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# Virtual Packaging: A Challenge for the Twenty-First Century

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## Introduction

This paper examines the impact that the Internet may have on package-based communications in the fast-moving consumer goods (FMCG) industry. This is an area in which current knowledge is based on experience and incremental developments, rather than on formal research. The advent of the Internet could cause changes that have major implications as the FMCG purchase environment develops beyond industry's current base of experience.

## FMCG Package Design: The Current Position

The vast majority of all consumer goods that are purchased today are packaged. During the second half of the Twentieth Century the role of the package as a communicator has been revolutionized by the establishment of the self-service format for the vast majority of FMCG or packaged goods. Consequently, this has required the package to change from a passive instrument of communication to an active instrument of persuasion, targeted at a consumer who had not yet made a decision to purchase. The package now occupies a central role in active market communications in the FMCG industry. A supermarket may have up to 40,000 products on its shelves. Only about 30 of these are supported by communications on television, radio, and cinema at any one time. Up to 500 may be supported by print communications, such as newspaper advertisements, inserts, or fliers. These communications are largely promotional rather than persuasive in nature. The remaining 39,000—plus products are solely reliant upon the package to communicate in the shelf location merchandising environment. Therefore, the package is a factor in initiating a purchase or maintaining a purchasing habit by the consumer (Miles and Lubliner, 1999). Even those products that are supported by remote communications rely on package-based communications to assist with recognition or recall of the advertising

message when the consumer is engaged in the purchase decision process.

The life or death of products and brands in the self-service environment thus depends upon what goes on in the few seconds that it takes for a consumer to make a decision to select one of the alternatives that are offered to them. The participants in this decision process are the consumer, the packages of the alternative products that they are evaluating, and the immediate purchase environment—including incidental human participants, such as children, who influence purchases.

## Packaging-Related Literature

The only operational model of consumer decision-making that academic marketing has offered to the FMCG industry is the "Theory of Planned Behavior" and variants (Fishbein and Ajzen, 1975). All of these models rely upon the consumer having an organized body of knowledge with which to structure his/her decision. However, FMCG purchase decision processes are associated with low involvement decision-making, which is related to theories of learning that do not give rise to structured knowledge (Assael, 1992).

The literature contains no operational models of low involvement decision-making, which can be driven by the unstructured knowledge that the existing models of low involvement learning produce (Hamlin, 1997). The FMCG industry is, therefore, largely on its own as it goes about systematically optimizing its package-based communications. During the past 40 years, the FMCG industry has devoted substantial resources to the practicalities of package-based communication, and large numbers of people have participated in the development of communication concepts for packages. At present, only two books and a few papers in industry-oriented journals (Miles and Lubliner, 1999; Hine and Pietch, 1997) deal with package-based communications as a definite discipline.

Despite this, the industry's package communications practices do seem to be based upon a consistent concept of how packages interact with consumers. This concept is based on a model of con-

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sumer decision-making that addresses the core problem of how consumers make rational and predictable decisions on a basis of incomplete and unstructured knowledge.

This model could best be described as cue-based decision-making. The decision between the alternatives available is made in the presence of the packages concerned. The consumer's evaluation of them is structured around heuristic constructs that are retrieved from the general, unstructured knowledge of the consumer in response to the cues that the products and their immediate environment present, not around a long-term structured knowledge that the consumer already has of these specific products. A structured knowledge, which is capable of supporting a rational choice by the consumer, therefore exists. However, it only exists for a very short time, at the time and place that the decision is made. While the cue utilization literature in academic marketing is extensive, this body of knowledge has yet to be consolidated into a formal decision model of the type that the FMCG industry appears to be using on an ad hoc basis.

### **Selling FMCG Products in Cyberspace: The New Challenge**

At present, package design and package-based communications are empirical processes, which are based on the collective experiences of those that are involved in the work. However, the rapid rise of the Internet as a medium of commerce will likely give rise to challenges that this body of experience, gathered over a long period of time, may not be fully able to cope with. The worldwide value of electronic commerce, in 1996, was \$2.7 billion and is forecasted to reach \$1.2 trillion by the year 2002. The driving force is the exponentially increasing capabilities of the converging technologies of computing and telecommunications. What was a great disadvantage—the distance from and time to major markets—is immaterial in the instant world of global digital networks where the minimization of the barriers of time and distance result in efficiency gains in the business demand chain. The democratic nature of the Internet has allowed individuals, small and medium businesses, and large corporations alike to easily participate in electronic commerce. The likely impacts of electronic commerce are difficult to identify, but they include: (Deans, 2000):

- (1) easy and cost-effective access to the global market for both producers and consumers;
- (2) access for anyone with a computer, an Internet connection, and a credit card to become a global consumer;
- (3) greater effectiveness in the delivery of services and support;
- (4) shortened product cycles;
- (5) simplified ordering processes and reduced inventory;
- (6) closer interaction between producers and consumers by allowing them to communicate directly without the intervention of traditional intermediaries, such as importers, exporters, wholesalers, and retailers;
- (7) lower transaction costs;
- (8) lower barriers to entry (trade and economic);
- (9) improved access to information for the consumer;
- (10) a move toward products that are typical of a "knowledge" economy (financial and other services, software, travel, entertainment, and high-value niche market goods) and, hence, well-suited to electronic commerce;
- (11) the ability to move from mass production of lower-value products to the mass customization of higher-value "customized" products developed in direct consultation with the final customer;
- (12) shift from a national market to a global market;
- (13) effective collapse of space, time, and distance; and
- (14) use of the Internet to perform advertising, public relations, and market research, and to initiate sophisticated communication strategies.

Until recently, companies marketing industrial goods, services, and higher-priced consumer goods dominated the Internet. Nevertheless, research done in New Zealand (Deans and McKimney, 1997) showed that these companies rarely approached an Internet presence strategically, had few if any objectives, and had no clear system of evaluating the costs of main-

taining a presence. While the Internet and World Wide Web in general offer many possibilities, too many companies see it as a panacea for falling sales figures and embrace the technology with little foresight and planning. What is appropriate for one company or product may be completely inappropriate for another. Marketing professionals need to realize that the Internet involves more than selling as it is also a very important tool for communicating, building relationships, creating dialogue, and building brands.

### **Packaging Challenges for Electronic Commerce**

If the Internet becomes a major channel for selling FMCG products to the consumer, package design and package-based communications are likely to present an acute challenge to the marketer. Humans are foraging people, and the way that the senses are used to forage for a cheese soufflé in a modern supermarket is similar to the means used by our ancestors to forage for food. Modern package design and communications are essentially only marginally influencing this ancient process in which an immediate, superficial, three-dimensional, and largely visual iconical environment is interpreted by the consumer, on a real-time basis, as they forage for their packaged "prey."

The Internet presents a radically different environment to the consumer. To begin with, the senses of touch, taste, and smell are not available. Vision is restricted to the resolution of the screen used and to two dimensions, unless a virtual reality environment is set up. Peripheral vision is lost completely. However, the environment does have "depth." If one points and clicks at the healthy eating logo on a real tin of baked beans, nothing will happen. However, pointing and clicking at the logo on the Internet may reveal "depth" in the form of further information. The action of browsing, so important to the incremental sale in FMCG marketing, is changed completely. Unless a total three-dimensional interactive environment is available, browsing in its ancient and natural form is impossible. Browsing in two dimensions requires some minimal knowledge of icons to move easily from one product to the next, thereby making the whole process more difficult. The widespread use of the Internet to sell FMCG products also brings up the issue of the illiterate or semi-literate consumer, which constitutes up to one-fourth of the population in many countries.

The current web page standard of the Internet makes it almost impossible for the consumer to review the alternatives simultaneously. A sequential examination involving manipulations and memori-

zation is required if all the information that is currently carried on packages is to be available to the consumer. This raises the possibility that a trip to the virtual supermarket could be considerably more time-consuming and exasperating than a trip to its real equivalent, unless the environment and its packages are designed with care and understanding. Impulse purchasing and the strategies that are currently used to promote it are currently an impossibility on the Internet. The whole concept of products and packages being designed for a certain part of the three-dimensional environment that a supermarket represents cannot exist, and this eliminates many category-based positioning strategies. All of these problems occur before the major logistical problem occurs while getting from the cyber product that the consumer purchases to the real product that they consume at a time and place of their own choosing.

### **Beyond the Web Page to the Virtual Package**

During the past 40 years, the package has advanced to the point at which it is the primary interface with the consumer at the point of purchase. Consumers hardly ever test and rarely even see the product at the time of purchase and thus are purchasing packages. Therefore, the idea that the package can exist in cyberspace as a separate entity from the product that it is selling is not a very large step to take. What is a major step is the totally different environment in which the consumer will encounter packages. The Internet has been extensively used as a sales tool, but the selling has so far been largely limited to the consumer who is planning the purchase of durable or specialty goods. Note the proliferation of country-specific sites for automobile manufacturers (BMW, Toyota, and Ford); white good manufacturers (Whirlpool, Fisher, and Paykel); and banking products/services (Bank Direct, ASB, and Bank of Scotland). The current standard of the web—the web page—is very effective in presenting information in a manner that assists such planned purchases and is an effective emulation of the traditional paper-based brochures, pamphlets, catalogues, and order forms that support such sales. This is achieved as a result of the multimedia capabilities of web-based technology that allow seamless interaction between text and images and beyond the paper-based system to sound and vision. However, there is a different behavior for the browsing FMCG consumer, and this will require an emulation of a three-dimensional product and its immediate three-dimensional environment, not a two-dimensional brochure.

What would this emulation look like? Would it be based on the standard web page/web site format, or would it use an entirely different platform, such as an interactive, three-dimensional, virtual retail environment? The advance in interactivity that is required is analogous to the advances that Windows presented in the development of the personal computer, and it is just as important to the widespread acceptance of the concept of shopping for the FMCG goods on the net. Retailers in the United States (Netgrocer, Peapod) and in New Zealand (Woolworths) offer such goods through Internet shopping. A corollary to this would be that such purchases normally represent "standard items" with which consumers are familiar and, therefore, represent low-level involvement and decision-making. The challenge is to present new products and product enhancements on the Internet.

The quick answer to the technology issue is that we do not know. The construction of an effective emulation requires an in-depth knowledge of how the object that is being emulated actually works, and we simply do not have this knowledge. What makes one package sell and another not sell is still somewhat of a mystery, as are the processes that go on inside consumers' heads as they make their selections. However, the same technology that spawned the challenge of the Internet has also given the market researcher the tools to study the package and the consumer in more detail than has previously been possible. The ability to produce commercial-quality one-of-a-kind versions of packages at a reasonable cost and the rise of technologies, such as scanner analysis and eye tracking, will allow the "real" package to be studied as an integrated entity for the first time. This knowledge would then be available for the development of its virtual emulation.

## Conclusion

The Internet offers a major challenge to FMCG retailing. It threatens to change the structure of the industry as the traditional industry structure—based on retail infrastructure, access to consumers, and market power—are put under pressure. There is considerable discussion about disintermediation, but perhaps the focus should be shifted to reintermediation. However, all of these macro-developments will not take place unless the microstructure of the FMCG purchase and its

participants are first put under the microscope. The foraging process by which humans choose FMCG goods is an ancient behavioral pattern to which the human psyche has highly adapted. The challenge facing the FMCG industry is to develop a virtual emulation of the environment, which realizes the advantages of the net but also allows this "foraging" pattern to continue for the comfort and benefit of both retailers and consumers. This emulation is likely to be based on a system of virtual packages—three-dimensional objects—rather than on their two-dimensional web-page equivalents. The advance to an effective virtual emulation of existing FMCG packaging will be greatly facilitated if those attempting it have knowledge that is based on understanding as well as experience. When using the new computer-driven tools available, academic marketing may have a significant role to play in acquiring such knowledge and in fitting it together into a framework that will complement what the FMCG industry already knows as they face this significant, and most interesting, challenge.

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