisfaction is not the only predictor of downstream performance measures.

This leads to a fourth observation about CRM activities and firm performance. Payne and Frow (2005) emphasize that one major element in any CRM system is the measurement process. Although the ultimate objective of any measurement process is to increase shareholder value, one of the real advantages of a CRM measurement process is that the firm normally also obtains measures such as customer lifetime value and acquisition and retention costs, which relate to the value dual-creation process. Thus, good CRM process measures provide the firm with the opportunity to gain deeper insights into how these intermediate process measures link to downstream firm performance. Several articles in this issue show these links. Thus, we do not believe that every article must focus its attention on the most obvious downstream measures of performance (e.g., profits, shareholder value). However, it is clear that more work must be done to establish the links between the many process measures that come from CRM systems and these downstream measures as well as the implied return on different CRM investments. The work of Gupta, Lehmann, and Stuart (2004) offers an excellent first step in this direction. This area should be of particular interest to researchers who want to demonstrate the link between marketing activities and shareholder value (Srivastava, Shervani, and Fahey 1998). In general, CRM creates the potential for firms to begin to treat as firm investments what were previously considered marketing costs (Rust, Lemon, and Zeithaml 2004). Furthermore, this implies that marketing could regain a central role in managing a key asset of the firm, namely, the customer asset.

Finally, even though we consider Payne and Frow's (2005) article conceptual rather than empirical, we note its relevance to the CRM–performance link. In particular, this conceptual framework emerges as the "best practice" from interaction research with several firms. If a firm does not achieve the desired results from its CRM activities, it might compare its practices with the best practice template that Payne and Frow provide. This comparison could reveal gaps in how the firm implements CRM relative to best practices.

Having said this, we note that Payne and Frow's (2005) framework is largely silent about how a particular context or process might interact with another process to produce differential results from CRM activities. Although the articles published in this special section show that CRM activities lead to enhanced firm performance, they also reveal situations in which CRM activities have more or less positive effects on firm performance. This leads to our next proposition:

> P_4: Holding fixed the level of CRM investment, the effectiveness of CRM activities depends on how CRM is integrated with the firm's (a) existing processes and (b) preexisting capabilities.

We previously noted that CRM activities need to be integrated into the fabric of the overall operations of the firm. Because different firms have different core capabilities, it is not surprising that CRM activities have a differential effect depending on the context of where and when they are implemented. This is similar to what has been observed in the context of relationship management (e.g., Coviello et al. 2002). Specifically, Jayachandran and colleagues (2005) show that the positive effects of investments in CRM technology are enhanced when the firm already has the appropriate relational information processes in place. Srinivasan and Moorman (2005) show that for online retailers, the firm's strategic commitments in terms of prior bricks-and-mortar experience and online experience affect the impact of online CRM investments on the firm's performance. Notably, they also find a few cases in which increased investments in CRM are associated with negative returns in performance.

Likewise, Mithas, Krishnan, and Fornell (2005) show that CRM activity returns are enhanced when firms share information with their supply chain members. Furthermore, Thomas and Sullivan (2005) show that an enterprise CRM system that coordinates and integrates data from different channel sources enables the firm to gain new knowledge about each customer and thus enhance firm performance.

We expect that there are many other contexts in which CRM activities are either enhanced or reduced. We discuss this issue in more depth in some of the subsequent propositions. However, before doing so, we offer another proposition that may sound somewhat contradictory to the previous proposition:

> P_5: Effective CRM implementation does not necessarily require sophisticated analyses, concepts, or technology.

After reading numerous submissions for this issue, we were struck by the "simplicity" of the application articles. The articles used known methodologies (e.g., latent segmentation: Lewis 2005; Thomas and Sullivan 2005), relied on known conceptual issues (e.g., adverse selection in acquiring customers: Cao and Gruca 2005), and examined small pieces of the overall set of CRM activities (e.g., use of customer lifetime value: Ryals 2005) in studying the effects of CRM on performance.

Perhaps the most striking example of this is Ryals's (2005) contribution. From a research methodology standpoint, the case study approach is technically unsophisticated. Moreover, the CRM activities implemented in these case studies are simple and straightforward. The combination of these two attributes led one reviewer of this manuscript to conclude that an important implication of this article was that even simple CRM activities yield measurable benefits for a firm.

Another surprise gleaned from the application articles is the relevance of traditional market segmentation in the context of CRM activities. Some may equate CRM with the idea that every firm offer/activity should be customized for individual consumers. However, in all of the application articles, we observed the use of basic market segmentation (Cao and Gruca 2005; Lewis 2005; Ryals 2005; Thomas and Sullivan2005), and three of the articles identify only two segments. Admittedly, these segments were not based on standard demographics but rather on detailed analyses of prior observed behavior.

Only Ryals (2005), in one of her two case studies, shows an application in which the firm treated each customer individually, and here the firm had only ten major customers. Still, what we find most germane in considering the group of application articles published herein is that despite the simplicity in the approaches, each of these applications was able to show improvements in firm performance when the firm acted strategically in terms of using customer information to create firm value.

Jayachandran and colleagues (2005) reinforce the point about simplicity and CRM effectiveness The database they used in their analysis contained a significant number of firms that had yet to implement sophisticated CRM applications. Yet these researchers showed that as long as these firms had good relational processes in place, they were able to obtain good firm performance. Thus, although the effectiveness of CRM may vary depending on the specific context of these activities, consistent with P_4, it appears that the most important element of CRM implementation is for the firm to acquire customer knowledge and then use this knowledge wisely for the dual creation of value. This leads to our next proposition.

> P_6: The core of CRM is the concept of dual creation of value.

Payne and Frow's (2005) Figure 1 best demonstrates "proof" of this proposition; it shows the cocreation of value as the central element in their conceptual framework. We consider the labels "cocreation" and "dual creation" of value interchangeable, but we prefer "dual creation" given instances in which firms can create value for one customer through information drawn from other customers (e.g., Amazon) rather than direct collaboration. Jayachandran and colleagues (2005) provide a deeper description of this core idea with their delineation of five subprocesses that they refer to as relational information processes. We believe that their processes, which they label "information reciprocity," "information capture," "information integration," "information access," and "information use," directly relate to the dual creation of value.

The idea that dual creation of value is at the core of CRM is also evident in all the articles that examine the firm–customer interface. For example, Cao and Gruca (2005) provide a framework whereby the firm can better limit its target market to customers who both want to hear about the firm's particular offer and qualify for that offer. As a result, the firm does not send messages to customers who are unlikely to respond, thus minimizing the disturbance to these customers. Likewise, the firm does not send messages to customers who are unlikely to qualify for the offer, thus minimizing their disappointment. The authors note that this leads to an obvious win-win situation for the firm and its customers (i.e., the dual creation of value).

In contrast, Lewis (2005) develops a pricing scheme that creates a differential value proposition for different market segments. He notes that this raises the issue of fairness and trust because the goal is for the firm to use knowledge about customers to extract more value for the firm and therefore create less value for the customer. Similarly, Ryals (2005) shows that firms reduce their attention to customers/customer groups after they determine that they are not able to garner enough value from these groups. Thus, for certain customers, value is taken away so that firms can increase the value they receive. In a similar manner, Thomas and Sullivan (2005) examine the dual creation of value from the firm perspective. They propose a process that enables firms to migrate customers into more profitable channels. However, this article does not address the issue of whether this process creates additional customer value.

These latter studies bring to the forefront the concept of who gets the economic rents from the value creation process. Economic theory is silent on this issue, other than to maintain that neither party can be worse off. However, if CRM is implemented in a way that leads consumers to believe that they are worse off, firms can put themselves at substantial risk. Information reciprocity can break down, and consumers may ultimately choose to opt out of relationships. This leads us to consider the "dark side" of CRM or, more generally, the potential pitfalls and unknowns that firms should consider when implementing CRM activities.

Potential Pitfalls and Unknowns in CRM Implementation

In ideal circumstances, CRM and the dual creation of value expand the pie such that both consumers and firms are better off. However, the focus in CRM applications, as some of the articles in this special section demonstrate, can be on the creation of firm value. In these cases, CRM might be considered a pie-splitting mechanism, whereby the firm can learn things about customers that enable it to take a big slice of the created value. To rephrase this in economic terms, firms may use CRM activities to attempt to extract consumer surplus. This possibility makes Wright's (1986) concept of "schemer schema" relevant in the context of CRM activities. Given customers' intuitive theories about what firms are trying to do with CRM, how will customers modify their behavior? This question leads to our first proposition about firm issues in implementing CRM activities:

> P_7: The successful implementation of CRM requires that firms carefully consider issues of consumer trust and privacy.

Sometimes the firm can unobtrusively collect information about the customer at the time of the transaction. Other times, the firm must rely on the customer providing this information. It is in the firm's self-interest to collect these data; as both Mithas, Krishnan, and Fornell (2005) and Jayachandran and colleagues (2005) show, firms that acquire this knowledge are more likely to have superior firm performance. However, it may not always be in the customer's self-interest to provide these data. Lewis (2005) nicely illustrates Wright's (1986) notion of schemer schema. In this application, the firm infers customer types from observed prior behavior. However, Lewis shows that some customers anticipate what a firm will do after it observes customer behavior. This leads these customers to modify their own behavior. In other words, the consumers act strategically. If consumers act strategically, this reduces the firm's share of the value creation pie, even if the firm anticipates these reactions, though anticipation on the part of the firm will reduce this reduction in share of the value pie.

In Lewis's (2005) setting, only 5% of the customers are in the "strategic behavior" segment. However, as more consumers begin to consider that firms are using CRM to act strategically, an increasing number of customers become less trusting of firm behavior and therefore act strategically in repeated interactions with the firm. The real issue from the consumers' perspective is whether they trust that firms will use their data in a way that helps the consumer. Lewis cites some fairly prominent examples of firm behavior that may reduce customer trust in those firms (e.g., attempts by Coke and Amazon to extract consumer surplus). In today's Internet environment, there is a proliferation of spyware (and spyware blockers) that has led to a distrust of the Internet shopping environment and a desire for greater consumer privacy.

Deighton (2005) suggests that issues of consumer trust could significantly undermine CRM activities. In particular, if customers lose trust in firms and believe that their data are used by firms for purposes of exploiting them, consumers will attempt to keep their data private or to distort the data. This has led, and could continue to lead, to both individually based efforts to keep data private or collectively based efforts that lead to privacy regulations. This consumer protection is certainly reasonable and appropriate. Thus, firms should think with foresight about trust and privacy implications of their CRM activities, and researchers should continue to consider these issues (e.g., Bart et al. 2005). If the firm does not adequately consider the creation of value for both their customers and themselves, they may lose access to the data required for the dual creation of value process. Stated simply, firms should not be greedy.

> P_8: The successful implementation of CRM requires that firms carefully consider issues of consumer fairness.

The precursor to some of these trust issues is fairness: Do customers trust that firms will be fair in splitting the value creation pie? However, there is an additional perspective of fairness to consider. In particular, CRM activities create the potential for differential treatment of customers who interact with a firm. Reitz (2005) provides examples in which customers did not become upset by being treated differentially, even when they were on the same airline flight. However, Reitz also notes that customers have norms of what is fair and what is unfair in terms of differential treatment of customers and that it is easy for firms to cross over the line in terms of what customers consider unfair.

Feinberg, Krishna, and Zhang (2002) demonstrate the risk of crossing this line by means of differential treatment. They report that there is more switching (lower retention) for the focal customer if another customer, who is perceived to be similar to the focal customer, receives better treatment from the same firm. They find the same result for the focal customer if the similar customer receives better treatment from a competitive firm. This is similar to the result of Boulding and colleagues (1993), who find that based on what customers observe other customers receiving either from the same firm or from competitive firms, customers develop expectations about what they should receive and downgrade their perceptions of the firm if they receive less than what they believe they should. Likewise, using a regret theory framework, Inman, Dyer, and Jia (1997) emphasize the importance of forgone alternatives in terms of the valuation of the chosen alternative and future purchase decisions. Both Srinivasan and Moorman's (2005) and Gustafsson, Johnson, and Roos's (2005) articles show results that are consistent with this prior research. They find that what customers experience, both within a particular firm and compared with other firms, drives what they believe they should receive or what they believe is fair and, thus, affects the firm's performance.

We believe that much is still unknown about the standards customers use to determine whether the firm is acting fairly and the connection between perceived fairness and trust. Thus, we hope that researchers continue to examine these standards (e.g., Mazumdar, Raj, and Sina 2005). Because these issues are intimately connected with customers' willingness to provide data and their satisfaction with the firm relationship, firms must take great care in monitoring and managing customer perceptions of trust and fairness.

> P_9: Inappropriate and incomplete use of CRM metrics can put the firm at risk of developing core rigidities, thus leading to long-term failure.

According to Payne and Frow (2005), one of the key components of CRM is a good measurement process. However, most of the most popular measures of current CRM systems (e.g., acquisition, retention, cross-selling, upselling, customer migration, customer lifetime value) are outcome measures. These outcome measures are important and necessary. However, they may not be directly linked to the value dual-creation process, and as we previously noted, this is the core concept of CRM. Thus, it is essential that the firm also develops measures that are directly connected with this value dual-creation process, enabling the firm to understand the drivers of value and thus to ensure long-term success. The flip side of this is that failing to do so can lead to doing too much of a "good" thing, producing core rigidities (Atuahene-Gima 2005; Leonard-Barton 1992) and long-term failure.

A few examples may be useful to illustrate this point. An early insight in the development of CRM was the importance of customer retention. Indeed, it can be shown that lifetime value calculations are more sensitive to improvements in customer retention than customer acquisition (Heskett et al. 1994). Fuller (2005) describes the implications of this connection between lifetime value and retention at L.L.Bean, which focused on retention at the expense of acquisition activities. The consequence of this focus was short-term gains in profitability but, unfortunately, at the expense of new customer acquisition and a reduction in the long-term value of the firm. Subsequently, L.L.Bean adjusted the balance between acquisition and retention activities.

This example brings the importance of customer portfolio management to the forefront (Johnson and Selnes 2004). Thinking about balancing the customer portfolio in terms of customer needs, implied firm actions to create customer value, and how these customers create company value leads us to ponder one of the recommendations in the bank case study that Ryals (2005) reports. On the basis of lifetime value calculations, the bank decided to stop targeting younger, less profitable loan customers. This decision is potentially based on incomplete use of metrics in two different ways. First, it could be that the younger, less profitable customers evolve over time into older, more profitable customers. The lifetime value metric needs to be complete in the sense of capturing this potential dynamism in customer value (Du 2005). Second, it could be that dropping these smaller, less profitable customers undermines the economies of scale that enable the firm to generate profits from larger customers, as was the case for a large European financial services company (Johnson and Selnes 2005). In this case, the lifetime value metric needs to be complete in terms of considering potential externalities across customer groups. This requires the firm to allocate the costs associated with providing customer value accurately.

Another example to illustrate this proposition is what took place over several years at Xerox. Xerox was an early leader in customer satisfaction and one of the first winners of the Baldridge Award. It created excellent information systems to collect and diffuse detailed customer metrics to relevant parts of the organization, which resulted in increases in customer satisfaction and firm value. However, many of these systems focused on measuring customer satisfaction with existing products and services. It is possible that, over time, these measurement processes, which had been a source of strength for Xerox, became core rigidities, ultimately leading to subpar performance for the company. If key CRM metrics do not directly assess the value dual-creation process, there is a risk that the underlying value proposition that generates outcome metrics, such as satisfaction, retention, acquisition, and lifetime value, can slowly degrade.

Thus, although CRM enables the firm to obtain a large number of measures, it is important that at least some of these measures connect to the current and future value creation process. This should enhance the firm's innovation activities and, in general, keep the firm competitive over time. It also raises an interesting research question: What is the relationship between the level of the firm's CRM activities and its level of innovation?

> P_{10}: Successful implementation of CRM requires that firms incorporate knowledge about competition and competitive reaction into CRM processes.

It is well accepted that CRM is a strategic initiative. As such, it should be held accountable to the same standard as the evaluation of other strategic choices that a firm faces (Boulding and Staelin 1995). Does CRM provide sustainable advantage for the firm in the face of competitive reaction? A standard issue in the assessment of returns to strategic choices is that if generalizations exist about strategic relationships, firms can be expected to compete away the advantages implied by these relationships (Wensley 1982). This issue is especially salient given that P_3 suggests that companies have developed proven CRM practices that enhance firm performance.

We find it surprising that the CRM literature and the articles in this special section are largely silent on this issue of competitive reaction. We note that Payne and Frow's (2005) five elements of CRM do not explicitly reflect competition, and none of the empirical articles directly considers the role of competition. We find this omission in the CRM literature especially surprising given that the evolution of CRM can be traced back to the market orientation literature. In this literature, there is a discussion of whether firms should be customer focused or competitor focused, and the conclusion is that firms should be market focused; that is, firms should focus on competitors, customers, and company capabilities (Kohli and Jaworski 1990). Thus, in addition to addressing the issue of sustainability in the face of competitive reaction, we can ask a more general question: How is competitor focus integrated into CRM?

We believe that a failure to integrate competition into a firm's CRM activities potentially puts it at serious risk. The biggest risk is related to the previous proposition (i.e., the destruction of the dual creation of value due to innovation from competition). For example, when innovation enables document copies to be made through distributed desktop printing rather than centralized copying, what does this imply for the dual creation of value for Hewlett-Packard and Xerox, respectively?

In summary, we believe that research is necessary in this area on two dimensions: First, work must be done that shows how to integrate competition into the processes underlying CRM. Second, work must be done that considers the conditions in which CRM yields sustainable advantage in the face of competitive reaction. With regard to this latter issue, it is difficult to imagine how the technology underlying CRM could create such an advantage. However, the relational information processes, the customer knowledge generated from these processes, the integration of processes, and the customer loyalty resulting from the value creation processes may be difficult to imitate.

> P_{11}: Effective CRM implementation requires coordination of channels, technologies, customers, and employees.

Again, an interesting aspect of this special section is what is not included. Little attention is given to the role of employees in the implementation of effective CRM activities. In discussing how Continental Airlines went from worst to first in customer satisfaction, Reitz (2005) stresses the importance of firms having people issues under control before investing in expensive CRM technologies. The articles in this issue that come closest to addressing the role of people in CRM are those of Jayachandran and colleagues (2005) and Srinivasan and Moorman (2005). Jayachandran and colleagues detail the processes that are needed to collect, use, and analyze customer data effectively, but they only hint at how to ensure that employees use these processes. Srinivasan and Moorman measure employee involvement in the collection and dissemination of customer data and show that this involvement is positively associated with good firm performance. However, they also do not provide insights into how to ensure that people in firms exhibit this behavior. Thomas and Sullivan (2005) demonstrate the potential value of enterprise systems that integrate customer information across channels. However, they do not indicate how to bundle these enterprise systems with people processes. For example, it would be nice for the catalog customer service representatives to have access to customers' shopping activities across all company channels.

Because employees are an integral part of the delivery of CRM activities, we believe that the organizational issues relevant to CRM are a critical area that deserves a firm's attention. Data and technology processes and systems are critical for CRM activities, but without appropriate human interaction with these processes and systems, the returns on investments in these areas are at risk. Vorhies and Morgan (2005) make a similar point in noting the interdependence of marketing capabilities. Because little is known about how people issues connect to the success of CRM activities, we believe that this is an area worthy of researcher attention. A good starting point might be the services marketing literature. This literature recognizes that services lie at the intersection of marketing, human resources, and operations. We refer the reader to the work of Zeithaml, Bitner, and Wilson (2000) for an extensive discussion of this literature.

Finally, related to the previous proposition, we also note that the integration of CRM across both people and processes may be difficult to imitate and thus provide a source of sustainable competitive advantage. Thus, we hope that others will provide deeper insights into the conditions needed to integrate people into CRM activities successfully.

Method Issues for Further CRM Research

On the basis of our discussion of the previous propositions, it is clear that there are additional substantive unknowns pertaining to the implementation of CRM and the understanding of the effects of CRM activities. We now turn to more general methodological considerations. We provide six recommendations that we believe are important for scholars interested in pursuing research in the field of CRM.

> R_1: CRM research should focus on the interaction among subprocesses or the interaction among processes, not total CRM systems.

We previously noted that CRM entails the integration of numerous processes; takes place across multiple areas of the value chain; and involves the confluence of technologies, data, and people. We believe that CRM is too complex and integrative to expect any one study to model all these aspects of CRM empirically. Thus, we expect that researchers will follow the lead of the eight empirical articles in this special issue and focus on specific areas within CRM, searching for insights pertaining to how particular processes or subprocesses behave and/or interact. However, we note an inherent tension in doing this. Researchers must remember that other parts of the CRM process may modify their relationships of interest. This will require researchers to either model these effects or control for them. In the following recommendations, we focus on specific methodological issues that investigators should take into account when conducting CRM research.

> R_2: CRM research should have the appropriate measures available for the desired insights.

Most studies on CRM are involved in one way or another with firm performance. We previously noted that the articles in this special issue use several different firm performance measures. Ryals (2005) and Cao and Gruca (2005) use profit. Lewis (2005) uses revenues. Gustafsson, Johnson, and Roos (2005) use retention, and Srinivasan and Moorman (2005) and Mithas, Krishnan, and Fornell (2005) use satisfaction. Jayachandran and colleagues (2005) use a combination of retention and satisfaction. Ultimately, CRM is about linking firm actions to the many stakeholders' values. One of the major stakeholders of relevance to CRM is the firm owners (i.e., the shareholders). A key objective for these stakeholders is profit maximization. Thus, we hope that researchers obtain cost data whenever possible, thereby enabling them to assess profits. This may require them to address the allocation of costs directly across different business units or customers groups, as Ryals (2005) does at both the customer and the segment levels. Beyond this, we hope that further work directly examines the link between CRM activities and shareholder value.

A second key stakeholder of relevance to CRM is the customer. A key objective for customers is utility/value maximization. Here, there is a great deal of research that examines how CRM connects to this objective, using the proxy of customer satisfaction. However, we reiterate our previously stated belief that more work could be done that examines how CRM affects measures of the value creation process rather than value creation outcomes. In other words, how does CRM connect to innovation and constant renewal of value creation for customers?

Other stakeholders of relevance to CRM include employees, suppliers, and collaborators. Given the integrative nature of CRM, we hope that further research explores how measures of relevance to these different stakeholders are related to CRM activities. We expect that these measures are present in a variety of other literature streams (e.g., strategy, supply chain management, organizational behavior and design).

In addition, the CRM environment provides a rich setting to test the relationship between and among various measures. Thus, Gustafsson, Johnson, and Roos (2005) examine the uniqueness of constructs that tap satisfaction, affective commitment, and calculative commitment as they are related to retention. This work emphasizes the issue that though constructs relevant to CRM may be conceptually distinct, their effects may be empirically indistinguishable, as is found with the satisfaction and affective commitment constructs. This finding suggests that careful attention to measurement issues is required when testing subtle theoretical effects relevant to the CRM domain.

> R_3: Research should provide conclusive evidence with respect to the causal effects of CRM activities.

Most CRM researchers are interested in assessing causality. One research strategy commonly found in the study of CRM (among other fields) is to obtain responses for several firms and then determine whether there is a tendency for firms of a particular type to display different behavior than firms of another type. Often, the researcher obtains these data by asking respondents to fill out a survey. It has long been known that if both the dependent variables and the independent variables come from the same respondent, it is likely that at least part of any association between these variables is due to common method bias. A way to avoid this bias is to use two different sources, one for the independent variables and one for the dependent variables. Two of the articles using cross-sectional data in this issue (i.e., Mithas, Krishnan, and Fornell 2005; Srinivasan and Moorman 2005) use this approach. The other article in this issue that uses cross-sectional data (Jayachandran et al. 2005) relies on survey data collected from only one source within a firm. However, Jayachandran and colleagues' interests center on the effects of an interaction term, something that could not be explained by common method bias. Moreover, they present theory that predicts the form of this interaction. Thus, we can be more confident in their interpretation of the findings.

Causality is difficult to determine if the only data available are cross-sectional. The obtained results are associational and subject to interpretations of reverse causality. Thus, it is highly desirable to have temporal separation between the independent and the dependent variables, as is shown by Mithas, Krishnan, and Fornell (2005), Srinivasan and Moorman (2005), and Gustafsson, Johnson, and Roos (2005).

In general, we note the relevance of longitudinal data or cross-sectional/longitudinal data for CRM research. This is especially true given policy changes that CRM research suggests. For example, Ryals (2005) shows an increase in business unit profits due to CRM, but she cannot document the validity of lifetime value estimates based on data from a single point in time. Therefore, Ryals must make assumptions about long-term profitability implications. Likewise, Thomas and Sullivan (2005) do not document before and after behavior, given a change in communication strategy that leads to channel migration. Instead, they must assume that model estimates made from a certain point in time continue to hold; that is, when customers migrate to a new channel, they assume the shopping behaviors of those already in that channel. We note that Lewis (2005) also does not conduct a longitudinal study. However, he is better able to assert what would happen if the firm takes a proposed action because his model reflects the interaction of the different players and is based on an underlying utility formulation. This enables him to make forward-looking policy statements that imply causality.

We believe that if the field is to advance, more emphasis must be placed on documenting causality. Further research should also reflect that most firm–customer interactions are dynamic and time varying. As such, CRM systems should help provide data for this research, because a key element of these systems is the collection over time of data that document critical aspects of the process. Perhaps the major issue for academic researchers who are interested in assessing causal relationships within CRM involves accessing these data along with the cooperation of firms.

> R_4: Research should acknowledge that firms do not choose CRM activities in the abstract; instead, they choose these activities on the basis of market response to these activities along with other factors, such as particular firm skills and capabilities.

Customer relationship management activities are not static. Firms and customers choose (and change) their behavior on the basis of others' actions to maximize value. Ryals (2005) shows how managers modified their behavior toward individual customers after being given access to measures of customer lifetime value. Lewis (2005) documents how customers act strategically to alter their behavior depending on the actions of the firm and that firms can alter their behavior on the basis of consumer behavior. Thomas and Sullivan (2005) show how firms can modify customers' channel choice through different communication strategies. Payne and Frow (2005) emphasize the dual creation of value between customer and firm. In all these cases, the actions of one player are chosen because of or depend on the actions of other players. In addition, Jayachandran and colleagues' (2005), Srinivasan and Moorman's (2005), and Mithas, Krishnan, and Fornell's (2005) research implies that firms should perhaps choose their CRM decisions on the basis of existing resources and capabilities.

All of this provides strong evidence that CRM activities should be considered choice variables and thus treated as endogenous in empirical models. As is well known from the strategy literature, if this is not taken into account, the result may be biased estimates of the effects of CRM activities on performance. This is because unobserved determinants of these CRM choices may also be correlated with the dependent measure of interest in the research. Thus, we hope that further CRM research uses structural modeling and estimation approaches that address this issue.

We note that this concern about endogeneity is also connected to our recommendation for increased use of longitudinal or cross-sectional/longitudinal data for CRM research. Correcting for the possibility of endogeneity bias is difficult when there is only access to cross-sectional data (Boulding and Staelin 1995). Given this limitation, we find that Mithas, Krishnan, and Fornell's (2005) approach is quite creative. Because they rely on a cross-sectional database, they cannot control for the issue of endogeneity bias. However, they present sensitivity analysis that indicates the degree to which the estimate of their theoretical effect of interest changes as a function of the (unknown) correlation of unobserved factors with the independent variable of interest. Thus, although their reported estimate is not necessarily free from bias, the reader can assess the stability of this result in the face of potential bias from unobserved factors.

> R_5: CRM research should suitably address potential heterogeneity in customer behavior.

An underlying premise of CRM is that customers have different needs, and thus the firm should treat them differently. By definition, this implies that researchers need to acknowledge heterogeneity in customer behavior. Given the extensive focus on heterogeneity issues in the field of marketing, there are several approaches that researchers can take to address this issue. Lewis (2005) and Thomas and Sullivan (2005) do this by constructing latent class segmentation schemes (Kamakura and Russell 1989) and then estimating different response coefficients for each segment. Cao and Gruca (2005) take a different approach by controlling for heterogeneity through observable differences in their customers. Gustafsson, Johnson, and Roos (2005) also control for heterogeneity through observable customer differences by constructing an individual-level variable that, in effect, segments customers in terms of current churn behavior based on past churn behavior. This approach is reminiscent of what Guadagni and Little (1983) did in the context of brand choice. Another approach, which none of the articles in this special issue uses, is to use Bayesian estimation (Allenby and Rossi 1999), which, at least conceptually, enables every person to have his or her own response coefficients. However, the bottom line is that CRM rests on the notion that customers may differ. Researchers need to acknowledge this potential diversity whenever they analyze customer response to firm actions.

R_6: The research results should generalize rather than be idiosyncratic to the chosen research domain.

A major feature of high-impact academic research is that the findings, concepts, and ideas that result from the research can be applied to a broad set of environments and/or domains. There are two basic approaches that a researcher can take to achieve such a goal for CRM research. The first approach is to base the research analysis on a wide range of firms (i.e., use cross-sectional analysis). Although this enables the researcher to address the issue of generalizability directly, it opens up the issue of being able to control for many environmental factors that could affect the dependent variable of interest along with the independent variables that vary across firms. One standard approach that researchers who conduct cross-sectional analyses use is to include variables that control for these differing environmental factors in their analyses. This is the approach that Srinivasan and Moorman (2005), Mithas, Krishnan, and Fornell (2005), and Jayachandran and colleagues (2005) use.

A key issue is not whether a cross-sectional analysis has adequate control variables but whether the researcher can claim that he or she has included all relevant environmental variables. Obtaining good measures for all potentially relevant environmental measures is often difficult if not impossible. Unfortunately, if one or more of the omitted environmental variables correlate with both the independent variable of theoretical interest and the dependent measure, the obtained result is biased. A way to circumvent this issue is for the researcher to obtain multiple observations on each firm (i.e., obtain a longitudinal, cross-sectional database). This enables the researcher to hold fixed the environmental factors that are unique to each firm by conducting both within- and between-firm analyses (see Boulding and Staelin 1995).

A second approach is to conduct a series of within-firm analyses over time and then look for commonalities among these studies. Here, the emphasis is on determining changes over time. Two examples of within-firm analyses over time in this special issue are those of Ryals (2005), who studies how managers modify their behavior over time in response to relevant CRM metrics, and Gustafsson, Johnson, and Roos (2005), who study how consumers change their behavior over time as a function of their prior behavior, satisfaction, and calculative commitment to the firm. When several of these single-firm analyses have been conducted, the researcher(s) can then perform a meta-analysis and look for generalized principles. In a way, this is what we tried to do by examining the ten articles in this special issue and then coming up with our propositions.

Conclusion

The field of CRM has matured over the past decade. We share Rogers's (2005) sense of excitement over this CRM maturation process. Much progress has been made, as witnessed by the number of academic centers, conferences, research papers, courses, and industry attention devoted to this topic. However, as does Rogers, we note that many unanswered questions remain to be addressed.

One question frequently asked is, What is next after CRM? Given our assertion that CRM is the outcome of the continuing evolution and integration of marketing ideas and newly available data, technologies, and organizational forms, we do not forecast a discontinuous leap after CRM. Rather, we predict a continued evolution in CRM as new ideas, technologies, and so forth, are integrated into CRM activities. We hope that this article and the other articles in this special section provide the catalyst for other researchers to continue to move the theory and practice of CRM forward in this evolutionary process.

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