Pharmaceutical Advertising: A Qualitative Comparison of the Internet and National Magazines

Broc Bilby
University of Nebraska at Omaha

Follow this and additional works at: https://digitalcommons.unomaha.edu/studentwork
Please take our feedback survey at: https://unomaha.az1.qualtrics.com/jfe/form/SV_8cchtFmpDyGfBLE

Recommended Citation
https://digitalcommons.unomaha.edu/studentwork/1751

This Thesis is brought to you for free and open access by DigitalCommons@UNO. It has been accepted for inclusion in Student Work by an authorized administrator of DigitalCommons@UNO. For more information, please contact unodigitalcommons@unomaha.edu.
Pharmaceutical Advertising: A Qualitative Comparison of the Internet and National Magazines

A Thesis

Presented to the
Department of Communication

and the
Faculty of the Graduate College

University of Nebraska

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

University of Nebraska at Omaha

by

Broc Bilby

December, 1997
THESIS ACCEPTANCE

Acceptance for the faculty of the Graduate College, University of Nebraska, in partial fulfillment of the Requirements for the degree Master of Art, University of Nebraska at Omaha.

Committee

Jeremy Harris Lipshutz, Communication
Name

Michael Hilt, Communication
Department/School

Curtis E. Seif, Sociology/Anthropology

Chairperson

Date October 13, 1997
ACKNOWLEDGMENTS

Many people contributed to the successful completion of this thesis. I would like to thank the Department of Communication. Thank you also to my advisor, Dr. Jeremy Lipschultz and the committee members, Dr. Michael Hilt and Dr. Andris Skreija.

On a personal note, I want to thank the Masonic order and the Scottish Rite.
Chapter 1

INTRODUCTION

The Internet offers tremendous potential benefits to consumers in terms of increased convenience, choices and information. Yet, along with such benefits, comes new risks to consumers, including an increased risk from fraud, deception and misinformation (FDA and the Internet Conference, October, 1996).

New communication technology, such as the Internet, allow scholars to rethink definitions and categories. When the Internet is conceptualized as a mass medium, what becomes clear is that neither "mass" nor "medium" can be precisely defined for all situations, but instead must be continually rearticulated depending on the situation. The Internet is a multifaceted mass medium in that it contains many different configurations of communication. It does so by its very nature. The Internet plays with the source-message-receiver features of the traditional mass communication model, sometimes putting them into traditional patterns, sometimes putting them into an entirely new configuration. Internet communication takes many forms, from World Wide Web pages operated by major news organizations, to Usenet groups discussing folk music, to E-mail messages among colleagues and friends. The Internet's communication forms can be understood as a continuum. Each point in the traditional model of the communication process can, in fact, vary from one to a few to many on the Internet (Morris & Ogan, 1996).

Significant changes in traditional mass media have occurred. These changes are due to technological advances in the means of electronic distribution and handling of
information. The term most often used to describe the emerging social order is that of "information society." Briefly, "this refers to a form of society in which there is a high and increasing dependence of individuals and institutions on information and communication in order to be able to function effectively in almost every sphere of activity" (McQuail, 1992, p. 1).

Researchers throughout the world have devoted much attention to the role of media in the field of health policy. Mass media have come to be recognized as a strong force in the field of preventive medicine. By focusing on health questions, media may enable people to think about lifestyle issues, and perhaps, to change their behavior. Media-based advertising health campaigns can spread information and knowledge, and at best, offer deeper insight (Brannstrom & Lindblad, 1994).

Meaning is the core element of the advertising communication process. Among other reactions, audiences respond to advertising by relating advertisements to their backgrounds and experiences, distorting information, making attributions and both deriving meaning from and ascribing meaning to advertisements (Friedmann & Zimmer, 1988).

Internet advertising is fundamentally different from traditional forms of media advertising in the sense that consumers must seek out information. Currently, some marketers address this problem by integrating advertising with content; for example, using a game, a story or other incentives for the consumer visiting their site. In this environment, it may become harder to maintain the clear lines that exist between advertising and program content.
Pharmaceutical advertising on the Internet is quickly becoming a topic of conversation for regulators. The U.S. Food and Drug Administration’s Department of Health and Human Services *FDA and the Internet* conference held in late October of 1996 is indicative of the FDA viewing this as an issue that will continue to grow in importance and significance. More people will have access to the Internet, and health care debates will command greater public scrutiny with the constant changes in policies and procedures (M. Moncavage, interview, Feb. 12, 1997).

The FDA regulates prescription-drug advertising as it currently appears in various media. However, there is no set regulation for the Internet:

The Internet is an information source, a communication channel, a transaction vehicle, and a distribution tool. It is the phone, the newspaper, the TV, the shopping mall, the library, and the coffee shop. It is open 24 hours a day, 365 days a year, available in every corner of the world. It is making integrated marketing communications inevitable. It is an end-to-end process. (Gronstedt, 1997, p. 9).

The purpose of this study is to examine the newest advertising tool, the Internet, and how pharmaceutical companies advertise their drugs in comparison to the more traditional print medium of magazines. Functional theory will be utilized as a framework for studying the Internet (Graber, 1997; Wright, 1976). The method of study will be a qualitative analysis of six selected pharmaceutical company Websites and magazine advertisements from three selected mainstream publications. The literature review illuminates the research that has been done on various methods of pharmaceutical advertising and promotion. The research also summarizes the limited research on the
Internet and how it has been used for advertising purposes. This study poses the following general research question: How are pharmaceuticals advertised on the new medium of the World Wide Web in comparison to another traditional medium such as print advertising in magazines?
Chapter 2

LITERATURE REVIEW

Advertising is paid, non-personal communication through which an identified advertiser (e.g., a firm, a nonprofit organization, or an individual) sends a message to a target audience with the hope of informing, educating and persuading. Advertising, as part of an overall communication program, is a critical marketing and social process that offers significant value to advertisers, consumers and society (Aaker, Batra, & Meyers, 1992).

Advertising Regulation

The FDA may regulate only those prescription drug promotional activities that fall within the legal definitions of labeling or advertising. However, the agency has defined its authority in this area to cover virtually any material issued or sponsored by a drug manufacturer. The definitions of labeling and advertising taken together cover all information, disseminating activities by or on behalf of a prescription drug manufacturer. Labeling is defined as any written, printed or graphic matter upon or accompanying the drug. To be construed as labeling the material need not physically accompany the product, only "supplement or explain it" (Kessler & Pines, 1990).

Advertising is not specifically defined, but the FDA generally views anything, other than labeling, that promotes a drug product and that is sponsored by a manufacturer as advertising (Cohen, 1988). Once an activity falls within the definition of labeling or advertising, it must meet certain criteria. Labeling for both prescription and
over-the-counter drugs must contain adequate directions for use. The requirements for prescription drug advertising differ from those that apply to labeling in one major respect: rather than carrying the full package insert, prescription drug advertising may contain a brief summary of it. False or misleading statements are prohibited. The agency’s regulations list 33 ways an advertisement may be false or misleading. Most commonly, advertisements are judged false or misleading if they selectively or inaccurately represent or report data, or make claims of superiority, based on less than adequate and well-controlled scientific studies (Cohen, 1988). Another FDA regulation is "fair balance" in advertising. In the fair balance test, the FDA views the advertisement in its entirety to determine whether it presents a balanced account of all clinically relevant information-risks and benefits (Kessler, 1990).

In recent years, the FDA has asserted its jurisdiction over an array of new promotional activities. In the FDA’s view, its mandate is to prevent physicians, other health professionals and consumers from being misled encompasses not only labeling any traditional advertising, but all promotional activities sponsored or financed by a drug company. The FDA’s Division of Drug Marketing, Advertising and Communications (DDMAC) is empowered to review all promotional materials, but has a small handicap: because of the First Amendment, it can require submission for review only after the company has begun to use the ads. This unregulated window of opportunity has produced a new opportunist, the rogue pharmo-capitalist. The new pharmo-capitalism is transforming the consumer, once known as the patient, into his own pharmacist (Critser, 1996).
The FDA’s position is that premature promotion may unfairly raise public and health professional expectations and also may lead people to believe that the product will be found safe and effective for a particular use for which there is no substantial evidence of safety and effectiveness. This conflict of vying for top-dog position can be seen in the immediate marketplace (Kessler & Pines, 1990). (see Appendix A).

The complexity of the market makes it difficult to trace any offenses in advertising pharmaceuticals. Control is not possible until the product has been placed into the market. The FDA must then identify the offense, or have to react to consumers’ complaints. Administrative agencies usually are created to deal with current crises or to redress serious social problems. Throughout the modern era of administrative regulation, which began approximately a century ago, the government’s response to a public demand for action has often been to establish a new agency, or to grant new powers to an existing bureaucracy. The development of new technologies often lead to creation of new government bureaus to promote and supervise these emerging industries:

The primary reason why administrative agencies have so frequently been called upon to deal with such diverse social problems is the great flexibility of the regulatory process. An agency’s regulatory techniques and decision-making procedures can also be tailored to meet the problem at hand. They can influence conduct through a wide variety of informal methods (Gellhorn & Levin, 1990, p.2).

It is also not easy to formulate unequivocal criteria for the judgment of medicinal claims. The powerful market forces now transforming the dynamics of therapeutic
choice will humble medicine and the pharmaceutical industry (U.S. Food and Drug Administration, 1996).

**Advertising Pharmaceuticals**

The pharmaceutical industry is geared toward success that depends on creative advertising more than on innovative research. The information from drug companies is a powerful influence on prescribing, but the quality of the product information provided is considered by many to be substandard. It is often incomplete or misleading, and companies will emphasize the positive aspects of products, focusing on attributes that will give the agent a marketing edge, and not to provide all the objective data (including adverse effects and contradictions) required for comparative analysis (The Lancet, 1993).

A fundamental role of pharmaceutical advertising is to link effective therapy to individual patient needs. Pharmaceutical advertising transfers to physicians information on the actions and proper use of medicines. Advertising is a crucial element of pharmaceutical innovation. Unless physicians are informed about the treatment opportunities offered by new medicines, there is effectively no innovation. Advertising provides physicians with an informed choice of carefully characterized agents, specific to the needs of individual patients (Levy, 1994).

Advertising helps in controlling the price of pharmaceuticals as companies compete for market share. Industry expenditures on advertising should be adequate to meet the objective of effectively linking therapies to individual patient needs. Strong links will mobilize the inherent potential of medicines to reduce the use of expensive
services, thereby reducing overall health care costs (Trends in Pharmacy, 1993). The fact is that the average expenditure per advertisement per medium has increased and that a relationship exists between the leading drugs advertised and the leading prescriptions filled, "implies that prescription drug advertising is of financial benefit to pharmaceutical manufacturers" (Krupka & Vener, 1985, p. 193).

According to the FDA, the pharmaceutical industry spends more than $10 billion on promotion every year. By the late 1980's, of nearly 16 million patients who visited doctors for depression, 70 percent ended up in drug therapy. Non-psychiatric physicians were brought into the prescribing fold (Critser, 1996).

Direct-to-consumer prescription advertising by pharmaceutical companies is expected to continue growing. From 1991 to 1992 pharmaceutical companies doubled their spending on direct-to-consumer advertising from $100 million to $200 million. The number of pharmaceutical companies advertising directly to the consumer has increased from two in 1983 to about 15 in 1992. Although the majority of prescription drugs do not lend themselves to consumer advertising, drug companies are expected to expand their efforts (Winters, 1993).

Competitive Media Reporting data indicate that the pharmaceutical industry spent $1 billion on consumer ads for prescription drugs in the past five years. The amount more than doubled between 1993 and 1995 (Conlan, 1996). It is likely that in the absence of industry "promeducation" (educational presentations that are sponsored by particular pharmaceutical companies), alternative methods for the dissemination of information on important new drugs would be satisfactorily achieved via the rise of
publications similar to *The Medical Letter* and with online databases such as COLLEAGUE, DIALOG, and GRATEFUL MED. (Deader, 1994).

Pharmaceutical companies compete with one another for market share. Because the synthetic chemical commodities they produce are frequently similar pharmacologically and clinically, each company must differentiate its compound in some way from competing commodities. Corporate competition for market shares is therefore conducted around advertising and marketing strategies designed to set apart each compound (Goldman & Montagne, 1985).

However, the money devoted to promotion might be defined as wasteful in a traditional economic sense because the marginal promotional expenditure does not produce any increases in primary or selective demand. To remedy this situation, legislation could be considered for the purpose of stimulation decreases in the level of advertising expenditures while encouraging the industry to invest in additional basic science research (Mackowiak & Gagnon, 1985).

As pharmaceutical companies seek new ways to promote their products, there is concern about promotion to consumers through patient groups. Pharmaceutical companies defend this as promoting consumer choice, but by redefining illness and selling the disease, they create new markets (Consumer Reports, 1992, pg.143).

The basic principles of a free enterprise system forcing fair prices through unrestrained competition are more applicable to the pharmaceutical industry now than ever before because of the advent of managed care. Managed care is use of a planned and coordinated approach to providing health care with the goal of quality care at a
lower cost. This type of provider usually emphasizes preventive care and often is associated with an HMO. Pharmaceutical advertising will remain a crucial element, with an increased emphasis on demonstrating improved outcomes for patients (Thompson, 1994).

Magazine Advertising

Advertising, regardless of medium, employs words, pictures, or some combination of words and pictures to communicate a specific message. Along the way, however, many things occur as receivers process the stimuli contained in the advertising. Research in the applied area of advertising effectiveness typically utilizes only recognition or recall measure as a dependant variable, while most research into the area of cognitive receiver response has centered only upon verbal processing. In fact, the general area of information processing, regardless of discipline, has relied heavily upon verbal information processing and has utilized recall measures as dependant criteria (Percy & Rossiter, 1982).

Studies by Mitchell and Olson (1981) and Wright (1979) have addressed the notion of imagery in advertising communication, utilizing visual versus verbal stimulus elements, with beliefs, attitudes, and intentions as dependent variables. Significant relationships were found, suggesting a mediating role for visual imagery in increasing cognitive response to advertising. Both verbal and visual elements in advertising can stimulate imagery, and variations in words and pictures are known to have differentiating effects upon at least recall measures of communication (Percy & Rossiter, 1982).
The way a message is conveyed (pictorially or verbally), whether the viewer is given some reference point for encoding the picture, and the type of claim made (objective, subjective, or characterization), have a significant effect on the processing of the information presented in the advertisements. These differences in processing are also shown to affect the viewer's brand attitudes and purchase intentions (Edell & Staelin, 1983).

Communication research interest in the elderly has focused on how they use the media and how the media portray them. The elderly, particularly women, appear to be under-represented in magazine advertisements in comparison to the general population. This pattern holds for many types of magazines. Because an advertisement is seeking to make a product attractive to its audience in order to encourage its purchase, it may be that advertising projects a less negative image of the elderly, in the case of magazines, than might have been expected from research on television dramatic programs. Nevertheless, the scarcity of the elderly in magazine ads suggests that the elderly are not considered to play a major role in the consumer society (Gantz & Rainbow, 1980).

Notions about the information, persuasion and orientation of newspaper and magazine advertising have been tested. Product analysis suggests that the information or persuasion orientation of an advertisement is a consequence of the kind of product advertised: familiar products are more likely to be advertised with persuasion than less-familiar products, which require more technical information and are more likely to be advertised with an information orientation. The information or persuasion orientation of advertising is not a significant issue since product type appears to dictate the mode of
advertising. Rather, the real issue is whether some products should, in any form, be advertised and this can only be resolved by those who pay for the advertising (Marquez, 1977).

Some drug manufacturers were thought to have scaled back their advertising efforts under the Clinton administration. In 1993, President Clinton had a campaign plank of halting price gouging by drug companies. Magazine advertisement sales departments were at a loss as to how to generate revenue sources. However, most publishers and ad directors claimed that despite the likelihood of smaller ad flow as public pressure on drug campaigns mounted, drug manufacturers had realized that magazine advertising was far too valuable a medium from which to completely remove themselves. Even in the face of lower profits, pharmaceutical companies continued to tout the health value and scientific benefits of their products (Patz, 1993).

Pathways to Purchasing Drugs

Social scientists were first drawn to pharmaceuticals by critical studies of dubious practices by the pharmaceutical industry such as bribery, fraud in safety testing, dumping and misinformation (Braithwaite, 1984). The regulation of pharmaceutical promotion has created a level playing field. FDA regulations limit communication about a medicine. Advertising is what many people mean when they speak of promotion, although advertising is only a small part of promotion. Relatively little is spent on the high profile activities visible to the general public. For example, "less than 3 percent of Glaxo's promotional budget is spent on the types of activities that the public traditionally associates with promotion-advertising and promotional literature" (Levy, 1994, pg. 328.)
An investigation by the Senate Special Committee on Aging found that much of the money drug companies say they spend on research to develop new medicines actually goes towards researching how to persuade doctors to prescribe their drugs. Drug companies often give doctors free drug samples, prescription pads, free trips for doctors and their spouses to attend company-sponsored seminars at posh resorts, "honoraria" ranging up to $1,000 for being willing to attend, and cash rewards to doctors who write a certain number of prescriptions (Gilbert, 1992).

In an era when patients have access to the Physician's Desk Reference, when anyone can tune in to the Lifetime cable television channel, when almost every week, major scientific studies are reported on the evening news, and when the National Institutes of Health and the FDA themselves sometimes seek to publicize their own research findings, the regulatory line between scientific exchange and promotion is extremely fine (Edelson, 1980, p.34).

The producers of a piece of knowledge, in the form of scientific research, often seek to control or at least influence its dissemination, and there can be difficulties if they do not appreciate that the perspective of a journalist is not that of the producer but of the consumer (Wilkie, 1996).

Prescribing a medication is much more than meets the eye. Smith (1980), in a classic article, lists 27 "latent functions" of the prescription. A prescription has psychological effects, it is a means of communication, it shows power and facilitates social control, it produces income, and it has symbolic significance. Prescribing is a social act. It demonstrates the physician's concern, and is an attempt by doctors to increase their good reputation (Kamat, 1995). Pharmaceuticals have a social life in that they follow a definitive process. First, they are prepared, usually in a technologically
advanced setting, and marketed to wholesale suppliers such as ministries of health and private firms, as well as to retailers. Next, they are distributed to consumers by prescriptions or direct sale. The prescription is an intermediate phase. It provides the patient only with a piece of paper that eventually leads to purchase of the medicine. After the pharmaceutical has come into the hands of a consumer, it will reach the final stage of its life: someone will use the medicine with the purpose of restoring, improving, or maintaining his or her health. The ways in which a medicine is taken constitute a crucial moment in its life. "Wrong use" may render its entire life meaningless. Finally, pharmaceuticals have a life after death. The fulfillment of their life purpose lies in their effect on the well being of the person who took them. The pharmaceutical company's efficacy is its ultimate and decisive life stage (Van der Geest, 1996).

Traditionally a physician makes the purchase decision for the patient/consumer by providing him or her with a prescription. In the absence of a managed care mandate for generic or therapeutic substitution, the patient would then have the prescription filled by a retail pharmacist of his or her choice. During this process, the patient may receive information about the medications use, intended effects, and side effects from the physician during the office visit, from the pharmacist in the pharmacy, and/or from a leaflet included with the package of medication or provided by the physician or pharmacies (Van der Geest, 1996).

Because a consumer cannot purchase certain pharmaceuticals legally without a prescription, pharmaceutical firms who advertise directly to consumers are not looking for the immediate desired behavioral outcome: purchase. Rather, their objective is to
encourage some other action on the part of the consumer that moves him or her close to purchase, such as seeking additional information from a physician, pharmacist, or friend (Williams & Hensel, 1995).

Waud (1992) indicates that advertising money from pharmaceutical companies actually comes from the end-user. The money trail comes indirectly from patient's insurance premiums or even more indirectly from insurance offered as a fringe benefit in association with their jobs.

Let me point out that my quarrel is not with the drug companies altogether. It is more with their advertising end. Indeed, I can see no role whatsoever for drug advertising. I believe that practically all the problems associated with physicians' interactions with the drug industry would vanish were advertising out of the picture (NEJM, 1992, p.353).

Pharmaceutical companies, as well as third-party providers of health care and their agents, are increasingly trying to cause patients to be switched from their originally prescribed medication to "me too" drugs marketed by the companies. These attempts are sometimes referred to as "switch campaigns." Pharmacists have been encouraged by pharmaceutical companies to identify patients taking a drug and urging patients to contact their physicians and ask to be switched. The pharmacists would receive a payment for each prescription thus switched (Kessler, Rose, Temple, Schapiro, & Griffen, 1994).

Marketers realize that while purchase may be the desired behavior ultimately, intermediate behaviors may be prerequisites to purchase. Providing information rather than promotion is a valid and utilized motive for advertising and may be a necessary condition for most consumer purchases. Furthermore, firms such as pharmaceutical
companies have multiple target markets, and several paths can lead to purchase (U.S. Food and Drug Administration, 1996). Pharmaceutical manufacturers have increasingly focused on the drug-buying public because they know that while the doctor writes the prescription, the patient often guides the pen. Nearly one-third of prescriptions for new products is now written at the request of the patient, according to the trade magazine *Pharmaceutical Executive* (Consumer Reports, 1992, pg. 142).

Because each prescription drug expenditure originates with the issuance of a prescription, it is necessary to understand physician prescribing behavior and the factors that affect it. It is estimated that two thirds of all patient visits result in the writing of a prescription (Mackowiak & Gagnon, 1985).

There seems to be a generally held but naive view that advertisements are supposed to make you rush out and buy something. One demonstrates immunity to advertising simply by not making an immediate purchase. The absence of that knee-jerk response is supposed to prove immunity. This is a non sequitur. The sell is much subtler. All the advertiser may expect is that, other things being equal, if you subsequently have to make a decision it is more likely to be in the favor of the advertiser (Waud, 1992, p.352).

To disseminate drug information, there remains a middle person between physician and patient, applicable to most countries and respected by the public: the local pharmacist. The pharmacist rather than the doctor is often the person to whom patients direct questions about prescriptions and to whom they mention side effects. He or she is also well placed to spot inconsistent or dangerous prescribing, whether by doctor or by patient’s self-medication (The Lancet, 1996).
The commodification of health and health care through the buying and selling of medicines has given rise to some lively debates in medical anthropology. The most prominent critic is Nichter (1989), who on the basis of research in South and Southeast Asia, remarked that there is a growing tendency to see health as something one can obtain through the consumption of pharmaceuticals. He calls this trend "defective modernization" and rejects it because it impoverishes the concept of health and gives a "false sense of health security," (pg. 370).

Consumers often express a desire to learn about the qualities and potentials of pharmaceuticals. There is a lack of understanding of the differential distribution of knowledge among users and of the channels through which information flows in the popular sector (Nitcher, 1989).

In addition to this assessment of the lay population, research was done on the effects of promotion on pharmaceutical demand among professionals. Mackowiak and Gagnon (1985) found that in sales calls to physicians and medical journal advertising there was no correlation between changes in detailing or journal advertising expenditures and primary or selective demand. Moreover the results of the study also indicated that (pharmaceutical) firms would be searching for media with larger primary and selective demand elasticity. Communication routes which show great potential for the future include direct to consumer advertising, physician cable TV, and on demand product information and advertising to physicians via a computer terminal in their office practice" (Mackowiak & Gagnon, 1985, p. 1195).
Overview of the Internet

Created by the Defense Department in 1969 for fail-safe communications in the event of nuclear war, the Internet's growth in the 1980's and 1990's was largely through ad hoc contributions by universities and through the private sectors marketing of personal computers. By the early 1970's, ARPANET (Advanced Research Projects Agency) was transmitting databases, software, hardware resources, storage space and computer power from computer to computer. This in turn, led to a separate military network (MILNET) for unclassified material. In the late 1970's, several universities began adding portions to the network, beginning with USENET (Users Network), and in the early 80's BITNET (for, Because it's Time Network, a message retrieval service) and CSNET (Computer Science Network). The network called the Internet was not formed until 1983, when the Defense Communications Agency reorganized the Pentagons networks and began requiring certain protocols on all military networks. In April of 1995, the National Science Foundation (NSF), which had become the closest thing to a federal authority over the Internet, formally turned over all responsibilities for running it to academia and private industry (CQ Researcher, 1995). As users of the Internet multiplied, the "domain" extenders required on the standard user's address were designed to include ".mil" for military, ".edu" for academia, ".gov." for government, ".com" for commercial and ".org" for organizations. In the following years, various universities would make contributions to the Net's usability. The browser called Mosaic came from the National Center for Supercomputing Applications at the University of Illinois-Urbana. The "gopher" searching tool came from the University of Minnesota.
Most recently, the World Wide Web came from the European particle Physics Laboratory in Geneva, Switzerland (U.S. Food and Drug Administration, 1996).

Businesses have become more interested in the Internet since the arrival of the World Wide Web. It allows companies, organizations and individuals to create their own "home page," or Internet entry point. Individual home pages allow user interaction and instant connections to related home pages around the globe (National Science Foundation, 1994).

The World Wide Web is a widespread information service. It is all embracing in its capacity to interface to other information systems such as Gopher, WAIS, FTP, etc. The Web is based on a hypertext system. Hypertext is a system for linking documents to other related documents. Links are embedded within the text of a document in the form of highlighted words or images. Pointing and clicking with a computer mouse most commonly activates links. When the links are activated, the linked documents are instantly retrieved and displayed. The linked document itself can contain links to other documents, and the process can go on indefinitely. Gopher was the precursor to the Web; however, menu systems are less flexible than hypertext systems in that links can be set up from menus to information, but not within the information (Sanders, 1996).

The precise number of Internet users is difficult to gauge. Before the recent estimate by the Internet Society, the best available estimate was one from late 1994 by Matrix information and Directory Services, available on-line. It counted 7.8 million users with computers that provided interactive services, 13.5 million users that could tap into computers that offered interactive services and a total of 27.5 million users with the
capability of exchanging electronic mail. Observers warned however, that many of the accounts and computers counted in such surveys are seldom used (CQ Researcher, 1995).

**Technology and the Internet**

An important and expanding adjunct of the U.S. Food and Drug Administration’s regulatory function is the dissemination of information about drugs, medical devices and other regulated products to health professionals and consumer. An important new avenue of information distribution is the Internet, especially the World Wide Web. The Internet is enjoying unprecedented popularity in consumer and professional communities. For this reason, the FDA now provides a home page for those who want to learn more about the agency and the products it regulates. The FDA Internet home page (http://www.fda.gov) provides up-to-date, authoritative information on food, cosmetics, human and animal drugs biologic and medical devices. It includes easy to use full text searches and hot links to other FDA documents and to other government Internet sites, such as the Department of Health and Human Services site. In addition, users can download and print documents of interest to them. (Rheinstein & McGinnis, 1996).

Usage studies continue to reflect the growing popularity of the Internet, with 17.7 million computer accounts reported last year, up from 10.3 million in 1995, according to Forrester Research (CQ Researcher, 1996). A total of 24.9 million computer accounts are expected to be added by the end of 1997. The Internet is a "potentially valuable tool" for the public but "carries risks as well as opportunities." A proposal for guidelines or policy on Internet prescription drug advertising is promised
before the end of the year. The Federal Trade Commission (FTC) has jurisdiction over advertising and marketing. While the drug industry is eagerly awaiting the FDA's proposal, "the basic approach is (already) there in the law" (OTC Business News, 1997, p. 18).

Advertising seeks to capture essential differences between competing products. (Levy, 1994). Yet, according to Forrester Research, by the year 2000 an estimated $6.6 billion in retail revenues will be generated through the Internet. Furthermore, it can be assumed that the drug industry would not invest millions of dollars in these advertisements if their market research had indicated that the advertising campaigns were limited or of no influence. The avenues through which we receive our drug information are rapidly changing. Managed-care programs will be giving us more information and limiting our prescriptions in a variety of ways. Multimedia messages and computerized information will expand (Bowman, 1994).

Commercial applications of the Internet are still in their infancy, but in the early 1990's pharmaceutical companies began using Internet Web sites to inform browsers about some of their products. In addition, most of those sites have hypertext link connections to other Web sites belonging to the same company, or to an unrelated entity, such as a voluntary health association or patient bulletin board. They, in turn, may have hyperlinks to other sites. The FDA is concerned about this and forbids drug companies from promoting off-label uses. The FDA is concerned about dangerous information from bulletin boards or elsewhere that might appear to be endorsed by a drug company because of a link (Conlan, 1996).
An increase in the use of the Internet to disseminate information about pharmaceuticals and medical devices has caused the FDA to evaluate how its policies concerning advertising and labeling should be applied to product information on the Internet and calls into question if additional regulations are needed because of the unique nature of the new medium (Snyder, 1996).

The major pharmaceutical companies believe that the Internet will be a key tool in their future communications mix. Many have plans to expand into other therapeutic areas, perhaps partnering with other companies. The results of their current efforts, guided by feedback from their customers, will impact future efforts as well as the evolution and creation of other companies' sites within the pharmaceutical industry. In developing a communications strategy utilizing the Internet, there is no wrong approach; there are no rules. Many companies are still struggling with how they define the Internet; some companies see it as an advertising vehicle, some as a communications tool, some as a combination of the two. Many manufacturers have used the Internet for product launches or to develop disease resource centers, while others focus on developing a database of customers (Carlson, 1996).

Linking is an issue because the FDA does not like companies to use information that goes beyond official labeling. In the case of ethical drugs, the FDA has concerns about whether it is necessary to distinguish online between advertising and promotion to health care professionals or consumers, since both groups have access to the same Websites. Every drug company now has information on the Internet. Many sites include
corporate information directed at investors and the general public, such as quarterly financial reports (OTC Business News, 1997, p. 18).

The FDA does not have specific rules and regulations that apply to the Internet. Ms. Melissa Moncavage, Public Health Advisor for the Center for Drug Evaluation and Research indicated that the pharmaceutical companies advertising on the Internet are quite varied in their approaches/tactics. "There is no cohesive effort by the pharmaceutical industry from the DDMAC's point of view." If anything, Moncavage believes, "most pharmaceutical companies advertising on the Internet seem to be doing their own thing. There is variation in the approach. Some companies are targeting the consumer, others... doctors, and some are simply presenting general information" (Interview, February, 12, 1997).

The Internet holds a vast potential for health care marketing that is attracting increased participation by the pharmaceutical industry. The World Wide Web is the fastest growing media in history, with an estimated 35 million people who have access to the Internet. In 1994, Business Mailer Inc. reported that more than 120,000 physicians own computers with modems, and that the rate of growth is doubling annually (Liebman, 1995).

Results of a study of health care marketing executives on use and knowledge of the Internet showed that, of the executives surveyed, only 16.5 percent were already using the Internet for marketing purposes. Of those already using the Internet, nearly 75 percent were using the World Wide Web as a marketing tool. Some possible uses of the Internet for managed care companies, hospitals, or provider networks include: 1.
maintaining up-to-the-minute provider networks accessed by subscribers, 2. Maintaining policy and procedure manuals for employees and providers, and 3. Offering providers access where only physicians can post questions or comments and see the responses of both company representatives and other physicians (Brakeman, 1996).

Six characteristics summarize what is new about this new medium. First is the great volume of information that is available. Second are the faster gathering, retrieving, and transmitting of information. Third is the greater control over the medium by consumers. Fourth is the greater ability of senders to target their messages to specific audiences. Fifth is the greater decentralization of the media. And sixth is the greater interactive capacity (Abramson, Arterton, & Orren, 1988). "The quest for information, especially among inquisitive, assertive, and aging baby boomers, alternately applauding and assailing ads virtually from birth, make continued growth with health topic advertising a natural fit with consumers and the Internet" (Conlan, 1996, p. 92).

Information retrieval and communication are two important aspects of the work of pharmacists and pharmaceutical scientists, and the Internet is an ideal medium by which these activities can be facilitated. The potential of the Internet is now being recognized, and in a year's time, several pharmaceutical information resources have emerged on the World Wide Web (D'Emanuele, 1995).

Information that appears on a homepage may be different from what companies have traditionally used to promote their products through brochures, sales meeting, word-of-mouth or sales people going out. All of these things are available. It should be clear in terms of looking at a company's homepage that it is coming from the company.
It is impractical for FDA to force disclosure of a company name on every page or every screen in a company website, but it should be readily available (U.S. Food and Drug Administration, 1996).

The Internet makes the issue much more complex because everyone has access to it. It is impossible for one person, group, or company to control the Internet. The FDA may regulate what pharmaceutical companies, medical device companies and biologic companies put on the Internet, but cannot control what consumers or what medical researchers independently put on the Internet (U.S. Food and Drug Administration, 1996).

The issue comes to a head when a drug company or a device company is distributing the information. Today if the drug company proactively sends out, for example, scientific journal articles about unapproved uses of drugs, that would be a violation that is treated as promotion. On the other hand, if a physician or a patient asks for a copy of an article and they know what it is, the company is free to send it out. The context is really determined by the receiver (U.S. Food and Drug Administration, 1996).

The FDA is concerned that keyword-based advertising on the Internet’s directories and search engines is unique and superior to advertising on other media. For advertisers, it offers access to a highly targeted audience on a cost-per impression basis, while for the search engine companies, it is an easy-to-sell service that commands a substantial premium over general display ads and banners. (Ubois, 1996).

Product-specific advertising is advancing cautiously on the Internet, because the FDA has no specific regulations that apply to direct-to-consumer ads. Despite jazzy graphics and audio, most manufacturers are treating Internet ads for products much the same way they do print. The FDA is considering different
requirements for different media, but no decisions have been made (Conlan, 1996, p. 92).

Media Content and Society

For marketers, in general, advertising products which cannot be purchased directly by consumers can be effective in encouraging members of the target market to seek additional information about the products, which ultimately might result in purchase. Pharmaceutical marketers should coordinate marketing efforts directed at consumers and their potential information sources, particularly pharmacists and physicians. "DTC advertising, being favored by those in poorer health may well communicate with the perfect target market of pharmaceutical companies: those in poor health." (Williams & Hensel, 1995, p. 40).

It is a fundamental error to assume that the Internet and the Web, in particular, is simply an extension of previous media. If the FDA deems that the Internet is just another form of promotion that can be easily regulated with existing rules, then that makes it easy for the government. If there are differences between the Internet and other forms of promotion that require special rules, then this becomes a challenge for the agency (U.S. Food and Drug Administration, 1996).

Yet, the Internet is subject to regulation as specific events have shown in the past. In 1996, Virgin Atlantic Airways agreed to pay a fine of $14,000 to the US Department of Transportation for putting out misleading advertising on the Internet. (Keenan, 1996).
The Internet Advertising Bureau, a trade group representing sellers of online advertising space, made its debut in June 1996. The IAB is choosing to narrowly define advertising along traditional lines, and this is, "not effective in approaching the medium that is based upon advancing technology, and increasing consumer access" (Advertising Age, 1996, p. 15).

In 1995, the National Advertising Division (NAD) of the Council of the Better Business Bureau made its first cyberbust at the end of that year, citing a company for false advertising on the Internet. The ruling, against Infinity Distribution shows that the NAD's rules will be applied no matter what the medium (Lucas, 1996).

The American Association of Advertising Agencies has created two disclaimers for copyright and liability, in case someone takes information from your site and uses it out of context on another site. These disclaimers can be used on any website. There is a site that is for the health of the NET code of conduct (www.hon/conduct.html). A non-profit group in Geneva, Switzerland promulgates it.

The complex forces shaping the pharmaceutical market in the past two years will continue to reshape it. The negative market forces include: the significant number of blockbuster drugs going off patent and the resulting generic and therapeutic substitution, the lack of major new products replacing off-patent drugs, increasing price competition and the rising influence of managed care. Positive market forces include: improved R & D productivity, aggressive marketing to managed care groups, prescription-to-nonprescription switch groups, opportunities, and reduced operating expenses (Medical Advertising News, 1997, p.40).
Technology is perhaps the dividing line with physician's views of pro or anti-information dissemination among the lay population. Three elements must be taken into consideration: 1) What is the message itself? 2) Is it mainly promotional or education? 3) Who is the audience?

Petroshius and Titus (1995) found that physicians are favorably disposed to the advertising of pharmaceutical products both to consumers and other physicians, with differences emerging among physicians based on age, experience, practice setting, type and specialty.

Petroshius and Titus found older physicians view pharmaceutical advertising less favorably than younger physicians do. The researchers offered the explanation that older physicians were trained at a time when "advertising was sort of frowned upon by the medical community, and little, if any, advertising was directed toward the consumer." (p. 47). In addition, "younger physicians are more likely to make an effort to keep abreast of new developments. They are also more responsive to patient inquiries and requests for prescription drugs" (p. 49). The researchers conclude that this may be due to the evolution of consumers becoming more informed about their medical options, when historically, the physician was viewed by the patient as "all-knowing."

While past research has found consumers to be favorably disposed to the advertising of pharmaceuticals (Alperstein & Peyrot, 1993), this is of little value to advertisers unless physicians respond favorably to patients' inquiries for advertised prescription drugs.
Petroshius and Titus found that the physicians in their study reported a high degree of responsiveness to patient requests for prescription drugs, suggesting consumer-directed advertising to be an effective promotional tool, especially in light of Alperstein and Peyrot's findings that consumers are generally in favor of consumer-directed advertising of pharmaceuticals.

Reflecting the fact that pharmacy benefit managers, managed care groups and consumers now decide what pharmaceuticals are prescribed, pharmaceutical firms are turning to advertising agencies for an integrated marketing strategy. Each target audience requires a specific message. An increasing number of drug companies are tracking the entire process of treating an illness, rather than developing medications and simply marketing the product on the basis of clinical research. Tracking sales calls can be an important source of database information, giving companies a way to track the effectiveness of their promotions *(Medical Advertising News, 1997)*.

Starting consumers off on the "path to purchase" by encouraging them to seek more information is a major goal of direct-to-consumer advertising for prescription medication. The attitudes of older adults are especially significant for pharmaceutical marketers because these consumers are heavy users of the drugs being advertised *(Williams, & Hensel, 1995)*.

Using current and new technology, pharmaceutical companies realize that the old and proven ways of doing business are no longer going to work. Reinventing pharmaceutical marketing, advertising and promotion by capitalizing on the opportunities offered by technology is a must *(Wind, 1994)*.
The Internet lends itself to the theoretical construct of the audience as market (McQuail, 1987, p. 220). This theory identifies certain characteristics, namely:

it specifies the link between media and their audiences as a consumer-product relationship, hence "calculative" from the point of view of the consumer and manipulative from the point of view of the consumer, and manipulative from the point of view of the sender. It gives little emphasis to the internal social relationships of the audience. The audience characteristics most relevant to this way of thinking are social-economic.

Wright (1976) suggests certain levels of functional analysis for communication activities.

The fourth level of functional analysis is rather abstract but crucial for the development of a functional theory of mass communication. Mass communication, as institutionalized in modern societies, constitutes a social phenomenon qualitatively and quantitatively different from personalized communication (Wright, 1976, p. 205).

Lasswell and Wright (1960, 1976) are among the many scholars who have considered the functions and role of the mass media in society. Surveillance, the first function, informs and provides news and information. This includes the information that is essential to the economy, the public, and society. In performing this function the media often warn the public of expected dangers. Graber (1997) suggests that the surveillance function involve two major tasks. For the political community at large, public surveillance focuses by publicity on selected people, organizations, and events. Private surveillance informs individual citizens in their private capacities about current events.
Correlation is the second function, and this is the selection and interpretation of Information about the environment. Correlation is the editorial and propaganda content of mass media. The correlative function also serves to enforce social norms and maintain consensus. Through the correlation function the media can often impede threats to social stability and may often monitor or manage public opinion. Gruber (1997) believes that by suggesting the causes and relationships of various events, the media may shape opinions even without telling their audiences what to believe or think.

As socialization, media function to communicate information, values, and norms from one generation to another or from the members of a society to newcomers. This is done in a way to increase social cohesion by widening the base of common experience. Gruber (1997) indicates that most of the new orientations and opinions that adults acquire during their lifetime also are based on information supplied by the mass media. Mass media information provides the ingredients that the public uses to adjust existing attitudes and opinions to keep up with the changing world.

Lastly, most media content is intended as entertainment. Mass media expose millions to popular culture, music, movies, and television. Two arguments develop for the entertainment function of media (Wright 1976). One argument is that media entertainment serves to provide respite from everyday problems and fills leisure time. Others argue that the media encourage escapism, corrupt fine arts, lower public taste, and prevent the growth of an appreciation for the arts.

Doris Gruber (1997) added manipulation to these functions. Direct manipulation of the political process is widespread. "After decades of neutral reporting
when most American journalists acted primarily as chroniclers of information provided by others, media now operate their own investigative units" (Graber, 1997, p. 12). The reason for the manipulation may be to expose misconduct and produce reforms. Or the reason may be to attract large media audiences and enhance profits.

Based on the review of literature on drug company advertising efforts and the Internet, the following specific questions were used to guide the investigation:

RQ 1. What type of information is presented? Does it inform the viewer?

RQ 2. What is the correlative nature of the information? What is the editorial content? Is it educational, promotional, or otherwise?

RQ 3. Does the information provided act as socialization? Does it communicate values and norms?

RQ 4. Does the information have an entertainment value?

RQ 5. Is the information used for manipulation?

A qualitative analysis was chosen in order to address these questions. Qualitative research involves the careful, detailed description of that which is under study (Babbie, 1995). Fundamentally, the goal of qualitative research is to preserve the form and content of that which is under study and to analyze its qualities, rather than subject it to mathematical or other formal codification (Lindlof, 1995).
Chapter 3

METHODOLOGY

The goal of this study was to systematically describe the content of six pharmaceutical companies' Web sites for four sample Saturdays over a one month period in 1997. In addition, three mainstream magazines were examined during the same month. Advertising for the two different mediums were compared to each other. This was a descriptive study as well as being exploratory. There exists little research on the content of the World Wide Web; thus an initial exploratory study was needed to help explain this phenomena.

Sample

Based on the researchers judgment and the nature of the study, a purposive sampling scheme was seen as the best approach (Babbie, 1995). The six pharmaceutical company web sites which were chosen for study were Merck and Company INC., Bristol-Myers Squibb Co. INC., Pfizer INC., Eli Lilly Co., Schering-Plough Corp., and Ciba-Geigy Corp (see appendix B). The criteria in selecting these six companies were sales volume and that the company had a web site. Relying upon Dun's Top 50 Business Rankings (1996) per SIC ranking by sales volume, all six fit the criteria of generated annual revenue and possessing a company web site.

The Standard Industrial Classification (SIC) is the statistical classification standard underlying all establishment-based Federal economic statistics classified by industry. The SIC is used to promote the comparability of establishment data describing various facets of the U.S. economy. The classification covers the entire field of
economic activities and defines industries in accordance with the composition and structure of the economy.

Companies were selected by having a website and their main business being pharmaceuticals. Of the six selections, Merck (4) represents the top-grossing company with $14,969,800,000 in sales and has a web site (http://www.merck.com/). Bristol-Meyers Squibb (5) has $11,984,000,000 in sales and has a web site (http://www.BMS.com). Pfizer (9) has $8,281,300,000 in sales and has a web site (http://fdncenter.org/pfizer). Eli Lilly (20) has $5,711,600,000 and has a web site (http://www.lilly.com). Ciba-Geigy (25) has $4,806,640,000 and has a web site (http://www.ciba.com). Schering-Plough (27) has $4,657,100,000 and has a web site (http://www.myhealth.com).

Although the SIC rankings differ from the rankings used in this study (SIC ranking shown parenthetically), these companies were selected for having prescription pharmaceuticals as their flagship business rather than the other companies, which have other business entities under the same respective company name. The SIC 28 classification is for chemicals and allied products which includes industrial inorganic and organic chemicals, plastics materials and synthetic resins, synthetic rubber, cellulosic and other manmade fibers; drugs; soaps, detergents, and cleaning preparations; perfumes, cosmetics, and other toilet preparations; paints, varnishes, lacquers, enamels, and allied products; agricultural chemicals; and miscellaneous chemical products.

As an example, Proctor and Gamble is ranked first on the SIC list, but their other product lines are vast, and prescription pharmaceuticals are not their core business as it
is with, say, Merck which is ranked 4th in the SIC listing, but first for these particular research purposes as having pharmaceuticals as its core business. Each company from the SIC list was examined to see if it had a web site based upon the network listing Netscape for businesses, primarily using the search engine YAHOO! to find the sites. (http://www.yahoo.com/pharmaceuticals.)

In the same manner, the three mainstream magazines were examined for drug advertisements that appeared during the month of May. The three magazines were *Time*, *Newsweek*, and *Modern Maturity*. The magazines were selected on the basis of their audience reach as well as their readership. Specific content analysis studies confirm the status of *Time* and *Newsweek* as being typical of mainstream newsmagazines. Smith(1990) and Moriarty and Popovich (1991) chose both *Newsweek* and *Time* because “of their national prominence, large circulation, and blend of news and feature subject stories” (Smith, 1990, p. 129).

Taken from the 1995 Audit Bureau of Circulation, the above mentioned magazines were selected for their ranking by total average paid circulation and the factors of recall and market niche. Of the 100 best-selling U.S. magazines, *Modern Maturity* is ranked second, *Time* is ranked 13th, and *Newsweek*, is ranked 19th. Factors that come into play for the selection of these publications are similar to the SIC ranking of pharmaceutical companies. For example, *Playboy* was 15th on the list as was *Ladies' Home Journal* with a ranking of 8th place. Although these magazines do rank higher than both *Time* and *Newsweek*, they are obviously targeted for a very core audience. *Time* and *Newsweek* have a broader readership as national newsmagazines. *Modern*
Maturity was selected because of its rank, and for the fact that it appeals to a specific age group that is more prone to be concerned with health care issues than other age populations.

Method of Analysis

The sites were selected because they meet the criteria of being listed in Dun's SIC listing, and they each have their own website address. Babbie says that in a purposive sample, the researcher "selects a sample of observations which (one) believes will yield the most comprehensive understanding of (one's) subject of study, based on the intuitive feel for the subject that comes from extended observation and reflection" (Babbie, 1995, p. 269).

Study of the websites occurred every Saturday for four-weeks, at 12:00 PM CST. Measurements and recordings were taken of each homepage and its links. A copy was made of each company's homepage. The first Saturday was the benchmark for the study, and any differences observed to have occurred were noted. The study went two links (where allowed) deep into each menu item given on the homepage. The study was conducted at this specific time, because of time restrictions and computer accessibility of the researcher. The first step was to assess the homepage. Every Saturday the homepage was printed and described by reporting what appeared on the page, and what links were available and where they lead. In preliminary research for this project, it was noted that the homepages have been witnessed to change in all manners, from layout, to graphics, as well as text and links.
General categories were *company history, drug information, investor relations, research and development, other.*

After the description of the homepage and an itemization of the links, the menu items were clicked on in order (top to bottom, and/or left to right). A full description was given of what the link showed, and the critical probes were used to assess what type of information was presented.

A classification and description was given of the information presented on the linked page with its category heading, (e.g. patient narratives under the home page category of research and development).

For the homepages, certain clusters were established: *company history, drug information, investor relations, research and development, other.* "Clustering" is a general name given to the process of using and/or forming categories, and the iterative sorting of things-events, actors, processes, setting, sites-into those categories (Miles & Huberman, 1984).

The company sites and their presented information were clustered in a way that addressed the functional research questions: *surveillance, correlation, socialization, entertainment, and manipulation.*

Gathering information for the magazines was done for each issue for the month of May and was collected from the selected magazines at the end of the month. Each issue of each publication was searched by hand to find drug advertisements. Of any ads found, they were labeled by date, product name,
company name, publication title, and if a website address was given. A photocopy was made of each ad.

A key element was whether or not the magazine ads had a website address. If a website address was given, the researcher went to that specific website and recorded any of the differences and similarities between the magazine ad and the website information.

This information was compared to the information that has been presented on the selected pharmaceutical company Webster. Any differences or similarities were recorded.

**Coding**

Copies were made of the relevant material. All printed material was kept in a notebook. Once all the material was collected, a detailed description of the magazine ads and six Web sites was written. The content was organized into categories based on the research questions. Illustrative examples were presented to explain the items from each category, and tables were utilized to present the information in an organized, summary manner.

**Interpretations**

Inductive reasoning is the logical model in which general principles are developed from specific observations (Babbie, 1995). Qualitative interpretations result from the intensive analysis of a single case, or a few cases. The intimate knowledge gained of subcultures and organizations is written up in a way that discloses the author's insight. For interpretative science, meanings arise out of the intentions, practical purposes, and the reciprocal perspectives. This scope of
analysis is called ideographic. One does generalize in qualitative research, but not in a way that tries to obtain the scope of a universal law. Instead, the richness of the particular elements that are documented and the patterns or themes they exhibit allow the researcher to generalize to other cases of the same problem in the larger culture. It is not intended to explain a universal, ahistorical mechanism for behavior (Lindlof, 1995).

After this part of the study was completed, the interpretative method of subsuming particulars into the general was done. Subsuming particulars into more general classes is a conceptual and theoretical activity in which the analyst shuttles back and forth between first-level data and more general categories (i.e. information on the websites and the broader cluster) which evolve and develop through successive iterations until the category is "saturated" (new data do not add to the meaning of the general category) (Miles & Huberman, 1984).
Chapter 4

RESULTS

Due to the large amount of information gathered from the six Web sites, the results were broken down into several categories based on the framework of the research questions. The first section describes the homepages of the Web sites. These pages alone deserve specific attention because they are the first pages users are exposed to when accessing the sites. The homepages all contained the same categories for linking options but under different names. The categories are as follows: company history, drug information, investor relations, research and development, other. After the findings of the categories have been reported, the type of information that is presented will be assessed. This information will be associated within the following functional categories: surveillance, correlation, and socialization and entertainment.

Home Pages: An Overview of Links

Merck (fig. 1) had its menu options on every linked page as it is presented on its home page. The menu items are: Site Map, News Products, Publications, Research, About Us, Topics for Health Care Pros and In Your Country.

Lilly (fig. 2) had menu options of: Who We Are, Targeted Disease Categories, Message from the Chairman, Strategic Focus, Financial Information, Press Releases, Corporate Citizenship, Speeches, Career Opportunities and Contact Information.

Pfizer (fig. 3) had a case scenario page that is presented before the actual home page is presented. The menu items are: Keeping People Well, Keeping Animals Well, Research and Development, About Pfizer, Investing in Pfizer and Career Opportunities.

BMS (fig. 4) had the menu options of: Latest News, Core Businesses, For Our Customers, For Our Investors, Media Connection, Message From the Chairman, A Look at BMS and Employment Opportunities.
Schering Plough’s (fig 5) menu options were: Allergy Zone, Skin Cancer Zone, Hepatitis Zone, ToughActin’ Tinactin, Research Zone, Schering Plough Zone, Animal Health Zone, Cold Sore Zone and Prostate Cancer Zone.

Ciba, now Novartis. (fig. 6) (See Appendix B for further explanation). Who We Are, Health Care, Agribusiness, Nutrition, Investors, Media, Contact Us.
It's summer in Whitehouse Station. Is it winter in your country?

Confused by cookies? Read our updated FAQ to find out what they are and how Merck's web sites use them.

Take our survey and help improve our site!

The Merck Manual is the most widely used medical text in the world.

Welcome to our award-winning web site!

We are a worldwide research-intensive health products company.

This web site is provided as an educational and informational resource for Internet users around the world.

We are...

- Human Health Division
- Managed Pharmaceutical Care
- Manufacturing Division
- Research Division
- Vaccine Division

Copyright © 1997 Merck & Co., Inc., Whitehouse Station, NJ, USA. All rights reserved.
Welcome to Eli Lilly and Company

What we do at Lilly

Eli Lilly and Company is a global research-based pharmaceutical corporation headquartered in Indianapolis, Indiana, that is dedicated to creating and delivering pharmaceutical-based health care solutions which enable people to live longer, healthier and more active lives.

You are invited to learn more about our company through these pages:

- who we are
- targeted disease categories
- message from our chairman
- strategic focus
- financial information
- press releases
- corporate citizenship
- speeches
- career opportunities
- contact information
- search this Web site

Your comments are important to us. Please give us your feedback.

Here is some information about our Web server.

Copyright © 1994-1997 Eli Lilly and Company, Lilly Corporate Center, Indianapolis, Indiana 46285 USA. All rights reserved.
New on the site

- **You’re As Young As You Feel** - Allowing people to mature with greater vitality and fewer medical costs is more important than ever.

- **1997 Pfizer Annual Shareholders’ Meeting Report**

- **Pediatrics & HIV: New Link** - Pfizer is co-sponsoring this edition of “The Cutting Edge Medical Report”, premiering July 17 on the Discovery Channel.

- **American Medical Systems** - a world leader in implantable medical devices to treat impotence, incontinence, urethral strictures and BPH.

- **Get In Step With Howmedica** - Tour the innovative products and programs from a global leader in orthopaedic implant technology

---

The products discussed herein may have different product labeling in different countries. The product information provided in this site is intended only for residents of the United States.
The mission of Bristol-Myers Squibb is: To extend and enhance human life by providing the highest-quality health and personal care products. Our aim is to be the preeminent global diversified health and personal care company. We invite you to find out more about our goals and strategies to maintain a leadership position around the world.
Welcome to the Health Care Homepage!

News - Last updated 4/3/97

- Schering Plough Research division now on line!
- Check out the Allergy Alert for your area in the Claritin Zone
- Check out the Cold Sore Zone for your lip needs!
- New Symposia Announcements in Hepatitis Zone
  - Claritin is A Logical Alternative to Seldane
- Professional Information section now open in the Claritin Allergy Relief Zone
- Visit The International Divisions of Schering Plough
- Professional Information section now open in Skin Cancer Zone

Welcome to the Health Care Homepage, brought to you by Schering-Plough.
new skills
in the science of life
The three-week study revealed that the websites changed very little other than minor variations of highlights on certain company home pages. For example, the Merck site had changed only with highlights presented on its home page that simply was a rotation of already presented material. In another instance, the update for Schering-Plough’s home page was dated April 3, 1997 and was not updated again during the course of the study.

There is a vast quantity of information presented by these companies that ranged from investor relations to personal testimonials. However, the majority of the information was PR-friendly text. Specific brands of pharmaceuticals were a rarity, and when they were presented, the information was limited by a physician DEA (this is a license the Drug Enforcement Agency approves for physicians to dispense medication) code block or there were simply no other links. Most company websites gave general information about certain diseases, symptoms to look for and other related material, but very few actually "advertised" their products. Product names were given, as an example, Lilly’s Humalog was presented on its “managing your diabetes” link, but there was no continuation of that specific product other than a small graphic with the product name. There was no link to more information about that product. Other links simply gave overviews of diabetes, and when there was a hypertext link option, it simply went back to the original link page with the small graphic and product name of Humalog.
Another example of this lack of true advertising was the presentation of a specific product followed by technical jargon that one could argue to be for physicians or pharmacists rather than a lay consumer. An example of this would be with Merck’s Comvax link which in a press release gave a date and product name without stating what the function of the drug was other than, “Comvax, haemophilus b conjugate meningococcal protein conjugate.”

Surveillance Function

The first research question asked: What type of information was presented? Did it inform the viewer? Did it provide news? The very essence of the websites was information based. All of them gave information about their company. However, the vast majority of the websites did not give information on pharmaceuticals. Although all of the companies posted a plethora of information, very little had anything to do with drugs. Brand names were prevalent in some of the sites, but more detailed information for the products were not found. The information that was given ranged from stock quotes to press releases. Ciba/Novartis’ had a press release from May 13th in regards to a business acquisition.

Basel, 13, May 1997-Novartis announced today the acquisition of Merck & Co., Inc.’s (located in Whitehouse Station, New Jersey) Crop Protection business for a price of USD 910 million. The deal includes the worldwide right to Merck’s business, which had 1996 sales of USD 200 million with strong position in the high-value acaricide/insecticide and post-harvest fungicide markets. Also included are approximately USD 21 million in product inventories. Novartis has entered into a long-term supply agreement but will not be acquiring any of Merck’s manufacturing plants.
Merck also had a menu option of news. This site contained similar items as the other websites and their press release material. Again, as with other aspects of the websites, the information given in these press releases dealt more with business ventures than with actual drug products. Lilly’s press releases link was categorized by month for this year. Link one was to April 21st and showed the first quarter sales growth. The second link was to a May 29th (fig. 7) press release that is fairly typical of the other website formats. The press release deals with funding and research incentives.

Outside news sources were evident in a few of the company sites. BMS had media connection with one link to press releases. This one link had many menu items and latest press release information (April 29th, 1997). Other linked items were to entirely different subject/topic areas such as: news, industry focus, online magazines, etc. This was an outside service that posted BMS’s information. This service was called PR NEWSWIRE, a separate entity.

All of the sites had business information. The information ranged from stock prices to annual reports. Figure 8 shows the BMS link that had up-to-the-minute stock information that was fairly typical of the other websites. Merck was typical of the other websites as it had an annual report. This screen had a mission statement link, investor relations and financial news. Under investor relations and financial news there were four more menu options. These were: corporate information, stock price, FAQ’s and financial news. The stock price also was given. It had the current DJIA price with an economic graph. This section also asked for your win/loss record with Merck stock.
Millennium BioTherapeutics and Lilly Enter Into a Collaboration To Develop and Commercialize Therapeutic Proteins

Eli Lilly and Company (NYSE: LLY) and Millennium BioTherapeutics, Inc. (MBIO), a newly formed subsidiary of Millennium Pharmaceuticals, Inc. (Nasdaq: MLNM), announced today that they have entered into a collaboration for the discovery and development of novel therapeutic proteins. The alliance with Lilly is the first with a major pharmaceutical company.

The agreement covers a three-year program with Lilly providing $8 to $10 million in research funding per year with a provision to extend up to an additional two years at the same level of funding. Additional licensing fees, clinical development milestones and royalties will be payable by Lilly in connection with specific therapeutic protein product candidates identified in the collaboration and licensed by Lilly. Lilly has also agreed to make a $20 million equity investment in exchange for 18 percent of the issued and outstanding shares of MBIO.

"Millennium Pharmaceuticals formed Millennium BioTherapeutics as a subsidiary to establish a focused, complementary effort capable of realizing for our shareholders the maximum value inherent in Millennium's commercial opportunities in biotherapeutic products," said Steven Holtzman, chief business officer of Millennium Pharmaceuticals. "Launching Millennium BioTherapeutics via this uniquely structured alliance with Lilly, a company with whom Millennium currently enjoys two other collaborations, represents a major step toward realizing this goal."

Under the terms of the agreement, MBIO and Lilly will equally fund the collaborative program to discover and define the therapeutic utility of candidate therapeutic proteins. The collaborative research will create a pool of potential protein drugs that have defined therapeutic utility in vivo models. Each company will have equal rights to select candidate therapeutic proteins from the pool for its exclusive development and commercialization. Both companies will share the right to use discoveries made in the collaboration for the purposes of developing small molecule drugs. Millennium BioTherapeutics retains the exclusive right to use discoveries made in the collaboration for all other purposes, including to develop antibody therapy, gene therapy and antisense products. MBIO has transferred small molecule drug and predictive medicine rights to Millennium Pharmaceuticals.

"Lilly has significantly enhanced its therapeutic protein discovery efforts with this important collaboration that will focus on the identification and validation of novel proteins," said August M. Watanabe, M.D., executive vice president, science and technology for Lilly. "A genomics-based therapeutic protein discovery effort is a critical component of our commitment to maintaining our leadership position in therapeutic proteins."

"We are delighted to have Lilly, a world leader in the development, manufacturing and marketing of biotechnology products, as a therapeutic protein partner," noted John Maraganore, Ph.D., vice president and general manager of Millennium BioTherapeutics. "We are confident that Lilly's extensive research
Up-to-the-Minute Stock Information

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYSE:BMY</td>
<td>6/24/97</td>
<td>16:30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Open</th>
<th>High</th>
<th>Low</th>
<th>Last</th>
<th>Change</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>77.75</td>
<td>85.75</td>
<td>77.50</td>
<td>84.75</td>
<td>+8.38</td>
<td>634980</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Earnings</th>
<th>P/E Ratio</th>
<th>Dividend</th>
<th>52-wk High</th>
<th>52-wk Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.20</td>
<td>24</td>
<td>0.38</td>
<td>80.37</td>
<td>41.50</td>
</tr>
</tbody>
</table>

Earnings data is computed by adding the four previous quarters to achieve a trailing annual earnings number. Company's quarterly earnings results are released approximately three weeks after each quarter ends.

P/E Ratio is computed by dividing the stock price by earnings.
It is then rounded off to the next point.

Data provided by Quote.com, Palo Alto, CA

Figure #8
In addition to this, outside investor resources were also linked to the company sites. Ciba had investors link, which gave a long list of investor relations' contacts and stock information. Link one was to Novaritus stock that in turn linked to an outside program/server and hit the stock list in the “N” section for Novaritus. Link two was to key dates, and this gave dates of various meetings, however, there were no locations or contacts. There were no links from this site. Lilly’s site also had financial information that gave annual reports, stock prices, and quarterly earnings releases. The first link was stock price, and there was a disclaimer as the server exited the Lilly website and linked to the Quicken Financial site. The second link was to the (most current) 1995 Annual Report. This information was introduced with the scenario of a girl with a disease that had been helped by Lilly’s products

Business descriptions of the companies were given on many of the websites. BMS’ core businesses had the menu options of: consumer products, medical devices, nutritional, and pharmaceuticals. Link one was to consumer products which automatically went to another menu screen where EXCEDRIN and other OTC products were displayed. These items were not linked to other pages. Detailed information about the products themselves were not given other than graphic representation. Link two was pharmaceuticals. This site had two menu options: pharmaceutical research institute and therapeutic areas. No drugs were displayed on either site only BMS’ research facility and their established procedures.
Correlation Function

The second research question asked: What was the correlative nature of the information? What was the editorial content? Was it educational, promotional, or otherwise? Most of the websites were a combination of educational and promotional material. The information that was presented would most of the time be designated in a educational/informational manner. Most of the websites would go into detail about ailments for illnesses, while espousing their corporate commitment to medical excellence. Again, the majority of the websites did not have product specific promotions. Yet there were instances where the “educational” forums would be sponsored by a specific drug/product. An example of this would be Schering’s Allergy Zone that featured Claritin. The site gave information on allergies and symptoms of allergies, with a Claritin logo on each link.

Promotional efforts included Merck’s Mediquiz (fig. 9) which offered browsers a free T-shirt. Four categories were presented: your body, medical discoveries, what’s in a name, and featured topic. Under medical discoveries, five questions were given. They were multiple choice on various topics, (i.e. when was the first Cesarean section performed?). Merck also had the disease information park. This option gave the link choices of heart disease, preventable disease, HIV/AIDS, glaucoma, and osteoporosis. The first link explored was heart disease. This link gave various background information on the disease, (i.e. you can quit smoking) and other elements for disease prevention. Brand names of Merck’s pharmaceuticals were not mentioned however. The second link was surviving high cholesterol with a full motion video that could be ordered. (It is the

July is full of holidays all over the world. While a web site can’t hope to match such ceremony and celebration, we mark the month with another round of Merck’s popular trivia feature, MedIQuiz!

Don’t be timid; you might know more than you think. Find out by taking our quiz, and you could win a T-shirt!

The multiple-choice quiz features five questions in each of four categories. Every month the first 10 winners who submit their contact information will be eligible to receive a free T-shirt. Even if you don’t win, you still come out ahead with a store of fascinating facts, terrific tidbits, and just plain useful information.

Now grab your virtual lab coat and stethoscope, and click on one of the following four categories. Good luck!
same as the ad that may be seen on TV that shows white on black text for synonyms of heart disease, with the phrases of "artery goo," "blood mud," etc). Promotional material could be found with the research item which showed published scientific work, Merck scientists available for seminar presentations, Merck gene index, MRL (Merck Research Labs), and career opportunities. Link one had published science. This was filled with medical jargon. Link two had available speakers and gave names, summary of studies and addresses only. What was unclear was whether or not the speakers were available for hire.

Lilly also had correlative elements. Targeted disease categories had several link options with: CNS, endocrine, infectious, cancer, cardiovascular and diabetes. Diabetes was the only link option active (fig. 10). Link two was to the education center. This site had long menu items ranging from glossary, to caring for your feet all in regards to diabetes. All gave the option for medical questions to be written in and sent via e-mail.

Pfizer had keeping people well with various menu links: dealing with depression, and the allergy information center (which is divided by product information and educational sites). Link one was the allergy information center that had the menu items of information, games, pollen count, and a survey. "Zyrtec" (fig. 11) was the featured product that the site was built around. Link two had the survey with a disclaimer. The function of this option was typical of many of the websites in that they combined educational/informational material in the context of the company, (or in some instances) the product name.
Diabetes information for health care professionals, patients, and consumers in the US only.

Figure #10

Introducing Humalog
insulin lispro injection (rDNA origin)

Welcome to Managing Your Diabetes! SM (AU format)
(WAV format is also available)

Purpose of this Web Site | Disclaimer | Trademarks | Other Resources

Copyright © 1997 Eli Lilly and Company | Disclaimer | Trademarks
User Survey

Fill out the information below and hit submit to see how you and other visitors to the Allergy-Info site are affected by your allergies. Please note that we are NOT collecting any personal data from this survey, and it is intended as a resource only. Thanks.

What region are you from?
(Our survey is limited to regions of the US)

Pollen Count Information

A high pollen count is a sure sign of trouble for allergy sufferers. We offer you a comprehensive pollen information source with timely pollen count information provided by the National Allergy Bureau.

To view pollen count information, click a region of the United States

Figure #11

How are your allergy symptoms today?
severe
bad
pretty bad
slight
none

During which season (or seasons) do your allergy symptoms bother you?
spring
summer
fall
winter

What are you allergic to?
Grasses
Molds
Trees
As for promotional material, there was basically PR friendly text on company history. Ciba had for example, a health care link virtually the same menu items as did the homepage and the who we are link. Link one was to consumer health that was a synopsis of PR information. BMS had similar information with message from the chairman, which had no links and gave some PR friendly text about the company. Ciba had promotional material that was on a company wide level. This sort of information was typical of all of the companies involved in the study.

As one of the world’s leading life sciences companies, Novartis is dedicated to creating value for its customers in the areas of Healthcare, Agriculture and Nutrition. Our commitment to health, safety and the environment (HSE) is part of this dedication and is inseparable from our activities, our identity and our values. Excellence in health, safety and the environment is not at odds with, but is rather intimately connected to our goal of providing the world with innovative products.

BMS had the company profile site. This site gave varied information such as general statistics of the company, earnings, and the number of employees, etc. Lilly had message from the chairman which simply showed the picture of the CEO and presented some PR friendly text. Lilly also had corporate citizenship (fig. 12). This menu item had many link options with: community, global philanthropy, and environment. Link one was global philanthropy. This link presented text regarding a $66 million philanthropic PR piece that had a link to a financial information option. Link two was the financial information link. This had various menu items ranging from grant guidelines to employee directed giving. As was common with all of the websites, drug specific
The belief that private enterprise has a special responsibility to contribute to the progress of society has been basic to the philosophy of Eli Lilly and Company throughout its history. This belief is a legacy of the Lilly family, who founded and led the company, and Lilly employees, who, for more than a century, have traditionally supported nonprofit organizations that help strengthen the fabric and enrich the quality of life of communities and nations. Through financial grants, the donations of products and equipment, and the volunteer time and expertise of its employees, Lilly offers assistance to organizations whose programs help meet the needs of people in the areas of health and human services, education, civic affairs, and culture. Its product donations provide ongoing support to the developing world. The company also contributes to disaster relief efforts. The commitment to good corporate citizenship reflects the fundamental concern of the company and its foundation for the well-being of people and the quality of life. It is a way to share Lilly's success, to invest in the future, and to give back to society. It is an integral part of the company's mission.

In 1996, Lilly contributed more than $66 million in cash and product valued at net-wholesale price to charitable organizations around the world and joined the circle of companies in America with the most generous records of giving.

FINANCIAL INFORMATION

Figure #12

[ Corporate Citizenship Index ]

[ Home | Search | Feedback ]

Copyright © 1997 Eli Lilly and Company
promotions were not prevalent. Promotional and educational material was on a macro-
level in that it dealt with the company or the industry as a whole.

Socialization Function

The third research question asked: Did the information provided act as socialization? Did it communicate values and norms? Granted, this is a bit more subjective in nature and does ask for some interpretation by the researcher, but there are instances of both cases. For example, Merck has in your country with links to different countries: Canada, Japan (fig. 13) and Italy. For example, the link to Canada, had English and French language options. Link two was the English option. This had additional menus with different options, quizzes, patent legislation, etc. Lilly was even more culture specific with who we are gave a company overview with linked options ranging from the history of the company to major facilities. The site showed the history of the company and general background with dates and locations. Other sites listed many countries. As Merck’s site had Japanese language, one of the company sites had Italy as an actual link and when explored further, the site was discovered to be in the Italian language. The transmission of the companies onto the worldwide stage was evident in much of the information given in the sites. Most of these companies are global in their capacities. Almost all of the literature have each of the companies describing themselves as, “global research-based,” “world leader in life sciences,” or some other similar capacity.

Schering had two options that transmitted the norms of individuals wanting to fit in with society. Cold sore zone is a site that had brand names with graphics. “Viractin”
brand name was the one link option. Link one was Viractin, and this link presented a narrative of a self-conscious individual with a cold sore.

That person is staring at my lip... or at least it seems that way. When you have a cold sore, it feels like the whole world is looking at the throbbing blister on your mouth. It’s no wonder that cold sores seem to hurt your ego as much as your lips.

The Prostate cancer zone had the linking options: patient information directory, professional information (which is password protected), and Schering patient support programs. The Schering patient support group gave various scenarios and the browser could order certain videotaped programs. The website transmitted the value of community, in that prostate sufferers would know that there were other men like them, and Schering was concerned about their health. An example of this was the video, “Committed to Life” and this had a brand name link to “Eulexin” which went to prescribing information about this specific product that one would find in printed form when a prescription drug was prescribed. The researcher was unable to view the videotape at the time.

Another value that the websites transmitted was by playing upon the booming U.S. economy. The option/opportunity for working in the pharmaceutical industry was prevalent in almost all of the company website. Lilly had a summer intern program (fig. 14). BMS had an employment opportunities site with many menu items that were for specific positions, (i.e. manager of strategic procurement management positions, etc.) Link one was to the manager of strategic procurement management position; this gave the details of the position and the requirements for consideration for the job. Link two
The Fitting Room -- that little space of horrors where new life forms are discovered under unforgiving fluorescent lights. Don't despair. Help is on the way.

Dorothy, Women's Link fitting room attendant, will help you match your body type with the right clothing styles to bring out your true star material.

You may already know what styles of clothing bring out your best features and hide your least favorite endowments. If you have a generous bustline, you know that a bumblebee t-shirt with horizontal stripes will make you look wider and shorter. And that black and dark colors make you look smaller or thinner and white and light colored clothing enlarges your overall look.

But there's much more to know! As you navigate The Fitting Room with Dorothy, you'll learn how to best define your body type or types and how to choose clothing styles to help you look and feel your best. Plus Dorothy will fill you in on what styles to avoid and what to do about those "special features" you may want to downplay.

START BY SELECTING YOUR BODY TYPE
was in examining another of the positions. This was for associate counsel, and again, it listed similar things as the other positions offered. Schering also had similar options with its research zone. This had several menu options with R+D, career opportunities, news, about Schering Plough and e-mail. Link one was to career opportunities with the menu items of: current opportunities, rewards and recognitions, and benefits. Career opportunities ranged from guidelines for submitting your resume to benefits.

**Entertainment Function**

The fourth research question asked: Did the information have an entertainment value? Most of the websites were straightforward in their presentations of the information. Among all of the company websites there were no specifically designed entertainment items. Some sites had quizzes and games, other sites simply had fun theme graphics, like Merck's balloons. However, some of the websites (in the minority) did have some entertainment functions. For example, BMS had a site for the sole purpose of entertainment; Women's Link, which is BMS' Clairol Web site. This site had a mall display and had such options as FAQ's and product information. Another feature that was connected to Women’s Link was the fitting room (fig. 15). This site gave recommendations for the most flattering way to dress.

Schering's the skin cancer zone had the links of: about skin cancer, about sun safety, and about treatment. Link one was to sun safety. This link gave menu items to other links, (i.e. UV index, important contacts). Link two was to important contacts. Address and number for the Center for Disease Control and the National Weather line were given.
The Lilly Summer Internship Program

At Eli Lilly and Company, we began our summer intern program more than 40 years ago and believe that we have one of the best in the country. Our internship selections for 1997 are complete, but we encourage you to visit our booth at campus job and recruitment fairs to explore the possibilities for a summer '98 internship.

We offer:

Challenging summer projects that provide opportunities to become actively involved in issues critical to our company. The projects are designed to utilize and develop the intern's talents and knowledge, as well as the leadership and communication skills essential to a successful career at Lilly. Students are exposed to all levels of management and usually present the results of their projects to top executives.

Interaction with other interns and many Lilly employees both on and off the job. For example, Lilly locates reasonably-priced, furnished housing so that all interns can get to know each other by living in the same area. Also, many social activities are planned throughout the summer to encourage informal interaction with other interns and Lilly employees.

Please see instructions on submitting your resume.

See also information on internships in Elanco Animal Health.

Eli Lilly and Company is an equal opportunity employer.
ToughActin' Tinactin option is of course a brand name OTC product. This site had John Madden with Jocks in a work out room. One of the options from this site was for fun and games (fig. 16). This gave two trivia questions where the browser could guess and then send the answers via e-mail and if they got the answer right and were picked from a drawing, the participant could win $50. None of the other websites had any similar entertainment items. Some had quizzes, like Merck's for its T-shirt, and others simply had short quizzes with basic medical questions:

Which is the longest nerve in the body?

a. optic nerve  
b. sciatic nerve  
c. spinal cord

**Manipulation Function**

The fifth research question: Was the information used for manipulation? As the literature review has shown, pharmaceutical companies have been under attack for disseminating false and misleading information. The information in the websites can not be held up to scrutiny at this time, yet the information that does appear on the websites is most favorable to the companies and their products.

The Schering Plough zone site may be considered the home page, but the corporate information listed “Myhealth” as the home page. In addition to a confusing web address, Schering had a manipulative angle in its presentation of the hepatitis zone (see figs. 17, 18) this option gave various menu icon items that range from understanding your liver to upcoming symposia. This might have been misconstrued in determining
Figure #16
Welcome to the Health Care Homepage!

News - Last updated 4/3/97

- Schering-Plough Research division now on line!
- Check out the Allergy Alert for your area in the Claritin Zone
- Check out the Cold Sore Zone for your lip needs!
- New Symposia Announcements in Hepatitis Zone
- Claritin is A Logical Alternative to Seldane
- Professional Information section now open in the Claritin Allergy Relief Zone
- Visit The International Divisions of Schering-Plough
- Professional Information section now open in Skin Cancer Zone

Welcome to the Health Care Homepage, brought to you by Schering-Plough.
Five Million Americans have Hepatitis. Do You?

The hepatitis B and C viruses are more common and can be more infectious than the AIDS virus. Yellowing of the skin or eyes can signal hepatitis B and C, although most people have no recognizable signs or symptoms. Untreated, hepatitis can lead to scarring of the liver or even liver cancer. You are at risk for hepatitis if you have been exposed to infected blood or body fluids through tattooing, body piercing or sharing razors or toothbrushes. Unprotected sex with many partners or experimentation with illicit intravenous drugs also puts you at high risk. Your doctor can do specific tests to diagnose hepatitis B and C. Get tested. In many cases, hepatitis can be treated.

GET TESTED

If you suspect you are at risk, see your doctor or call the AMERICAN LIVER FOUNDATION for free information.

1-800-223-0179

GETTING HIP TO HEP

WHAT EVERY HEPATITIS PATIENT NEEDS TO KNOW

UNDERSTANDING YOUR LIVER

RED BLOODED BLUES

PRESS RELEASES
what company is responsible for the startling image of a child's blue face and yellow eyes (the only two colors in the website). The magazine ad is the same as Schering's web link. Yet the magazine ad is sponsored by the liver foundation (fig. 19). It was confusing in determining who was responsible for the ad. Pfizer had a few manipulative elements in its website as well. To begin with, when the homepage was initially connected, there is a brief teasing testimonial before the actual homepage is brought up. “I was 25 and could barely move. What kind of life was I going to have?” (fig. 20). After this screen was flashed to the viewer for a moment, the homepage appears. Pfizer had a menu option of testimonials and this picture of this woman was among the options. What could be questioned is whether or not such testimonials are really true. It is not in the context of this study to determine.

Pfizer constructed another manipulation of information. One option was for “The contribution of pharmaceutical companies: what's at stake for America.” There are 22 pages that follow this option which traces the history of the pharmaceutical industry and the political ramifications and conditions of operating under the regulation of the U.S. government.

Viewed from a long perspective, progress in health care has been one of the great successes of the twentieth century. This fact should be one of the premises of the current debate on health care reform. At this point it is not...there is no scientific way to place a dollar value on extending human life and improving its quality, or to measure what percentage of this extension is due to drugs. However, the value that each person would place on extending his or her own life expectancy from 54 to 75-21 years—is surely substantial.
Get hip
Get tested
Get treated

Medical experts estimate that 4 million Americans have chronic hepatitis C, the leading cause of liver transplantation in the U.S. More than 8,000 Americans will die from complications of chronic hepatitis C this year alone, and within the next 10 to 20 years that number is expected to triple. If you received blood before 1990, either during a medical procedure or as a medical treatment, you are at risk for hepatitis C. Unprotected sex with many partners or the use of illicit intravenous or intranasal drugs can place you at greater risk for developing hepatitis C. Individuals in occupations where exposure to blood can occur, such as health care workers, emergency medical technicians and paramedics, may be at higher risk for hepatitis C infection. Other potential sources of hepatitis C infection include tattooing, body piercing or sharing razors or toothbrushes. Beyond these known risk factors, hundreds of thousands of people with hepatitis C today are not in any high-risk group.

Hepatitis C: If you're at risk for hepatitis C, get tested. In many cases, hepatitis C can be treated effectively. If you suspect you are at risk, see your doctor or call the AMERICAN LIVER FOUNDATION for free information.

1-888-4HEP-USA
www.liverfoundation.org
"I was 25 and could barely move. What kind of life was I going to have?"

Melinda Sheppard
Nantucket, Massachusetts

Today Melinda is avid about her aerobics. But eight years ago, she could hardly walk.

Pains that started in her left foot spread to her hips, wrists and ankles.

The problem was chronic inflammation of the joints.

Thanks to physical therapy and medicine developed by Pfizer research, Melinda's active life returned.

And shortly thereafter, so did her smile.

We're part of the cure.

Copyright © 1996, 1997 Pfizer Inc. All rights reserved.
The manipulation of information also occurred when websites inquired about specific individual information. Schering's allergy zone menu options had mailing list information. Link 2 was to the mailing list. This link mentioned the product name "Claritin" and gave a survey for demographic/mailing information for the browser to put into the given space. Another way in manipulating the information was through restricting access to certain information. Schering had a link to the health care professional. Password only or the DEA (Drug Enforcement Agency) number for physicians to access this link could only access this link.

Magazines

As for the magazine ads, similar themes emerged. Modern Maturity (fig. 21) is a bi-monthly publication. May/June was the issue used for the research. There were no pharmaceutical advertisements. However, there were a few of the same ads for the AARP pharmacy service. This evidently is a service provided by the Agency for the Advancement of Retired People that does cost comparisons among drug manufacturers for the least expensive drugs. Three brand names of presumably the same compound are compared on a chart: Lescol, Zocar, Pravachol. There is no further explanation as to the make-up or function of the drugs, so perhaps it is assumed that the target audience is familiar with the drugs. No website address was given.

The mainstream magazines have a different result than the highly targeted publication. Time and Newsweek both have prescription drug advertising in their issues for the month of May. For the month four issues were examined. The dates are the same for both publications: May 5th, 12th, 19th, and 26th. There were no pharmaceutical
Now you can feel better even before you take your medicine.

As you can see from the chart above, one of the things we do at AARP Pharmacy Service is make sure you don't have to pay more than you need to for the medications you need. We carry over 3,000 brand name and generic prescription drugs as well as a complete line of non-prescription health products that are all competitively priced. We also have a 7-day-a-week phone service that's answered by friendly and knowledgeable people. A staff of pharmacists to fill your prescriptions safely and answer your questions. Even fast and reliable delivery by mail that comes straight to your door. For over 35 years, we've helped millions of AARP members feel better. We'd like to help you too.

To get your free price quote, call 1-800-456-7821. Ask for Department 112130 Monday - Saturday, 6am to 10pm & Sunday, 8am to 12pm. Figure #21

From RETIRED PERSONS SERVICES, Inc.
ads in *Newsweek*’s May 12\textsuperscript{th} edition. The breakdown of the data was by publication and date.

**Surveillance Function**

The first research question asked: what type of information was presented? Did it inform the viewer? Did it provide news? Most of the magazine advertisements gave information and informed the reader. All ads had the subsequent FDA label information. All of the magazine ads presented vast amount of information (fig. 22) as they are required by law to do so. The information was the labeling risk information that the FDA requires. In this regard all of the ads provided information, even more so than the websites. However, due to obvious space restrictions the websites gave a much more vast array of information than the magazine ads.

Other types of information ranged from news to directions for use. *Time*’s May 19\textsuperscript{th} issue had an ad for “Caverject alprostadil for Impotence.” The ad was mostly text with the headline, “Impotence. If your treatment hasn’t made the difference you need...maybe you need a different treatment.” The ad continued with the text:

> When properly dosed, Caverject produces an erection that lasts about one hour. So if your aren’t satisfied with your current impotence treatment, or if you though impotence couldn’t be treated at all, caverject could be the answer. Many insurance plans, including Medicaid, will cover it.

In addition to this information, the ad gave safety information and quasi-directions for use. “It simply takes about 10 seconds to self-inject Caverject into the side of the penis. This puts the medicine right where you need it. Once the ideal amount has been established, the erection usually lasts about one hour.” The company is Pharmacia
& Upjohn, and their name was mentioned in the ad. No website address was given, however a 1-800 number was present for more information.

**Correlation Function**

The second research question asked: what was the correlative nature of the information? What was the editorial content? Was it educational, promotional, or otherwise? Most of the magazine ads were promotional in nature. Some could be considered educational simply by the specific information they gave. The magazine ads differed from the websites in that they specifically promoted a specific pharmaceutical product, whereas the websites tended not to. The May 26th edition of *Newsweek* had an ad that was for “Accolate zafirlukast.” The headline was "accolate twice a day helps me control my asthma." The ad had a picture of a young woman and her puppy. The company is Zeneca. The company name was not prominent. There was no website address. There were promotional and educational components of this ad which were typical of most of the magazine ads. The promotional piece was with the selling point of the convenience of a tablet. “You know how frequently you have to use your rescue inhaler. By making Accolate part of your asthma treatment regimen, you may even reduce your reliance on your inhaler. With Accolate, you simply take one tablet in the morning, another in the evening.” The educational element was in the citation of medical studies. “Accolate has been shown to have a side-effect profile comparable to placebo (sugar pills). In fact, in over 4,000 people studied, Accolate was generally well tolerated.”
Socialization Function

The third research question was: did the information provided act as a transmitter of culture? Did it communicate values and norms? The magazine ads were all in the English language, so there was no other foreign influences or options as there were in the websites. Therefore culture was not communicated. However, values and norms were communicated. Much like the Schering' cold sore zone playing upon and individual's vanity, there were a few magazines ads which did likewise. The May 19th edition of Newsweek had an ad for “metrogel/metrocream metronidazole topical,” with the headline, "Maybe its sunburn. Maybe it's skin irritation. Maybe it's an allergy. Maybe its acne. Maybe its Rosacea." In another ad there was a picture of a woman's face with discoloration (fig. 23). The product is from Galderma Labs. The company name was not prominent. No website address was given. Time's May 19th issue had an ad for “denavir penciclovir” for cold sores. The ad showed a self-conscious woman holding her lip with the headline, “new prescription Denavir blocks the virus in the cold sore, so it heals in 2-4 days.” The company is Merck. Their name was not in the ad. No website address was given.

Entertainment Function

The fourth research question asked: Did the information have an entertainment value? None of the magazine ads had sheer entertainment functions as did some of the websites. None of the magazine ads had quizzes, or games for the viewer to participate in. However, some of the print ads could be considered “entertaining” as they were presented with a lighter flair and a more humorous angle. An example of this is the May
MAYBE IT'S AN ALLE
MAYBE IT'S ACNE.
MAYBE IT'S ROSACEA.

Persistent redness or flushing in the middle areas of the face. Broken blood vessels. Acne-like bumps. These are all symptoms of rosacea—a skin condition that affects over 12 million Americans middle-aged and older.

Rosacea symptoms may come and go, but without treatment, they may get worse over time. Over-the-counter medications may help temporarily, but to really get your rosacea under control, you need to see a doctor.

So don't wait. Talk to a dermatologist today. And when you do, ask about MetroCream™ or MetroGel®, the #1 doctor prescribed topical rosacea medication.

In clinical trials, patients experienced the following individual side effects in order of frequency: skin discomfort (burning and stinging), redness, skin irritation, itching, or worsening of rosacea. The total incidence of side effects was approximately 10%.

MetroGel, MetroCream™
(metronidazole topical gel) | (metronidazole topical cream)
Topical Gel, 0.75% | Topical Cream, 0.75%

Rosacea therapy that works.

FOR FREE INFORMATION ABOUT ROSACEA,
CALL 1-800-432-4909

© Celestine Laboratories, Inc. 1996. Please see next page for important product information.
19th edition of *Newsweek* had an ad Atrovent ipratropium bromide with the headline, "break free from your runny nose" and a picture with a play on ball-and-chain with a box of tissues (fig. 24). The company is Upjohn. The name was not prominent. No website address was given. The *Newsweek*’s May 5th edition was a cartoon ad for "prilosec omeprazole" (fig. 25). The ad showed a cartoon man holding his stomach. The headline is, "If your heartburn medicine works so well, why do you keep getting heartburn?" The manufacturer is Astra Merck. The company name was not prominent. No website address was given.

**Manipulation Function**

The fifth research question asked: Was the information used for manipulation? As with the websites and some of the examples of manipulation, the magazine ads could have had information that was not entirely accurate. Aside from this possibility is the fact that some of the ads did play upon or manipulate the emotions. *Newsweek*’s May 5th issue had an ad for "rimadyl carprofen," an animal product that was part of a four-page spread. The headline was "if arthritis pain took your dog out of the picture, where would you be, besides a little lost?" The picture depicted a family frolicking with the dog. The copy included:

You’ve always enjoyed those long walks with your best friend. Problem is, joint pain and inflammation can sometimes make it difficult for him to lead the way. That’s why it’s important to recognize the early signs. You’ll notice stiffness and difficulty rising, walking and climbing stairs. Your dog won’t act like himself. He’ll resist your touch, he’ll whimper and he’ll limp.
Ask your doctor about an exciting advancement for treating runny noses, ATROVENT® Nasal Spray. **NOT A STEROID** It's the first in a unique class of nasal sprays that actually stop runny noses where they start. **NOT AN ANTIHISTAMINE** ATROVENT Nasal Spray's special inhibitors provide effective relief without insomnia or drowsiness. **WON'T KEEP YOU AWAKE. WON'T PUT YOU TO SLEEP.** And it can be safely used by children 12 years and older. ATROVENT Nasal Spray is available exclusively by prescription. Only your doctor knows if it's right for treating your runny nose. Though most ATROVENT Nasal Spray users experience trouble-free relief, nasal dryness (approximately 1 in 20 patients) and mild nose bleeds (approximately 1 in 10 patients) are potential side effects.* So ask your doctor about ATROVENT Nasal Spray, or call toll-free 1•888•ATROVENT (287•6836) for a free brochure and money-saving coupon.
FREQUENT HEARTBURN SUFFERERS:

If your heartburn medicine works so well, why do you keep getting heartburn?
This is a Pfizer product and the name was displayed prominently. The website address is www.pfizer.com/ah. The May 26th issue of Newsweek had an ad for no specific product other than publication material for Alzheimer’s (fig. 26). The headline was, "he's working to help Alzheimer’s patients remember, and that's helping families hope." There was some testimonial material and snapshot pictures. No company or product name appeared. There was a website address http://www.phrma.org.

Time’s May 5th issue had no product name, and no company sponsor. Rather, it was much like the Alzheimer’s ad in that it was an awareness ad for Hepatitis. The headline was, "get hip get tested get treated." A website address was given with www.liverfoundation.org. This ad was similar to a pharmaceutical website. Time’s May 26th editions had the hepatitis ad (fig. 19) which has been described before. This ad varied a bit in its layout, but the text and message was the same.

There were six website addresses from the magazine ads. Some were from specific pharmaceutical companies; some were general information and were unnamed. The sites are described and the research question most applicable to the particular website is discussed. It should be noted that many of these sites contain elements that are relevant to all of the research question areas. All of the sites contain information. Some of this information is promotional in nature, some of it is manipulative, and some of it transmits certain mores and norms.

The first website address that was explored was Flonase from Glaxo Wellcome www.flonase.com (fig. 27). The homepage for this particular product was not the homepage for Glaxo. Menu options for this page was understanding allergies, allergy
He's working to help—
Alzheimer's patients remember, and that's helping families hope.

"When I was a young student, people used to think that memory loss and dementia were a normal part of aging. Today we know that in many cases, the real cause is Alzheimer's disease. As a pharmaceutical company researcher, I am committed to finding ways of treating this disease."

"Currently, there are about 4 million people in the United States with Alzheimer's disease. Unfortunately, this number will dramatically increase as our population ages. My company is searching for treatments that might slow down, halt or maybe even reverse the progression of Alzheimer's."

"We think Alzheimer's disease has several different causes," says Axel Unterbeck, a pharmaceutical company researcher. "Some forms are genetic while others might involve additional factors. Because it affects memory and learning, it's one of the most complex diseases we know of." Unterbeck and his team of researchers are working on genes that are linked to Alzheimer's disease. "Four genes have been identified so far," Unterbeck says. "These gene discoveries give us, for the first time, a realistic hope to find a cure."

Call 800-862-5110 for our free booklet on Alzheimer's or visit us on the internet at http://www.phrma.org. Find out more by calling the Alzheimer's Disease Education and Referral Center at 800-438-4380.
Nasal allergy sufferers:
Ask your doctor about Flonase (Fluticasone propionate) the allergy medicine that unstuffs your nose.

Click here to receive your free allergy kit including a $5 savings certificate.
library, about flonase, more cartoons, product info, free allergy kit, and home. All links had expanded information about the product and all links link back to the homepage of Glaxo. There was also the additional item of a $5 savings certificate when the browser chooses a free allergy kit. This site provided the standard risk information that was seen in the magazine advertisement. There was a promotional aspect with this site as it gave the viewer an incentive to purchase the product with a discount feature. In this light it could be said that there is some manipulation in the site as there is the proverbial "dangling carrot" to purchase the product with a rebate incentive.

The next website address explored was from the Alzheimer's advertisement www.phrma.org. (fig. 28). This address actually went to a site called phrma for America's pharmaceutical companies. Menu items included: Phrma homepage, members, facts and figures, health guides, current news, industry issues, search, and new medicines in development. The site had a statement that Phrma membership, "represents approximately 100 U.S. companies that have a primary commitment to pharmaceutical research. These companies are discovering, developing and bringing to market medicines that improve our health and quality of life, etc." When explored a bit, the links did not go to other pharmaceutical company sites. Some recognizable companies were mentioned in the text, but there were no hyperlinks. It is unclear at the time of this research if Phrma is an umbrella name for specific companies, or is an entity unto itself. No further data was given. Product information was presented, only in name rather than affects and other relevant information. For this reason, this site was manipulative in its
PhRMA membership represents approximately 100 U.S. companies that have a primary commitment to pharmaceutical research. These companies are discovering, developing and bringing to market medicines that improve our health and quality of life—as well as reduce the overall cost of healthcare.

While visiting here, be sure to stop by our sections on Drugs in Development, industry Facts and Figures, and our consumer Health Guides series.

To find out more about issues concerning pharmaceuticals, look at Current News. This section will discuss the hot topics and state issues that we are currently following.

Our new Genomics section provides a dynamic and accessible information resource on emerging genomics-related issues for members of PhRMA and American Institute of Biological Sciences (AIBS).

Thanks for visiting. We will continue to update this web site to keep you abreast of new developments. If there is anything you would like to see here or have any comments please let us know.

Sincerely,

Sidney Taurel
Chairman

Alan F. Holmer
President
information as it was simply unclear what exactly product and company is featured. The lack of clarity enhanced the manipulative nature of this site.

The next website address explored was from the hepatitis ad. The homepage had the menu options of: information, ALF publications and videos, ALF services, activities, and groups please sign our guest book. What was of keen interest was that the ad that appeared in the magazine was the same ad by Schering-Plough in its hepatitis zone menu option. On this particular page, there was a link to the American liver foundation, but there was no link from the American liver foundation to the Schering site. This site could be seen as being manipulative, as there was confusion about the website address given and the actual site. The “darkness” of the ad and the seemingly “other-worldly” layout of the ad also use scare tactics.

The next address examined was www.migrainehelp.com. This was for Imitrex (fig. 29). The site had hypertext link options of symptoms, treatment programs, detailed diagnostic screening, complimentary support materials, and free subscription to Headway. In addition there was a main menu options which linked back to the Glaxo Wellcome homepage and the option of sharing your thoughts and experiences, which was in survey format. Imitrex option simply provided more information about migraine headaches and little about the product other than lay perspectives and testimonials. This site provided news and information about the product. It could also be considered to be correlative as it has strong promotional emphasis on how the product aids the sufferer.

Zocor was the other prescription product from a pharmaceutical company magazine advertisement. www.zocor.com was the address (fig. 30).
Welcome to the Migraine Resource Center.

Those who suffer from migraine headaches know how painful, debilitating, and isolating they can be. The good news is now there is more information available about migraine than ever before, as well as promising treatment programs that may help you. If you think you may have migraines - or have been diagnosed by a physician as a migraine sufferer - you should see your doctor or allied health care professional to discuss possible treatment programs.

Here in the Glaxo Wellcome Migraine Resource Center you can learn about some of the triggers, symptoms, and treatment programs for migraine, take a free detailed diagnostic screening, receive complimentary support materials such as a free subscription to HeadWay, the migraine newsletter, and much more. Glaxo Wellcome Inc., a pharmaceutical research and development company and sponsor of this site, is dedicated to the better understanding and treatment of migraine.

As this site will be frequently updated, we urge you to visit us often - to get the latest news as well as to share your thoughts and experiences. We want the Glaxo Wellcome Migraine Resource Center to be a place you turn to for the information and support you need to live better with migraine.

To get started, click on Main Menu.

Please see important information for IMITREX® (sumatriptan succinate) Tablets.

Intended for US residents only.

©Copyright Glaxo Wellcome Inc. 1996
All Rights Reserved
Comments/Questions?: webmaster@migrainehelp.com
welcome to
www.zocor.com*
brought to you by Merck & Co., Inc.

(Merck is also known as MSD, Merck Sharp & Dohme and others outside of the USA.)

Merck & Co., Inc., is a worldwide health care company that is committed to developing and marketing innovative products that treat conditions which impact your quality of life.

The information found here will help you to become better informed and educated about heart disease, which could affect your health, lifestyle and future. We believe that the better informed you are, the more involved you can become in partnering with your doctor to improve your overall health. To assist us in providing you with the most appropriate information, please select one of the following:

- I am a resident of the United States of America.
- I am a resident of another country.

Merck develops products and services for a wide variety of conditions, including high cholesterol, high blood pressure, osteoporosis, enlarged prostate, glaucoma, and preventable diseases. Please visit our Disease Infopark for more information.

When you have finished visiting ZOCOR.COM, please use the buttons on the top of each page to navigate to sections of the Merck site to view information about other medical conditions and products that Merck has developed.

Copyright © 1996 Merck & Co., Inc., Whitehouse Station, NJ, USA. All rights reserved.

* ZOCOR® (simvastatin) is a trademark of Merck & Co., Inc., Whitehouse Station, NJ, USA, and registered in the United States Patent and Trademark Office.
Menu items for this site simply were all directed back to the Merck homepage. No explanation was given about the product. This was a manipulative tactic as the website advertised in the magazine stated one thing, but the actual site was something else.

Pfizer had the magazine website address of www.pfizer.com/ah. This site was for the animal health care products that were mentioned earlier under this company’s homepage description. Menu options for this site included: about Pfizer animal health, veterinarians, pet owners, and livestock. The information was fairly lengthy, however it was mostly for the veterinarian as it is technical in nature.

What was of interest with all of these ads was that the ones with website addresses were not necessarily the pharmaceutical companies that appear on Dun’s rankings. Glaxo Wellcome had two ads for two different products but was ranked outside of the given parameters. Merck seemed to be active in promoting its website as its product features the address for its drug.
Chapter 5

DISCUSSION

The present research investigated six drug companies advertising pharmaceuticals on the Internet as well as three magazines advertising pharmaceuticals. The findings provided a broad background for understanding how drugs are advertised on the Internet compared to other, more traditional mediums. From the investigation three main discussion points emerged. These points can be illustrated by using the theoretical framework of Lasswell and Wright (1960, 1976) and Doris Graber (1997). The three areas of discussion are: magazine portrayal, pharmaceutical company websites, individual drug advertisements and connections between the two mediums.

What the results showed was unexpected. From the literature review, one could extrapolate that the free flow of information that the Internet allows for is of concern regarding the lay population and pharmaceuticals (FDA and the Internet, 1996). What was surprising about the findings was that overwhelmingly there was very little information about pharmaceutical products themselves. The vast majority of the information that was presented was information about the pharmaceutical companies, their role in the consumer culture, their role in the business culture, and generalized healthcare information. Little if any of the information involved in the websites dealt with pharmaceuticals.

Company history and community relation information took up a lot of space with each company website. Much of the information presented was geared toward the
consumer in a public relations manner. Novartis had a management letter with its “who
we are” link that gave the mission statement for the company.

As one of the world’s leading life sciences companies, Novartis is dedicated to
creating value for its customers in the areas of Healthcare. Our commitment to
Health, Safety and the Environment (HSE) is part of this dedication and is
inseparable from our activities, our identity and our values. Excellence in Health,
Safety and the Environment is not at odds with, but is rather intimately connected
to our goal of providing the world with innovative products.

All of the company websites had similar items for customer relations or other such text,
ever were specific products mentioned.

The drug information that was presented on the websites was limited. Specific
product names would be mentioned (i.e. Claritin) as a link would be built around the site
of that particular product, but no more detailed information could be retrieved or was
offered in the majority of cases. Most product-specific links merely stated “ask your
doctor” type referrals. Although little information was given, this type of link does
confirm the literature in that companies are targeting the end-user to direct the
physician’s prescriptive inclinations (Consumer Reports, 1992).

Because the research showed that pharmaceuticals are big business (SIC,
1996), the interest in monetary performance is logical. The obvious drive for the bottom
line is fueled by the advertising expenditures earmarked by the companies (Conlan,
1996). All of the websites explored had a financial link which gave company stock
information. Novartis, as well as a few of the other companies had actual links to other
financial websites to give the most current stock information. Again, specific
pharmaceutical products were not mentioned.
Of all the possible links, link options and their menu options, research and development seemed to be the best place to find detailed information on specific pharmaceutical products. However, all of the websites had public relation information which was akin to company histories, but only a few sites contained information where specific products were mentioned. Flonase from Glaxo Wellcome was an example of specific product being mentioned. The website had information about about the product and general allergy information. Schering Plough had Tinactin and Claritin information and specific sites built around those products. However, there were no other products mentioned in any of the websites which gave specific product information for other types of drugs. Athlete’s foot spray and allergy medicine were the featured products. No antidepressants or other schools of pharmaceuticals were mentioned. BMS research and development link was typical of the other companies.

(PRI) Pharmaceutical Research Institute is headquartered in Princeton, New Jersey, and is recognized leader in discovering and developing novel, cost-effective pharmaceutical therapies that improve people’s health and quality of life. The PRI’s long tradition of preeminent scientific investigation has led to numerous advances in pharmaceutical treatment and prevention across the spectrum of medicine.

Magazine advertising

It is interesting that, in researching this area, much of the mainstream press has reported the issue of health and health care. For instance, three of the eight magazine issues during this research had cover stories on some form of health. The May 26th edition of Newsweek had Asthma as its main cover story. Time had "How we get
addicted" as its cover story for the May 5th edition, and "Natural Healing" as its May 12th cover story. Far from drawing any conclusions, it is at least worth noting that these issues all had some form of pharmaceutical advertisements between their covers. The *Newsweek* May 12th edition had a cover story on China, and absolutely no drug advertising. No generalization can be drawn from this; however, these facts help solidify the public’s awareness and concern about health care in all fashions and forms.

The magazine ads tended to be loaded with information. Some of the ads were balanced with lay terminology and traditional advertising approach presenting feature/benefit, yet there is little doubt that much of the ads were directed toward those in the medical profession. The technicalities of many of the ads support this observation. Most of the ads were consumer-oriented in that they had elaborate layout with color graphics and photographs. Much of the text was for the lay person with information about heartburn interlaced with technical jargon.

Taken as a whole, the magazine ads did not convey a surveillance function in providing “news.” The information presented did not necessarily inform either. Most of the data presented in the magazine ads gave technical information and attempted to find identification with the individual looking at the ad. For this reason, all of the magazine ads were considered correlative in nature. They editorialized on the information given. This was the selling point of the material presented. For example, headaches are not pleasant, but the ad for Glaxo’s Imitrex showed a rebirth of sort for the user of the product. Most assuredly, these can be labeled as socialization. They function to communicate values, and norms from the members of a society to a newcomer. If one
was a first time user of this product, one would not know what to expect. Such graphics helped to illustrate what that individual can expect. It is not just aspirin, it is freedom. People who get older and need more medical assistance are prone to be “initiated” into this culture by their peers, and most assuredly the companies. There are ways that are presented by the ads to gather more information, and adjust oneself to the jargon. 1-800 numbers are given, as are guideposts to see if one qualifies for the use of the product via a checklist of symptoms. If one has these symptoms, one qualifies for the treatment. Entertainment did not necessarily apply to the magazine ads. They either informed in a minor way, helped the audience identify with the product, or point the way to more information. Graber's (1997) manipulation function did come into play by the sheer nature of the medium. The ads attempted to entice the consumer, create empathy, or create a need by playing upon the possibility of the consumer’s discomfort. Pain and “dis” ease are often shown in these ads. Perhaps this was done to create empathy with the viewer. A sense of identification with an ad is apt to draw a viewer. This type of logic can be traced back to transmitting a value or a culture.

Pharmaceutical websites

The company websites offered a host of information. Perhaps one of the biggest features of the websites was the financial news. These sites were all about information, from giving historical background on diseases to providing press releases about new product development. They all qualified for the surveillance function. The correlative function was a bit more difficult to apply to the company websites. Interpreting the environment was not the primary function of the websites. If anything,
the magazines did a better job of correlation. They defined diseases or symptoms. The websites did not interpret the environment. Moreover, the magazine advertisements had more promotion of the product in their content than the company websites. Initial contact with a web page gave the browser many options for gathering information and different aspects of the company and health care as an entity. In examining the websites and Internet as a whole, it could be argued that they do in fact transmit information to "new" web users. There are several links on the company sites that allow for a tutorial showing how to navigate on the web. An example of this would be Lilly's "search this web site" option.

Entertainment did play more of a role in the company websites than it did in the magazine ads. As the findings showed there were a mix of entertainment and educational devices. However, Postman (1985) suggests that through technologically advanced devices, information dissemination is not necessarily educational.

We face the rapid dissolution of the assumptions of education organized around the slow-moving printed word, and the equally rapid emergence of a new education based on the speed-of-light electronic image. There is a new conception of knowledge and how it is acquired (Postman, 1985, p. 145).

There were "interactive" processes that a browser could engage in. Videos could be ordered and cartoons appeared on some sites. There was movement in some of the graphic layouts of the home pages. For an example, Merck had moving graphics of balloons as well as quizzes that people could play. FAQ's (frequently asked questions) were another option provided by many of the sites.
Manipulation on the Web is difficult to assess. The very nature of the Internet allows for the browser to manipulate and navigate through the sites. In so doing, the site itself manipulates the browser by providing information and situations that the browser must "manipulate" in order to access further information. By its very nature this is a manipulative medium, but its interactive nature puts the media user in charge of key decisions. The companies control by limiting options on a particular site.

**Magazine and website addresses**

The magazine ads with website addresses fall under the surveillance function because the magazine ads provide the information (the website address) to the audience. It is providing information and news. Most of the ads asked the consumer to, "visit our website." The relationship between the two mediums is not correlative in nature. It is true that the magazine ads contain strong graphics, but there is no editorializing around the naming of the website address, other than the tame incitement of "come visit." The strongest function of the relationship between the two mediums was that there was a socialization process. The magazine ads were communicating information, perhaps even values and norms from one generation to another. The literature review has shown that the Internet is an ever-growing medium (Liebman, 1995). The listing of a website in a traditional medium like a magazine ad is socialization. Entertainment was not evident in this relationship, however manipulation is. By the sheer function of a Web listing in a traditional medium such as a magazine, the audience is being manipulated to "seek more information" by researching another medium. Such listings move the culture by suggesting use of the web has become a social norm.
Even at the time of this research, there is continued growth in the Internet and health care. Patients who want to know the recommended treatments for their medical problems will have a place to turn to in cyberspace under the new National Guideline Clearinghouse. This website will post the full range of treatment guidelines. The project is being developed with the American Medical Association and the American Association of Health Plans, which represents health maintenance organizations and other managed-care plans.

This type of development is what fuels the FDA’s concern over this new technology and the general public’s access to such information. The pharmaceutical companies have a history of being driven by the bottom line, and as a result, the expansion into this new medium is cause for some concern as a unique relationship is beginning to form with an information, techno-savvy public, and a profit driven industry.

However, what this research has shown is that there is no illicit behavior going on with pharmaceuticals on the web. If anything, there is a lack of information in this regard. The drug companies have a plethora of information but very little of it is in regards to actual pharmaceutical products. Yet, if the current players continue to be in the mix, there is great incentive, and very little cause for restraint in supplying the consumer with that information.

Limitations of the study

The major limitation of the study is the source that was examined in trying to find information about pharmaceuticals. As the FDA is on guard about how and what information is presented (Critser, 1996) and it appears that pharmaceuticals have a well
documented history of using some questionable strategies for selling their products (Braithwaite, 1984), it would be surprising if the pharmaceutical companies did promote their products on the Internet. Perhaps a better study would be to examine other sources on the Internet that are promoting certain drug products. It could be that there is a group, individuals, companies, or other entity that is providing in-depth information about drugs that the consumer is looking for, and is posting this information on the Internet.

Another limitation of the study could be the timeframe of the research which was not ample to look at trends and changes. A one-month period is good to get an initial reading, but as it was discovered, the websites did not change in any dramatic way. Perhaps with a three-month window of time or longer, one would be able to see more changes in the text and layout of the websites. Over time, a long-term analysis could study evolution of the sites. Another limitation of the study is the choice of the magazine medium. Television might be a more comparable medium. However, one must take into consideration, that television advertising of pharmaceuticals is a relatively new development. In addition to this point, there is very little “text” in a television ad. Magazine advertising and the websites are compatible for the fact that they are both copy heavy. Another possible angle from which to study this issue is by focusing on the specific product rather than company. To trace the product lifecycle might be more beneficial than to track it through the various mediums it may appear in.

The framework in which the study was conducted might also be another weakness. Functional theory (Wright, 1976) has vast limitations. It is descriptive in
nature rather than predictive. What is of concern to the FDA is the possibility of misinformation being disseminated on the Internet without any regulations. What would be most beneficial is to attempt to predict the likelihood of this situation occurring. What the research found was that there is virtually no drug information being presented by the pharmaceutical companies.

What is of concern is the potential power these pharmaceutical companies have in their drive for the bottom-line. (McQuail, 1987) suggests that the role of mass media is determined essentially by economic forces. In essence, the basic economic law of supply and demand could dictate the future of the Internet and what information is provided regarding prescription pharmaceuticals. If there is a great enough demand by the public, these companies are prone to comply. As it was stated earlier in the research, there are no set regulations by a governmental body for this specific type of information for the Internet.

Future research

The most interesting aspect of this research was to learn about the practices of the pharmaceutical industry. Obviously, selling drugs is big business, and in the consumption driven economy of America, the bottom-line is that much more deliberate. We are consumers of information. It is a major part of our civilization. The purpose of the information industry is to facilitate access to the precise information needed at any specific time and place. Wolpert (1986) believes that knowledge is for three purposes: First, for fun or social interaction; second, for education, as essential building block facts
that are required or may be advantageous to acquire: and third, for making decisions or assisting in action choices.

Information retrieval systems and the information industry are concerned with the creation, organization, and dissemination of knowledge from databases and the related aspects of processing, marketing, and communication. For an economy to develop, it must have a good information system. However, most economists have ignored the basic rules of information (Wolpert, 1986, p. 11).

Future research might be beneficial for both consumers and the government if the information that is presented by these companies on their websites could be scrutinized in detail. One would suspect that with the history of the companies, there would apt to be stretches in the "truth" presented on the websites. Another aspect for study would be to examine possible trends in the growth or decline of name brands on the sites, and compare that to the market share of that particular product.

The Internet has been impossible to ignore. Even people who are not computer owners and do not have access to get on-line, have been made aware of its growing popularity and effects on the population. It is sure to evolve into a medium of what is now considered to be the mass mediums; television, radio, and print. Credibility is an issue. The Internet makes few such claims at the moment, and it is possible that the concept of credibility will also change as a result. Traditional mass media have addressed the issue within their organizations, hiring editors and fact checkers to determine what information is accurate. Source credibility will vary on the Internet, with commercial media sites carrying relatively more credibility and unknown sources carrying less. A much greater burden will be placed on the user to determine how much faith to place in any given source. (Morris & Ogan, 1996, p. 44)

Such research as to how the Internet can actually comply to the definition of a mass medium might help determine the validity of information. Yet, if the Internet is not
considered a mass medium, how can the information that is presented on the Internet be critiqued?

Nitcher (1989) sees the growing tendency to view health as something one can obtain through the consumption of pharmaceuticals. As self-medication is by far the most common medical action (Van der Geest, 1996) it is natural because it is convenient and economical. Self-medication is encouraged in reaction to overdependence on medical services. For consumers, it is a movement to assume greater responsibility over their own health. For the state, it is a welcome opportunity to economize on health care. It also benefits the pharmaceutical industry. Research could be done on the possible trends that may be occurring with populations in how they are receiving their medical information as with the example of website addresses in magazine ads, and whether or not people respond to those addresses and go to the websites.

To take it a step further, a viable topic of study could be to see if people are reactive or pro-active to pharmaceutical advertising on the Internet. The possible number and age of a browser could help define whether or not the medium cross-over is effective, and with which demographic groups, if any.

This early exploratory study of the Internet provided a starting point for future study of advertising on the Internet. While this study did not set out to explore the effects of this new type of advertising of pharmaceuticals, such studies in the future are inevitable. How many people use the Internet as a source of medical information and a profile of who they are will be keys to understanding the effect of this new
communication technology. Continued systematic research by scholars is needed on the Internet in order to see possible abuses of the system.
Chapter 6

CONCLUSION

The specific topic of pharmaceuticals being advertised and promoted on the Internet is becoming a greater issue in the public’s mind. At the conclusion of this particular study there were several articles in national publications that addressed this matter. What may be the impetus for this growing concern is the fact that the FDA has eased its regulations of television advertising for pharmaceuticals. The possible risks and/or side effects of taking a prescribed medication no longer are needed to be included in television advertising. Simply, all that is needed is the mention that some risks may occur and an individual’s physician should be consulted.

With the broad and ever growing appeal of the Internet, access to certain kinds of information is cause for alarm in some quarters. What this study has found may only be the initial prospectus for what is sure to become a hot topic in the national dialogue. Privacy issues abound in light of the information age, but with the open access to information concerning health factors, a peculiar twist emerges. Doctors are the experts in consulting our health. Yet, if the lay person can diagnose and then prescribe his or her own treatment based on the amassing of information, the doctor may become only a middleman in the pharmaceutical delivery cycle. Moreover, the governmental role that has been the definitive gatekeeper for public health may find itself in jeopardy as more and more people are apt to turn to their own devices in the information age to medicate themselves.
This study has drawn no specific conclusions on this topic. In fact, at the time of this study, the mounting fears and trepidation of certain groups were simply unfounded. The majority of the information that was displayed by the pharmaceutical companies on the Internet was not product specific. The majority of the information could be found in other mediums and other sources. However, this does not mean that specific pharmaceutical information is not available. The study simply did not explore other options of this kind on the Internet.

Most company websites explored in this study had lots of information regarding the company, health problems and concerns, and other varied information that did not involve specific pharmaceutical products. There was no cause and effect, nor direct problem/solution scenarios. In other words, there was no direct linking of a particular ailment to a particular drug.

However, as there have been an easing of FDA restrictions towards one medium, it may not be farfetched to concede to the possibility that the same may be true for the Internet in the future.
Appendix A

The Companies

Bristol-Myers Squibb Company

William McLaren Bristol and John Ripley Myers founded bristol-Myers Squibb Company in 1887. The merger of Bristol-Myers and Squibb Corporation in 1989 marked the largest single stock transfer in the history of the health care industry at that time. The company dedicates over $20 million a year toward philanthropic endeavors. The company is the parent of high-tech operating units involved in pharmaceuticals, health care products and other areas of technology. Producer of cardiovascular, anti-cancer, anti-infective and other such agents, its products include Capoten and Azactam, which are used as a medication for heart failure.

Pfizer Inc.

Pfizer Inc. is a research-based, global health care company. Their products are available in more than 150 countries. This company is the parent for many operating units involved in the manufacture of hospital products, pharmaceuticals, and chemicals. Over-the-counter drugs include Ben Gay, a topical muscular pain reliever, and Rid, a lice treatment. They are also the producers of anti-infective agents, psychotropic and...
cardiology drugs. Products include Unasyn and Cefobid antibiotics, Zoloft antidepressants, and Cardura, a cardiology drug. Pfizer was formed in 1849.

Merck

Merck was established in the United States in 1891, began its research program in the 1930's and rapidly became known for its achievements in cortisone, and penicillin. Merck estimates itself as conducting 5 percent of the world's pharmaceutical research. Merck is the parent of high-tech units involved in the research, development and manufacturing of pharmaceuticals and chemicals.

Ciba-Geigy

This company is a non-U.S. company founded in Switzerland in 1940. Ciba-Geigy is a producer of drugs for arthritis, cardiac treatment, hormone balance, smoking cessation, attention deficit disorders, and obsessive-compulsive behavior treatment applications. Other products include laxatives and analgesics. Products are sold to the medical and pharmaceutical industries. Habitrol, the nicotine patch, and Ritalin for attention deficit disorder are among its product line.

Eli Lilly

Founded in 1876, this company is a manufacturer of injectable and oral antibiotics, drugs and agents. Parent/holding company with units involved in the medical pharmaceutical and biotechnology industries. The bulk of revenue is derived from activity in the pharmaceutical industry. It has 26,000 employees with a 4% growth in the prior year. Among its product line is Prozac, an antidepressant drug, and Humulin, a drug for insulin treatment.
Schering-Plough

Formed in 1936, Schering-Plough is the parent of operating units involved in prescription and over-the-counter pharmaceuticals, vision care and animal health products, sun care and foot care products and research and development of allergic and inflammatory disorders and cardiovascular diseases. It has 21,000 employees with a 1-% employment reduction in the prior year. Drixoral, a sinus medication and Dr. Scholl's are among its product line.
Appendix B

Ciba-Geigy/Novartis

In Basel, Switzerland in late December 1996, the United States Federal Trade Commission (FTC) granted provisional approval to an agreement with Ciba-Geigy and Sandoz, clearing the way for the creation of Novartis. With core businesses in health care, Agribusiness and Nutrition, Novartis had, in 1995, an R&D investment of 3.5 billion Swiss francs on pro-forma sales of 36 billion Swiss francs. Novartis was formally founded in early 1997 when the company was registered in Switzerland, and its shares began trading soon thereafter on the Swiss stock exchange. The merger was conducted through an exchange of shares. This merger became active in the United States on March 7, 1997.

Because of the timing of this merger and the study being conducted by the researcher, some discrepancies do occur. At the time of the study, all three entities went by their individual namesake, while referring to the Novartis merger, but remained their own entity. While some of the figures will be off, and some are simply non-existent, the validity of the study does not appear to be infringed upon. For the sake of argument, the researcher will use Ciba and Novartis interchangeably, and keep the figures of the Dun’s report, which are indicative of Ciba’s performance. Since Novartis is a new holding, there is no ranking for it in Dun’s or otherwise.
REFERENCES


Consumer Reports, (1992, March). Miracle Drugs or Media Drugs? pp. 142-146


