COMPUTER USAGE
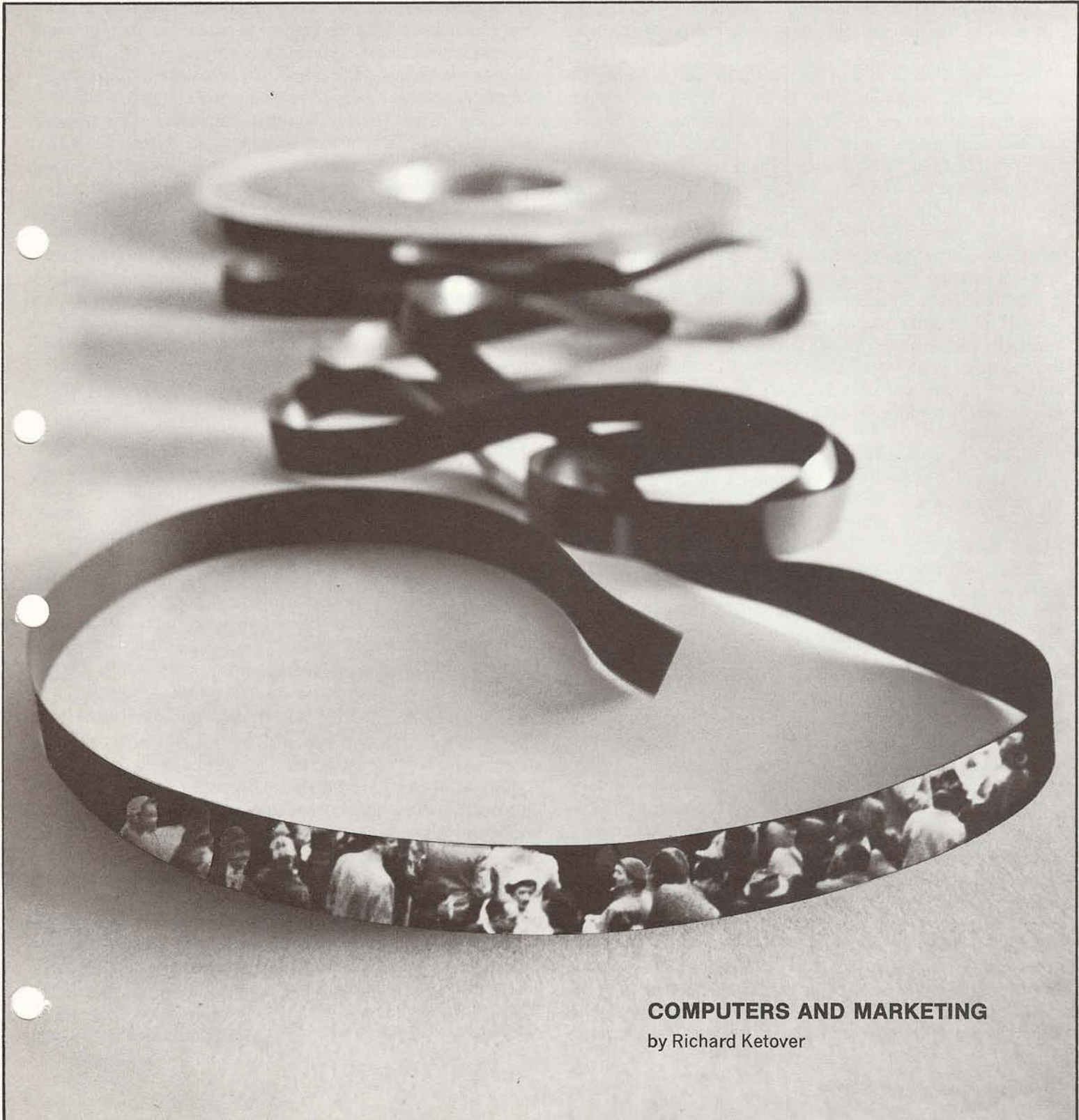
COMPUTERS AND MARKETING

by Richard Ketover

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Nobody really knows when it began. Eve sold the apple to Adam. But the serpent sold the apple to Eve. On a larger scale, in steamy oriental markets, buyer and seller met in the village bazaar. Fishmongers and rugmakers hawked their goods from neighboring stalls.

And every child in the Western World knows that the pig that went to market got roast beef while the pig that stayed home got none.

Marketing, in this Age of Consumption, is becoming the prime concern of business and industry. While still streamlining the machinery of production, businessmen are placing overwhelming emphasis on the marketplace — probing consumer motivation, distribution channels, merchandising techniques and the universe of marketing activities designed to place products into the eager hands of customers.

Manufacturers are critically aware that, with all the advances in production techniques there is one hard fact to face — a product has no value to a company unless it sells. In this real sense the computer revolution has gained the support of another ally — marketing management. It was inevitable because information is the heart of marketing and the computer is an information machine. The ability of computers to handle and store accurate and timely information has made them indispensable to every facet of the marketing function.

Marketing, strangely enough, has been one of the last business areas to resist the computer's steady advance on the information barrier. "Not enough data to make it economical," went one cry. "Marketing is an art — not a science," went another.

Today, you won't find much agreement with either argument as tons of data pour in from opinion research, sales figures, media, and analysis. The data was always there — but not quite there, not quite retrievable.

The advent of so-called peripherals — input and output devices like the Data-Phone, tape, ticket and card readers and high-speed printers — has made this data more easily retrievable.

The computer permits the facts that always existed, but have been pushed aside because they couldn't be processed and stored, to be looked at and analyzed.

The reason is simple: Computers can handle data a million to a billion times faster than humans. The impact of computers on marketing techniques is felt in all areas from inventory control and media selection through market research, distribution and pricing decisions.

HEY ALICE! WHERE'S MY GREEN SHIRT?

The problem of inventory control is no stranger to any of us. But the daily trials we face in finding mislaid or forgotten pieces of clothing or tools around the house is fun and games when compared to the vast inventory problems faced by the Nation's large department stores and big businesses in general. Sizes, styles, colors, fads are only a few of the variables management juggles to have what the customer wants — when he wants it.

For many businesses, both large and small, the computer's speed permits precise control of stock levels and ordering procedures. J. C. Penney's operation is a good example. Every night when the registers stop ringing at Penney's stores across the country, the punched sales tickets that were detached from sale items are collected and shipped to New York or Los Angeles. There, computers convert the data punched into the sales tickets to magnetic tape. This is done by a high-speed ticket reader capable of converting 1000 tickets per minute.

This is how it works. A model stock is established by each store based on its estimates to sell such staple items hosiery, lingerie and socks. Each store takes periodic stock counts to adjust its model stock. The information from the sales tickets which is on tape instructs the computer to write orders with specific shipping instructions to maintain each store's model stock for each stock-keeping unit.

FROSTING ON THE CAKE

Many retail stores using a computer to minimize their inventory problems have found some interesting peripheral advantages to the machine's general use. Large food chains, which of necessity went to computers to speed up inventory control and warehouse operations, have found there is a rich market for the data that their EDP systems continually compile. The mountains of figures they gather on cards and tape to keep track of merchandise, is like frosting on a cake to food manufacturers. Information like: what cranberry sauce is selling . . . where it is selling . . . and at what time sells best . . . is invaluable information for food producers who can analyze such statistics in light of their advertising efforts and publicity campaigns. The marketability of such data was recently emphasized when two companies were formed for the sole reason of buying such information and marketing it.

THE TARGET

The use of computers has also brought added concentration on the individual buyer—the target, the man with money to spend. Market researchers want to know his tastes, habits, locations, reactions, etc.

The merchant families of Fugger and Rothschild, through their informal trading of marketing information, carried one of the few candles to light the darkness of marketing prior to 1920. But, it wasn't until the Twentieth Century that marketing started to catch up with the industrial revolution.

In 1879 N. W. Ayer & Son conducted a grain production survey to uncover markets for agricultural machinery. Harlow Gale at the University of Minnesota researched ad-

vertising psychology at the close of the 18th Century. From these slender beginnings an army was spawned — over 10,000 marketing professionals, and 30,000 additional professionals, field and clerical people in marketing research alone.

An airline's marketing vice-president recently referred to the "insatiable demand" for marketing information, the "product" of market research. Market research is becoming so thorough that an automobile marketing man recently joked convincingly that he knew the color of the socks the potential buyer was wearing.

For Seagrams CUC analysts worked on a system that segmented the distiller's customers and prospects by whiskey brand, market location, age, sex, etc. When completed, the system gave Seagrams the ability to tabulate, edit, update information, and generate comprehensive reports.

For years CUC professionals have been working alongside marketing managers on a wide variety of studies and applications designed to help move U. S. products and services to the consumer. Just recently CUC finished testing its new **Qu**estionnaire **I**nterpretive **P**rogram (QUIP) reprogrammed to run on its IBM/360 Model 40. For the past five years QUIP has been widely accepted by market researchers, advertising agencies and corporate marketing managers as one of the most efficient and inexpensive means of processing survey questionnaires.

THE CRYSTAL BALL

Mathematical model building and man's ability to simulate actual situations on computers have always been indispensable tools to the military. Big business soon followed and now, in an effort to provide the competitive edge vital to survival in marketing's competitive areas, more and more marketing firms are turning in mass to the computer to take advantage of its "crystal ball" concept.

All the top agencies already have simulation models and according to many of their internal EDP executives, the models are getting closer and closer to reality. Many of the new techniques are attempting to simulate test markets.

Large packaged goods companies such as Procter & Gamble, General Foods, General Mills, and Libby McNeill & Libby use computers for answers to such practical questions as: What would the effect of a price change be? How would consumers react to a particular promotion? What is the competition likely to do?

General Electric has a division that sells almost exclusively on a bid basis. The obvious and critical question asked by the marketing man is: What is the competition likely to bid? The computer's answers reportedly are amazingly accurate.

Chrysler Corp., for example, put this question to its market analysts: What will the market for heavy trucks look like in 1970? About one month later — after evaluating a mountain of data covering the relationship of truck sales by weight class to a variety of variables like population, gross national product, industrial production, personal income, etc. — the answer came back. The analysts had worked out a mathematical model—a simulation—of truck sales in 1970.

MEDIA

Models are also being used in testing consumer reactions to packaging and new product concepts, price changes, competitive products, and advertising.

The computer has affected advertising in many ways. The advertising industry has always hinged its philosophy on shifts in our social framework and economy. Things like the media proliferation have forced advertising to dig into new techniques for capturing the consumer's attention. They again must have fast, accurate information on: who he is, where he is and how to turn him on.

In order to schedule their leisure time, audiences are becoming very sophisticated in their choice of media. The working and professional man must draw a line and expose himself only to what really interests him.

Dr. Raymond A. Bauer of the Harvard Graduate School of Business Administration puts it this way: "The public must be more and more selective in what it attends in order to preserve its wits and get on with the job of life. The proper lesson to be learned is that one must put greater effort on identifying and locating one's prospect audience and concentrate more on selecting channels and messages that will be effective with that audience rather than winning an over-all popularity contest."

Once accurate data is gathered about such things as media cost, market, exposure and qualitative value, computers are used to select various combinations of media with heavy emphasis on demographic data. The computer's capability in this area is very detailed. For instance, given accurate data the computer might recommend an optimal ad campaign combining TV and local newspapers. It can also recommend exposure, timing, and ad frequency. With this type of information a media buyer can choose an ad plan which he feels will reach his market and, at the same time, predict cost to parallel his budget.

For example Thomas A. Wright, Leo Burnett Company vice president in charge of media and integrated data processing, says that Burnett uses its IBM 360 computer system in a number of marketing areas by programming 25 per cent of its daily computer time to such things as profile matching, BRI special procedure — media exposure of users, sales analysis by geographical region or district, media dollar allocations, demographics by media coverage area, commercial schedule optimization, sales forecast by branch, district and territory, advertising expenditure analysis and

profit and sales potential index.

According to Mr. Wright, "This procedure provides the media man with a media selection aid heretofore unavailable."

One concept which communications experts claim is not "far out" will have a staggering affect on advertising. The idea is based on an experiment being conducted at NASA. An IBM 7090 computer wades through all the professional literature available and notifies 700 NASA and Air Force scientists of the latest articles of interest to them. The system works from key words taken from technical abstracts and reader profile information. Based on this experiment, it doesn't seem too far-fetched to predict that in the future a computer system working from reader profile cards could break down media information according to the vocation, hobby or other interest of any reader. The reader would only be exposed to the material he is interested in and not be subjected to wading through non-essential material and advertising.

"OCCUPANT" APARTMENT 1B

Direct mail has always been a stable stand-by of advertising men. But there was always one problem. It lacked credibility. It's hard for anyone to get excited over an envelope addressed to "Occupant" or a letter salutation reading "Dear Friend."

The consumer has become so inundated with similar junk mail that in many cases he has set up a barrier in an effort to protect his privacy. The problem is even more acute among businessmen who could spend most of the morning blinking through letters and brochures punched out and mailed to literally hundreds of thousands — names bought from magazine subscription lists and motor vehicle registration lists. So usually the businessman directs his secretary to discard letters not personally directed to him.

Man's ingenuity in using the computer seems to have come up with a solution here too. CUC has recently started a Computer Letter Service. Under this system, the computer prints out letters on the client's letterhead, addressed to the recipient, using his name in the salutation.

In addition, the recipient's name is repeated in the body of the letter, along with any personal data that may be pertinent. As the letters are trimmed from printout sheets, the signature is printed on each letter. The signature is printed with actual ink and resembles the original in every detail. The entire operation takes about four seconds per letter and costs as little as five cents for each. On the system's maiden run, a letter and questionnaire to an international magazine's subscription list, subscriber response has been well ahead of what is usually expected from bulk mailings.

THE FUTURE

What the future holds for the computer and marketing is exciting and challenging. The marketing function is essentially an exercise in information and communications. And spawned by computer systems, we are now in a communications-information revolution — a revolution that is going to drastically affect marketing ideas and approaches and our total social structure.

The basic change that this information revolution is going to bring about is: We are going to have at our fingertips more vital information than ever before in man's history. What follows is that this information is going to be available to more people than ever in the past and on a real-time basis. This information's accessibility is vital to marketing practices. The marketplace is no longer a section or percentage of our population; it's the world and a world audience. Communications satellites, made possible in part through computer systems, will be largely responsible for future advancement.

Communications experts say that we can now get in touch with two-thirds of the globe through communication satellites. Think of what this means to marketing people, and the programs that will have to be implemented to handle the situation.

Marketing executives will depend on marketing information systems that will be capable of displaying information on a visual device upon request. Controlled consoles then will feed vital decisions into a computer for simulation purposes. Through sophisticated simulation techniques marketing men will be able to test campaigns, sales programs and new products under whatever conditions and pressures they choose.

These are not far-fetched plans for the future. They are realities.

For one of the Country's leading financial institutions CUC has already conducted pilot studies, designed, and implemented various approaches to create a computerized marketing information system. The system includes demographic analyses of population and income of a large metropolitan area. Implementation of the system will include the design of a special command and control language for an on-line, real-time system. The marketing men who wish to survive in the technologically oriented Twentieth Century must face the facts—information is replacing intuition.

Richard Ketover is manager of CUC's Marketing Services. In this position, he is responsible for CUC's proprietary program QUIP, **QU**estionnaire **I**nterpretive **P**rogram and the newly organized Computer Letter Service, both mentioned in the above article.

Mr. Ketover has a Bachelor of Science and a Master of Science in Industrial Engineering from N. Y. U. He joined CUC in 1959.