There is a parallel between the response of natural systems to rapid environmental change and the response of business systems to rapid technological change. (p. xiii)

From this principle, it is argued that our view of the world-as-machine greatly hinders us from economizing very well in this age of rapid technological change. Why? Because the rules keep changing faster than our machine-like business systems can accommodate. Perhaps it is time for a “new” science to help us understand life in the midst of rapid change (Rothschild, 1990).

**CRM IN BUSINESS ECOSYSTEMS**

In the freewheeling business of today, companies try to build Customer Relationship Management programs that aim to create the same kinds of relationships with their customers. To build these relationships, companies must learn to understand their customers. To understand their customers sufficiently to build effective customer relationships, marketers must

- Learn how to identify the right set of customers to do business with (segmentation);
- Learn how to identify valued customers;
- Learn how to recognize danger signals in their data relating to customer behavior that, if unchecked, might lead to decisions to leave the company;
- Use segments defined by attrition probability algorithms to strengthen and maintain relationships with valued members of the existing customer base.

The key principle in this approach is that the most powerful predictors of customer behavior in the future are customer behavior patterns in the past. Other customer characteristics are important also in defining patterns of customer behavior (i.e., demographic and firmographic information). However, unless we include in our models of customer behavior the patterns of past customer behavior related to their future actions, they will not be very powerful predictors of what customers actually do. When these patterns are combined with the more static customer information gathered by businesses in their day-to-day operations (e.g., the date a business started business), companies can take a quantum leap forward in understanding the customer and improving customer loyalty.

**Differences Between Static Measures and Evolutionary Measures**

The key difference between historical behavior patterns and relatively static characteristics of customers is that historical patterns enable us to track the development of the decision to leave rather than just the decision itself. These evolving behavior patterns are very organic in nature and are driven by a number of significant nonlinear events (NLEs). Farrel (1998) maintains that bursts of customer demand (or “anti-demand” like attrition) are driven by these NLEs. The evolutionary nature of these NLEs renders them much richer in predictive value than static characteristics alone because they can capture the mood of