Part IV: Big Bob — Contributions That Were Industry-Changing

Bob Blattberg wrote papers that changed how business is done across entire industries. These papers were sometimes published in academic journals, sometimes in monographs or books that were distributed more widely. Their impact is less evident in citation counts than by observing practices in the industries he studied.

Bob's industry-changing papers share three common characteristics. First, he was a pioneer in whatever he did. As a result, his work led industries and developed new paradigms rather than making incremental contributions. He was a harbinger of important trends and issues whose work helped set the agenda for industries. Second, Bob focused on applying models to data to make better marketing decisions. In some cases, his work found new models to apply to existing data sources; in other cases, his work focused on applying models to new data sources. Either way, his objective was to improve the information available for marketing decisions. Third, Bob's papers made clear recommendations for implementation. He was never content just to describe the data and models; rather, he clearly intended that they be used.

The objective of this chapter is to highlight Bob's papers that changed industries. With one exception, the papers in this chapter relate to consumer packaged goods. Bob's work changed the practices of both retailers and manufacturers in consumer packaged goods. The other paper in the chapter relates to the copper industry. Bob's work in direct marketing and customer loyalty also changed industries but is covered in another chapter of this volume and so is not included here.

The Copper Industry

Bobe's first paper was published in *California Management Review* when he was still a doctoral student at the Carnegie Institute of Technology (Blattberg and McGuire, 1967). The paper used the copper industry as a case study to examine the effectiveness of wage-price guideposts. Wage-price

guideposts were voluntary limits on prices that were tied to changes in industry productivity. They had been introduced in the copper industry as part of a broader government program in the 1960s to keep inflation under control.

Blattberg and McGuire carefully chronicled events in the copper industry over a five-year period, demonstrating large changes in supply and demand. The authors found that the firm-level price increases that had triggered US government intervention under the wage-price guideposts had been entirely justified by a reduction in copper supply worldwide. On the basis of the case study, Blattberg and McGuire concluded that wage-price guideposts interfered with, rather than supplemented, market competition which led to a misallocation of resources by both buyers and sellers.

As an explicit evaluation of government economic policy, this paper is perhaps Bob's most ambitious in scope. It was also an early response to increasingly interventionist US economic policies that culminated in 1974's wage-price freeze. This was to become a pattern in Bob's industry-level publications — early recognition of problems and opportunities with clear recommendations for decision-makers.

Consumer Packaged Goods

The remainder of Bob's industry-changing publications focused on consumer packaged goods and the application of technology. He studied issues that were of importance to both manufacturers and retailers. His applications for new product marketing impacted manufacturers; his scanner data studies primarily affected retailers; his category management publications impacted both.

New Product Marketing for Consumer Packaged Goods Manufacturers

With John Golanty of the advertising agency Leo Burnett, Bob developed TRACKER, a model for forecasting sales and diagnosing shortcomings of new products (Blattberg and Golanty, 1978). For a given new product introduction, the model follows consumers down the path from awareness to trial to repeat usage. The authors modeled each step in that path with a separate econometric specification using a time series dataset comprised of consumer surveys, media advertising weights and prices. Repeat usage was modeled with a long-term market share model in which consumers were segmented based on usage rates. The parameters of this long-term market

share model could be used to diagnose problems with new product acceptance. Together, the awareness, trial and market share models could be used to forecast sales and market share for the new product.

TRACKER represents an effort to use test market data to make marketing decisions. The emphasis was on making those decisions quickly; in this case, forecasting year-end sales with only three months of data. Being able to determine quickly whether to roll out a new product and, if so, how to market it enabled consumer packaged goods companies to reduce the high costs of test markets and potentially gain a strategic advantage.

Bob took on another important issue related to new product introductions — who to target. Blattberg, Buesing and Sen (1980) addressed the targeting question by employing a segmentation approach. Using household panel data that the *Chicago Tribune* had recently begun to gather, households were segmented based on three dimensions: loyalty (loyal vs. switcher), brand preference (national vs. private label) and price sensitivity (deal prone vs. not). The authors used the introduction of Puffs facial tissue to test whether new products should target brand switchers, who conventional wisdom suggested were most open to buying new products. The data showed that switchers were the indeed more likely to buy Puffs but continued to switch between brands. On the other hand, households that were loyal to national brands were less likely to buy Puffs but *more likely* to become loyal Puffs purchasers if they had. The authors concluded that new product introductions of national brands should target national-brand loyals, as well as switchers. Buyers of more expensive private label products were also found to be attractive for targeting.

Bob's work with new products in the late 1970s and early 1980s focused on applying models to data from new sources to make better marketing decisions. Blattberg and Golanty (1978) emphasized the modeling; Blattberg, Buesing and Sen (1980) emphasized the data. Bob's interest in new data sources was peaked again as supermarkets began to use electronic scanners at checkout.

Scanner Data Applications for Consumer Packaged Goods Retailers

The use of scanning equipment in supermarkets began in 1974. Scanners were rapidly found to offer hard, or operational, benefits such as reduced labor costs and faster checkouts. Yet, scanners also held the promise of soft, or informational, benefits from data-based pricing, promotion, shelf and cost management applications. Supermarket companies found it difficult to quantify the soft benefits — the value of using scanner data to make

marketing decisions — so they did not immediately implement these data-based applications.

In a study conducted for the Coca Cola Retailing Research Council, Bob determined the costs and benefits from implementing a wide range of data-based applications at a hypothetical supermarket company (Blattberg, 1988). He found that the following applications would all return a positive payout within the first year of implementation:

- perishable management systems,
- direct product profitability (similar to more recent activity-based costing initiatives),
- display and ad analysis,
- localized marketing,
- price simulators,
- shelf management systems,
- promotional analysis and
- computer assisted ordering.

The highest overall benefits would be realized from direct marketing and perishable management applications. To help retailers prioritize potential applications, the study also considered implementation requirements including data quality, time and ease of implementation and technical sophistication.

This study was widely read by leaders and managers in the supermarket industry and helped many to understand and evaluate the soft benefits of scanning. Stimulating demand for scanning applications, the study helped create new markets for data-based applications and services that have grown during the past two decades.

The databases generated by supermarket scanners could include daily sales and pricing records for tens of thousands of individual items at hundreds of different stores. The sizes of such databases were measured in gigabytes or even terabytes. Estimating models to help retailers make pricing, promotion and inventory decisions using these vast databases is simply too large a task for manual modeling. In Bob's edited volume *Marketing Information Revolution*, Blattberg, Kim and Ye (1994) proposed automating or "mass-producing" models on which to build marketing decision support systems. Using item-level pricing models for illustration, the authors showed how models could be used to improve retailer decisions. In order to be used in decision support systems, the mass-produced models must have:

- predictive accuracy,
- correct parameter signs and magnitudes,

- adaptability to changes in the environment,
- little human intervention require,
- automatic recalibration and
- the right specification (i.e., automated variable selection).

The authors also suggested robust estimation techniques so that the mass-produced models would meet the above criteria. Robust regression, constrained regression and regression with time varying parameters were deemed superior to ordinary least squares regression for estimating the mass-produced models.

Bob was among the first to anticipate the value of scanner data in marketing decision making. His guidance about how retailers could use the data to help them make pricing, promotion and other marketing decisions has had an important influence on practice. His influence was also felt in his contributions to the practice of category management.

Category Management Consumer for Packaged Goods Retailers and Manufacturers

Category management represented a new paradigm in retail management — a shift in focus from the performance of individual items and brands to the performance of entire product categories. The new paradigm involved managing categories as separate business units with their own business plans, integrating the buying and merchandising functions under a single category manager, relying on data-based analysis and collaborating with suppliers to profitably deliver value to consumers. In 1995 and 1996, Bob published a series of practical guides to implementing category management for the entire grocery industry (Blattberg, Fox and Purk, 1995–1996).

The objective of the guide series was to give grocery retailers of any size the necessary information to implement category management. The guide series began with a ten-step process to implementation in the first guide, "Getting Started." This guide also spelled out the changes in organization, technology and business practices that would be required. The second guide, "A Blueprint for Implementation" offered case studies of retailers of different sizes that highlighted the obstacles and solutions to the implementation of category management. This guide also offered "how to" details, frameworks, and scorecards for each of the ten implementation steps. The third guide, "The Category Plan," focused on this important aspect of the process. It included a series of templates to make category planning consistent and efficient. The fourth guide, "Information Tools," addressed the technology

requirements of category management. Its objective was to help retailers assess their data requirements, choose hardware and software solutions to meet those requirements, then integrate the technology into their business processes. The fifth and final guide, "The Role of Supplier Organizations," focused on establishing and maintaining the collaborative relationships that were important to the success of category management. Category captains, as collaborating suppliers were known, offered retailers category expertise, insights into consumer behavior and analytical sophistication. Yet, category captains were understandably more interested in the success of their own products than in the success of their competitors' products on the retail shelf. The final guide addressed this issue and discussed the roles of other potential collaborators: wholesalers, brokers, merchandisers and data vendors.

The category management guide series helped bring about a paradigm shift among retailers of consumer packaged goods. Retailers changed how they viewed their business, relying on different categories for specific contributions (to margin, to store traffic, etc.). Retailers also came to rely on their suppliers for information and recommendations. Equally important, retailer decision-making became more fact based as retailers began to harness the power of their data for marketing decisions.

Some Personal Comments

This chapter highlighted Bob Blattberg's industry-changing work. In particular, that work has had an important impact on consumer packaged goods retailers and manufacturers. Bob was among the first to recognize the potential of scanner data and statistical modeling techniques for marketing decision-making; his work paved the way for their widespread use. One can see evidence of his contribution today — the applications and techniques that he championed are now in common practice.

Perhaps it is fitting that I have had the opportunity to focus on Bob's industry-changing work because he was heavily engaged in this work during the early years of our association. As a student and research associate, I watched Bob define category management for packaged goods retailers and suppliers. At the same time, he was helping to usher in the era of database marketing. However, watching Bob at work provided only limited insight into "Big Bob." A review of his industry-changing work has offered a little more perspective. I have come to believe that foresight may be Bob's greatest gift. Not that he saw changes before they happened; rather, he saw the potential for positive changes before they were realized and had the

wherewithal to make them happen. We would all be well served to follow his lead and try to see the world not just as it is, but as it could be if we helped to change it for the better. Thank you, Bob.

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