

**Commentary on “Volume 1: Processing of Price Information”**

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## **A DIFFERENT VIEW ON PRICING**

In the Early Years...

From the outset of his research career, Monroe planted the seeds for a new and important area of inquiry: behavioral pricing. Much of his early research focused on how consumers process price information, a theme he often returned to over the years. His early research in this area, published in the late 1960's and early 1970's (i.e., the papers in Section 1), took economic theory as its starting point and highlighted differences between what it said about how a "rational" consumer should use price information and what he observed about how consumers actually used prices. Monroe challenged the view that deviations from economic theory implied that people were irrational, and argued instead that the assumptions of economic models were not reflective of the real world. He grounded his ideas in psychological theories and began the development of a behavioral theory of how consumers actually process and use prices and why.

Monroe's goal was to broaden our understanding of the "irrational" consumer by uncovering rational explanations that underlie their perceptions, preferences, and behaviors. Over time, Monroe drew from an expanded set of psychological theories that allowed him to develop more nuanced predictions of how consumers search for price information, how they process and use it, and how this in turn affects their preferences and behavior. For example, progressing from his work in Sections 1 and 2 to his work in Sections 3 and 4, his research placed a heavier focus on experiences: prior knowledge, prior experience with products, familiarity with brands, price ranges, etc.

## In the Later Years...

Given the progression of Monroe's research over time, it is clear that he felt that much work was still left to be done, as academic research in economics, marketing, and even consumer psychology, by and large was still grounded in how consumers "should" behave. For example, research at that time still focused on normative aspects of how consumers should search for, attend to, and react to pricing information. This in turn affected the conclusions these researchers drew about consumers' perceptions of prices and how much they ought to value price information. For example, before Monroe introduced the concepts of recognition versus recall (Monroe et al. 1986), and implicit versus explicit knowledge (Monroe and Lee 1999), consumers' inability to remember prices was attributed to their lack of awareness of prices and a lack of importance placed on them. Monroe made a major advancement by suggesting that the way we measure consumers' price awareness may not be appropriate (i.e., recognition vs. recall). Again, he explored what we should expect of consumers given what we knew about their cognitive processes and context. He reassessed what was currently known, what we would rationally expect to happen, and helped revolutionize the way we now think about how consumers use and process price information.

## Into the Future...

Monroe's papers had a high impact in the years immediately following their publication and a persisting impact in subsequent years; even now, their impact continues to increase. Figure

1 shows the number of times the papers in Volume 1 have been cited each year, based on a December 2009 citation search on Web of Science.

--- Insert Figure 1 about here ---

As Figure 1 clearly shows, Monroe's impact has grown over time. In fact, although much of his research was published decades ago, his research on how prices are processed was cited more times in the most recent year (2009) than in any earlier year. We think there are several characteristics of Monroe's research that help explain its enduring and growing impact. First, his work introduces and highlights important concepts and theories that continue to have meaning and be useful over time. Second, while these concepts are central ones to researchers working in consumer psychology and marketing, they also have important implications for researchers working in a wide range of fields as well as for policy makers. Third, his research has created a new field of behavioral pricing which has attracted a large number of leading scholars. Many of the papers published by those inspired by Monroe's research have become seminal in their own right. We use four of the papers in this Volume (Monroe 1971, 1973, 1976; Monroe and Lee 1999) to help illustrate these points. All of these papers were highly cited in the years following their publication and continue to be highly cited today (see Figure 2).

--- Insert Figure 2 about here ---

## **MONROE'S ENDURING INFLUENCE**

### **Four High Impact Papers in Marketing**

Monroe (1971) was one of the first papers to discuss the subjective nature of how consumers process price information. It explains why consumers may not react in the same manner to prices that fall within an acceptable range as they do to prices outside that range, that consumers hold price thresholds that are measurable, and that we can use these notions to help explain why demand curves sometimes may bend backward. Monroe expanded on these ideas in his 1973 *JMR* where he discussed how and why perceived prices differ from actual prices, for example, because price plays two roles – a measure of economic sacrifice and as an indicator of quality. He also discussed the psychophysical aspects of how consumers process price information, how this can be explained by the Weber-Fechner law, when consumers will and will not notice price differences, and when we should expect to observe assimilation and contrast effects. This paper also laid the ground work for future inquiry on reference price effects and consumers' knowledge and consciousness of price information. In his 1976 *JCR*, Monroe enriched his theories by examining how non-price cues, such as brand name and product familiarity, moderate how consumers process price information. Monroe and Lee (1999) highlighted the importance of having a full understanding of how price information is acquired, perceived, processed, stored in memory, and retrieved, and discussed how theories of numerical cognition can enrich our understanding of these processes. This paper introduced the concept that consumers can know prices even when they cannot recall them, and highlighted the differences between explicit versus implicit memory for prices. Finally, this paper, like many of Monroe's, offered a thoughtful agenda for future research on behavioral pricing that inspired much of the research we see today in marketing.

Impact Beyond Marketing

The topics and concepts discussed above have central importance for consumer psychologists and marketing modelers who use them to build richer and more realistic models of how consumers react in the marketplace and therefore it is only natural that his work has been so highly cited by marketers. What is perhaps even more impressive about his work is how often it is cited by researchers from other disciplines. For example, the ideas from these four papers have been used to help develop more general psychological models of numerical estimation (Murray and Brown 2009) and economic models that better reflect how consumers actually behave (Carter and Milon 2005; Dunn 1978; Perloff and Salop 1985, 1986; Villas-Boas 1995). These ideas have also helped researchers describe and develop hypotheses about when people seek advice (Gino 2008; Sniezek, Schrah, and Dalal 2004), how they behave on the internet (Chu and Lu 2007; McCoy et al. 2008), how information processing affects tourism (Chen, Ruseski, and Schwartz 2009; Kerstetter and Cho 2004; Oh 2003; Joost et al. 2009), real estate decisions (Einio, Kaustia, and Puttonen 2008; Lambson, McQueen, and Slade 2004), charitable giving (Desmet and Feinberg 2003), food related perceptions and behavior (Chang and Chiou 2007; Di Monaco, Ollila, and Tuorila 2005; Kronl et al. 1982; Owen, Griffith, and Wright 2002; Reaburn, Kronl, and Lau 1979; Schifferstein, Kole, and Mojet 1999; Torrieri et al. 2008.), and how risk perceptions affect decision making (Brown and Green 1981; Sitkin and Pablo 1992). Because the ideas from these papers also have important implications for policy and regulation (e.g., taxes, consumer protection) they are often referenced in this regard (Beales, Craswell, and Salop 1981; Brokaw, Gale, and Merz 1990; Ott and Andrus 2000; Skinner, Childers, and Jones 1981).

## Impact on Behavioral Theories of Pricing

Finally, Monroe's work inspired others to continue to develop behavioral theories of pricing and many of these papers, like Monroe's, have become seminal, highly cited papers. For example, his work laid the foundation for research on reference price effects (Urbany, Bearden, and Weilbaker 1988; Winer 1986), price knowledge and search (Brucks 1985; Dickson and Sawyer 1990), processing of advertised information (MacInnis, Moorman, and Jaworski 1991), customer satisfaction (Singh and Sirdeshmukh 2000), price expectations (Kalwani et al. 1990), value consciousness (Lichtenstein, Netemeyer, and Burton 1990), consumers' risk perceptions (Shimp and Bearden 1982), and country-of-origin effects (Han 1989).

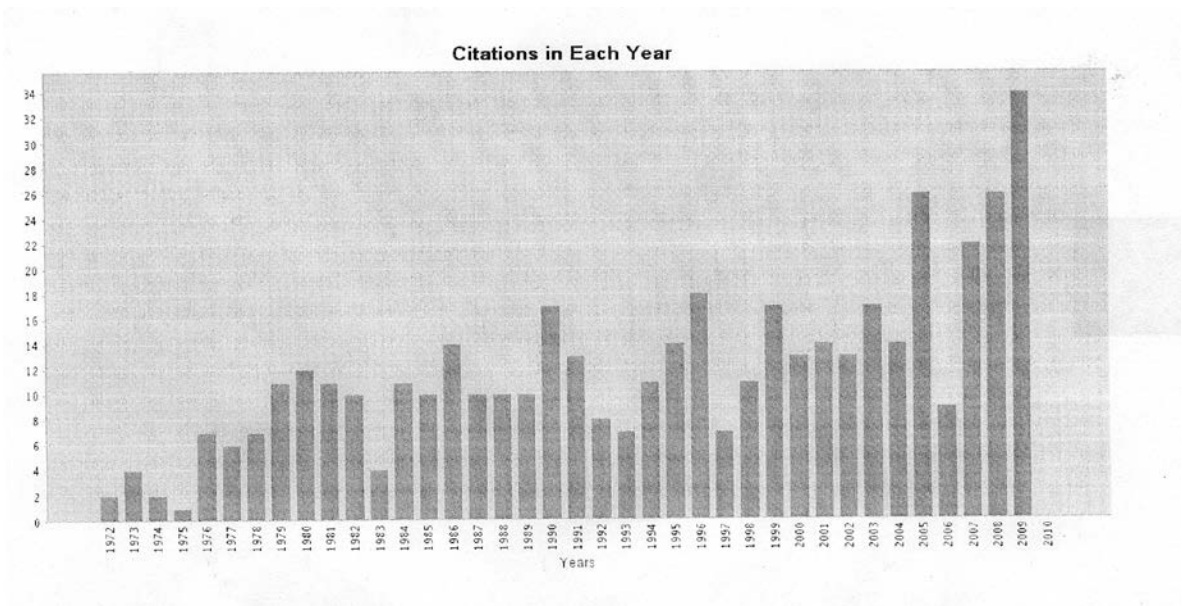
### **A PERSONAL NOTE**

On a more personal note, Kent Monroe has been a mentor and a friend, and his research was the inspiration for my (Vicki Morwitz) own interest in behavioral pricing. My first research in this area (Morwitz, Greenleaf, and Johnson 1998) examined how consumers process and react to partitioned prices. This research takes as its starting point ideas Monroe brought forward including that consumers do not always accurately notice and process price information. Therefore, their perception of the price of a product that has a partitioned price could differ from the actual sum of the price components and this perceived price would be what affects demand (Monroe 1971, 1973). Monroe's work also motivated us to hypothesize that the manner in which partitioned pricing affects consumers could vary with how the price is framed and with individual differences (Monroe 1976). Kent invited me to present this research at a behavioral

pricing camp he organized at the University of Illinois, and he provided great support and insightful comments. Monroe's work also served as the inspiration for Thomas and Morwitz (2005), which offered a psychological explanation for when and why consumer perceive nine-ending prices to be smaller than prices that are just one cent higher. Our theorizing was motivated by ideas outlined in Monroe and Lee (1999) concerning analog models of numerical cognition and the idea that prices are often compared to a standard (Monroe 1973). Kent again very generously invited Manoj and me to present this research at a behavioral pricing camp at the University of Illinois and as before, offered sage advice and support. I owe Kent personal thanks for the impact he has had on my research and career, and for the support he has provided to me and to my doctoral students. I am certain that many others whose work was inspired by his feel the same way and that given the growing impact of his work, he will continue to inspire researchers in the years to come.

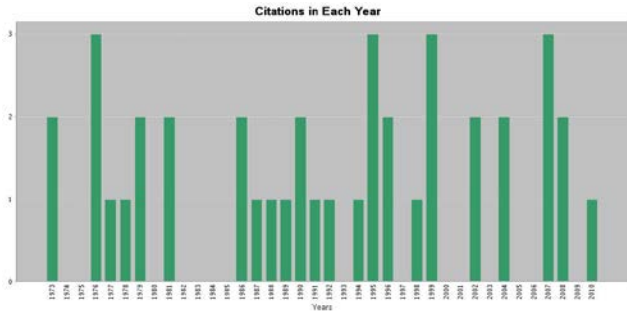


Figure 1

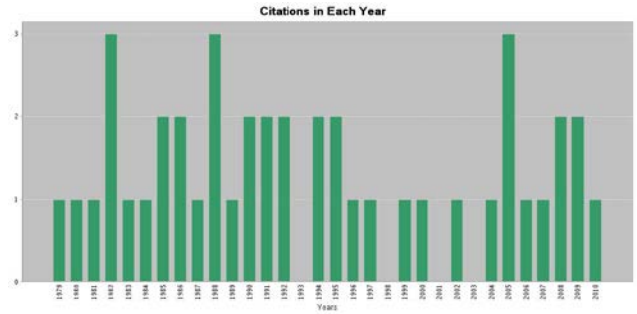


**Figure 2**

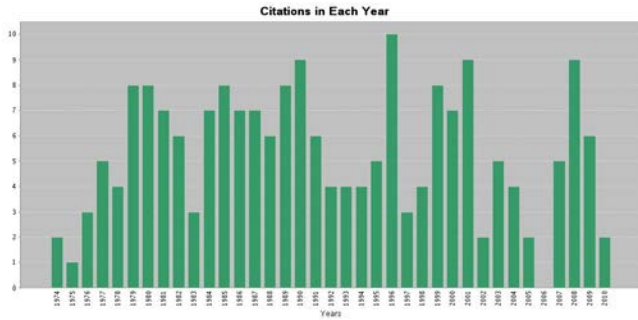
"Measuring Price Thresholds by Psychophysics and Latitudes of Acceptance," *Journal of Marketing Research*, 8 (November 1971), 460-64.



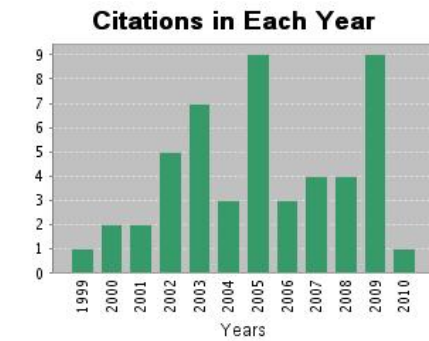
"The Influence of Price Differences and Brand Familiarity on Brand Preferences," *Journal of Consumer Research*, 3 (June 1976), 42-9.



"Buyers' Subjective Perceptions of Price," *Journal of Marketing Research*, 10 (February 1973), 70-80.



"Remembering vs. Knowing: Issues in Buyers' Processing of Price Information," *Journal of the Academy of Marketing Science*, 27 (April 1999), 207-25, (with A. Lee).



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