THE IMPACT OF AUTOMATED USES OF GEODEMOGRAPHY

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Since 1967 CERR has helped more than four hundred colleges and universities nationwide achieve their recruitment and retention goals.

In 1986, CERR helped develop the application of geodemographic market research for enrollment management. CERR’s clients have used it to focus recruitment efforts, find more students, plan travel, manage financial aid, and advertise more effectively.

CERR’s primary activities today remain enrollment management consulting and geodemographic market research. The firm is also active in developing Internet-related enrollment management activities.

ABSTRACT:

Geodemography and the Internet are two innovative and powerful methods for recruiting students unconventionally and cost-effectively. The Web, through homepages, offers colleges and universities new and exciting ways to recruit students more cost-effectively. Geodemography provides the means of analyzing and segmenting an institution’s market base and streamlining recruitment activities for greater impact. To maximize effectiveness, institutions must develop ways to blend these electronic techniques with traditional recruitment activities. This session will highlight how institutions may use the Web and geodemography for recruitment, offering practical suggestions for using these technologies to maximum advantage.

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I. INTRODUCTION.

Those already experiencing the impact of the Internet and the demands for computer usage in recruitment understand the consequences of melding the two seemingly disparate technologies: geodemography and the Internet. For them as well as those not yet initiated, the following joint presentation will, we hope, be both
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Informative and intriguing. Besides examining techniques of student recruitment through the use of geodemography, we will also examine ways in which the use of the World Wide Web can effectively control the demands on correspondence control programs, reporting requirements, and statistical research needs.

II. THE ROLE OF GEODEMOGRAPHY

Geodemography is the classifying of neighborhoods according to demographic and lifestyle data. This analysis is done at the block group level comprising 200 to 300 households. CERR uses a geodemographic software system called PRIZM, created by Claritas Inc. in 1983, [there are other systems as will be explained later] which segments each neighborhood in the United States into one of sixty-two unique types called "clusters."

These clusters, each descriptively nicknamed, were developed with demographic and lifestyle information from 1,600 consumer and government sources including the U.S. Census, Simmons Market Research Bureau, Mediamark Research, Nielsen, and R.L. Polk.

PRIZM assigns each block group or zip code in the US to one of the sixty-two clusters, using several categories of demographic variables collected in the U.S. Census:

1) Social rank (including education and income levels)
2) Household composition
3) Ethnicity
4) Mobility
5) Urbanization
6) Housing

These factors, combined with geographic and consumer behavioral data, form the basis of the PRIZM system. PRIZM works on the premise that "birds of a feather flock together." That is, families generally choose to live among neighbors with similar characteristics. Studies show, on the other hand, that married couples living in suburban areas are different from married couples living in small towns or urban areas; "different from" refers not only to basic demographic characteristics but also to lifestyles and purchasing practices. Segmentation systems like PRIZM allow us to capitalize on these distinctions.

Clients (in our case educational institutions) provide the researcher with addresses and zip codes of inquiries, applicants, and enrolled students. The data is imported into a licensed software system and "profiles" each student population to identify clusters with the most potential for the client. Next, these clusters are arranged into target groups of three or more clusters and ranked them according to hundreds of variables—demographic, lifestyle, media, product, magazine, and financial.
The third step in the research process is to conduct a series of “market scans” identifying geographic areas where the target groups live in highest concentrations. These scans can be done at the zip code, county, and metropolitan statistical area (MSA). Market scans highlight areas with high market potential. Finally, recruitment and marketing recommendations intended to help recruit students cost-effectively can be made from the research.

When these factors are combined with geographic, lifestyle, and purchase behavior, as they have been done in the Claritas PRIZM system, discrete neighborhood types can be defined by geographic boundaries. Using this data, a database manager can project maps, create charts, make graphs, and print out seemingly endless data by zip codes and other mapping criteria.

To do an analysis, any data element that can be linked to a block group or zip code can be analyzed. In academic institutions, enrollment, alumni, and donor databases are the most frequent targets of this research.

The purpose of geodemographic research, whether for a commercial or nonprofit enterprise is to answer four questions:

Who is our market?
What are they like?
Where are they located?
How do we best reach them?

The last question is where the Internet becomes involved.

III. RECRUITING THROUGH THE INTERNET

Many students being recruited conventionally must feel as if they are caught in a sort of web of promotional literature, phone calls, applications, and campus visits. This perception can scare them off. While recruiting through the World Wide Web can simplify the process for both colleges and students, it also has the possibility, if mismanaged by the institution, of intimidating students even more than the conventional process. The volume, as well as the intensive invasion of privacy the Internet offers, may prove counterproductive to both students and the institutions.

Given the intense competition in the marketplace, more institutions are exploring the "electronic frontier" for better, more cost-effective ways to recruit students. Lest this new Internet resource become a tangle of Websites where no-telling-what spiders lurk, we as professionals must learn to use it wisely. Our hope is that this session will point us in some good directions. The use of geodemographic research as a "filtering" process for directing electronic responses to prospects offers a possible solution to both volume and privacy concerns.

IV. SOME ADMISSIONS HISTORY

But first, let's take a quick tour through admissions history to see how we got where we are in this electronic age and why MIS is so important to today's enrollment model.

Back in the Neanderthal period, students were recruited door-to-door by many institutions. This intensive, face to face recruiting removed the need for much data processing. The paper work was done "onsite." Occasional follow-up letters were needed, but follow-up was not programmed.
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In the Prehistorical period, this door-to-door selling became more sophisticated. Well-known and respected colleges hired people to recruit "on commission."

One advantage this system offered was that the institution dealt with applicants only and, sometimes, only those students already accepted in the field by the college representative. Very little need for automation here.

Moving into Post-Industrial history—when some of you were objects of yet another "new methodology"—direct mail evolved as a more expedient way to get the salesperson to more doors, over a larger area, more quickly, and less expensively. After a while the College Board began to sell names of test takers. The era of "mass marketing" for colleges had begun. Computers suddenly were in the forefront of this effort—this period, for those of you who remember, coincided with the IBM punch card system. Every "prospect" was to be entered in the database and something mailed to them. It did not take long before admissions staff people and consultants like me saw the option of programming the "mainframe" to send "batch" follow-ups to these prospects, either on a planned delay cycle or upon request.

This era of mass marketing picked up steam with the availability of the personal computer. Now it was possible to diversify this mass marketing to the offices responsible and get their tens of thousands of names out of the institutional database so real work could be done. Thank goodness for this development, or many baby boomers would never have gotten into college!

In the Post-Hippie period, a group of marketers hit the college scene with something called, curiously enough, "telemarketing." Telemarketing required even more extensive database management, for reminders of both when to call and what was said in the last call. (Even the uninitiated can tell by now that the database requirements were multiplying rapidly.)

Not too long ago, the Age of Marketing began to yield to the Age of Contemporary Marketing. Precision or target marketing was ushered in with the development of geodemographic research by Claritas Inc. CERR worked with Claritas in the mid-80s to apply geodemographics to college admissions.

V. SOME BACKGROUND ON THE INTERNET

Alas, just as we all thought we understood how to market our institutions with sophisticated tools like geodemography, an upstart appeared on the scene that could simultaneously take us back to the beginning of recruitment history and launch us into completely uncharted space.

Yes, the Internet reared its head and said "Boo!" Some colleges have yet to recover from the shock, others are madly infatuated with this new "play toy," and a few are beginning to use it effectively.

No, this is not going to be a history of the Internet. Fascinating (or frightening) as that may be to some, our time is limited. However, I do want to point out some recent trends—within the last five years—that we must be aware of.

According to recent research:

• 31% of the homes in the U.S. have PCs (approximately 30,214,612 households).
• One-half of these have modems (approximately 15,107,306).
• 25% of all college-bound students have a home computer.
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- 48% of the homes with incomes of $50,000 and above have a PC (approximately 15,165,775 homes).
- 7% of homes with less than $25,000 income have PCs (1,054,365).

Further, note the following facts about the typical U.S. Internet user:

- Average age: 33
- Average household income: $59,000
- Usage: 80% access the Web daily
- Users who are female: 32%

Internet users in general:

- 1981: 378,000
- 1992: 727,000
- 1993: 1.5 million
- 1994: 12.3 million
- 1995: 30 million
- 1996: 70 million
- 1997: 150 million (estimated)

(Whenever I quote statistics on the Internet, I think of Jimmy the Greek trying to explain the "point spread" to Mother Teresa.)

About four thousand e-mail messages are sent per second, and Web sites are growing at an estimated rate of 1,200 per week. The service that registers site names or Universal Resource Locators (URLs) now charges $100 to register for two years and $50.00 each year after that.

Shipments of modems in North America: (Source: Dataquest)

- 1994: 12.3 million
- 1995: 19.0 million
- 1996: 25.4 million
- 1997: 35.4 million projected
- 1998: 45.2 million projected
- 1999: 50.5 million projected
- 2000: 55.8 million projected

Now some facts about college admissions and the Internet:

- More than 40% of colleges use the Internet to help them recruit students. Colleges' home pages are increasingly more complex and well-organized.
- Although the number is growing, very few colleges have internal "search engines" or maintain interactive sites for downloading or submitting documents or sending messages.
- Ninety-eight percent of four-year public and private colleges had access to the Internet in 1994.
- Currently 95% of all private colleges have access to the Internet.
- Of all two-year colleges, 75% now have Internet access.
- In February 1995, 465 colleges and universities worldwide had Websites.
- In July 1995, 1,372 colleges and universities worldwide had Web sites. By November 1995, 1,900 colleges and universities worldwide had Websites.
- For several months last year, 300+ colleges came on-line in the U.S. alone each month.

Given these statistics, anyone in academic marketing who thinks the Internet, e-mail, and the Web have little or no place in the marketing mix today are lagging behind the growing pack. They may have a hard time catching up.

VI. WHAT ARE COLLEGES AND UNIVERSITIES DOING WITH THIS TECHNOLOGY?
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Since I am the most familiar with enrollment databases, I’ll speak about them. Colleges analyze inquiry, applicant, financial aid, enrolled, retained, and graduated pools of students. They also look at them from a variety of other factors: majors, residential, transfer, student activity, and grade point averages. A very frequent use of this research is to locate recruitment areas where students are likely to be able to pay more of the cost factors. Colleges also use this data to achieve diversity patterns, or simply to find new territories.

"What are colleges and universities doing with Internet technology?" The general answer is "just about everything." A bit more specific answer is "anything that can be done by telephone," and the most specific is "everything a modem can carry from one computer to another."

Let’s look at the most specific answer. Data transfer is the basis for any transaction, whether conversational or contractual. Admit it, recruitment and admission at their most basic levels are communication of data--data about the institution, its history, offerings, requirements, costs, benefits, programs of study, and any other information of interest to students and parents. Data about the student includes demographics, academics, finances, and their relationship to the institution.

Some simple equations:

- Institutional data + student data = transaction
- Computerized institutional data + computerized student data = faster transaction
- Institutional computer + modem + telephone line + modem + student computer = fastest transaction

Ah! But you are thinking, “Where's the visual impact of publications?” This is when the Web steps in and says, "Coach, send me in!" The Web offers an increasingly sophisticated way to transmit color still photographs, charts, maps, graphs, and forms to fill out and file, not to mention video clips and real-time movies and audio tapes. So include in your definition of "data" all the visual and audio options you can imagine.

I see the day, not far off, when college applicants will send through the Internet everything necessary to support their applications--personal photographs, footage of sporting or musical events, spoken rather than written essays--and when colleges will interview students online. Currently, students can complete via Internet any form a college supplies for admission, financial aid, registration, advising--you name it. This is also true for high school guidance counselors’ references, transcripts, and anything else the college requires. And obviously the data flow can go from institutions to individuals as well.

VII. SITUATIONS YOU MAY FACE WHEN COMBINING GEODEMOGRAPHY WITH THE INTERNET

As you start to use these suggestions for recruiting through the Internet, you may encounter the following concerns. (Anything new brings on questions.)

The first concern institutions deal with, when it comes to opening a Web site to the whole wide world, is the matter of security. Probably the only secure system is one in which the server for the Web is separate from the central computer operations. This is not a major expense in view of what the average college spends on computers--we're talking $20,000 to $35,000.

The second concern is the problem of having a mainframe connect with what is essentially a personal or desktop computer application. This is the equivalent of learning, not a new environment, but an entire new culture.
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or industry. So be patient with your admission personnel and offer to do as much in your shop as you can. If all you have to do is write "front-end programming," they will get their Web site more quickly. With all the homepage aids out there now, they can either do it themselves or get a 13-year old to do it for you.

Then there are questions about quality control. From the admissions perspective, this probably means that data entered are correct, there are no duplicate records, and the right people get the right information or follow-up. To the data center it means, at least in part, that there is a centralized control point for all data, the data elements are consistent or compatible with all applications they have to service, and no self-entered data will compromise the data in files of other offices. (Remember, the only thing more fragile than database integrity is academic integrity.)

Now for the concern about "personalization." I begin with a caution: What seems personalized to you may not seem personal to prospects. Consider that 76% of teenagers have a credit card in their names. Simply speaking, this means that the whole world is at their finger tips, so "personal" becomes "getting what I want the way I want it when I want it (NOW)."

However, you can personalize your computerized follow-up and services by using geodemographic research to segment prospects into many different types of follow-up, each geared to the demographics of the reader. There will always be the concern, "Are we missing good prospects?" The answer is, "Yes." However, more good prospects are served better this way than in the shotgun approach of sending the same things to every prospect all the time everywhere.

A final but emerging concern is dealing with the potential volume of response to your home page. Virginia Tech receives an average of 6,000 new prospects a week through the Web. Small potatoes compared with the U.S. Air Force Academy which gets an average of 143,000 hits a day!

Some institutions force Internet prospects back into traditional methods of getting information: conventional mail, phone, or fax. Others vary the contact options by directing e-mail requests back to the prospects. More and more colleges and universities are beginning to open the process with downloadable or interactive information request cards and innovative applications, and allowing prospects to be very specific about what they want to happen next.

VIII. NOW FOR SOME FUN STUFF

There are all kinds of Web sites out there that add to the attraction and fun of using the Web. For example:

- Dilbert can be reached at <http://www.unitedmedia.com> or by e-mailing Scott Adams@AOL.com.
- MTV <http://www.mtv.com> has a really fascinating page and great insight into what kids are watching now. Can your Web site measure up?
- You'll love the Froggy page <http://www.cs.Yale.edu/homes/sjl/froggy.html>. My favorite quotation: "On the Internet, no one knows you are a frog."
- Send your friends a greeting card through The Electric Postcard Cardrack <http://www.media.mit.edu/Postcard/cardrack.html>.

IX. USING A GEOGRAPHIC INFORMATION SYSTEM (GIS) TO IDENTIFY POTENTIAL MARKETS: EQUIPMENT AND STRATEGY
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It is no longer possible to process the data necessary to make meaningful decisions using only traditional database managers and spreadsheets. At the very least, you need a stand-alone Geographic Information System (GIS) capable of analyzing and displaying basic data and preferably a GIS thoroughly integrated with the geodemographic package doing the market segmentation. The basic strategy you need is to think of everything you do as a research project; ideally, you can employ some of your faculty with geography (or other social science or earth science) background to assist you. Let’s devote a few minutes to a discussion of both the equipment and the strategy.

Equipment

The GIS we are demonstrating today is the Proximity system by Decisionmark, which lets you integrate your own data into the PRIZM segmentation scheme used by CERR and many others for college enrollment management. The data you are seeing here was generated by CERR on the COMPASS system they lease from Claritas for market segmentation. It is the system used at Ohio State and being presented as a companion presentation in this session. You may get such data either from consultants such as CERR or directly from Claritas. Two other companies who offer similar segmentation data of high quality are Equifax and CACI.

The advantages of the Proximity system are that it is available for $350 and contains abundant national and regional data for five-digit ZIP code, county, and larger units of geography for the entire U.S. The more detailed block group data that you will need for your principal recruiting areas will need to be purchased, with the cost for most colleges ranging from $500 to $5,000. Updates can be made every second or third year to save cost. A less expensive version can be built using BusinessMap by ESRI ($100) and getting data primarily from the Internet. More expensive versions can be built by using either MapInfo or ArcView 3 as the GIS engine. Much of the work at Ohio State is done on full-blown ArcInfo, which is prohibitive for most colleges, both in terms of cost and personnel.

A more expensive option is to have your own COMPASS system which integrates market segmentation capabilities with MapInfo. Such a system has been made available at academic discounts for $10,000 a year (about a fourth of the commercial cost) since 1995. Recent changes in the management of that Claritas leaves the cost figure somewhat unsure, however, and it has been questioned within Claritas if colleges should be permitted to use academic packages to market their own programs. As of this writing, though, it is still an available and very attractive option. The main drawback is that the system must be updated annually or lost. Similar academic discounts were not available at this writing (November, 1996) from Equifax or CACI.

Strategy

Whichever system you install, you will need to become a marketing researcher. You have probably been used to deciding what to send out and to whom, and then sending everything of the same type at the same time. The current technology makes it very much worth your while to select three to seven different sets of materials, one to satisfy each of your major “target groups,” and two or three versions of the materials being sent to each group.

We then suggest that you send out perhaps ten percent of the materials and build in an effective way to monitor the results. If you have seven target groups with three versions of each package, you have twenty-one different sets of materials going out. You then pick out the most effective version for each of the seven target groups and send that version to, say, thirty percent of the remaining uncontacted potential students. Discard whichever version did poorest in a group, unless it and the middle version were almost identical in impact, in which case send both to another ten percent of the uncontacted potential students and carefully analyze the results. Using the knowledge you gained from your contacts so far, devise a strategy for contacting the balance of potential students. The second batch of responses should be significantly higher than the first.
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X. PREPARING FOR GEOFEMOGRAPHIC RESEARCH IN RECRUITMENT

At Miami University, we began using geodemographic research in a deliberate way, choosing to implement the research in ways that would meet our immediate needs. We were able to take this approach because the firm we used, CERR, provided us with a disk linking all our target groups to a nationwide ZIP code base. Using the following outline, I will describe the steps we took, some of the concerns we faced, and how we worked as a team involving the admission office and the computer center.

1. Data Diskette
   a. Format of Diskette - explanation of how the data on the diskette is formatted and the best way to import that data into the PC package that is being used to do the analysis
   b. Data Fields - the data that is supplied by CERR (or other consulting companies for geodemographic marketing) generally contains the following data elements. I will explain what each element means
      i. Zip code
      ii. Target Group
   c. Other Zip codes - these are the zip codes that will not pertain to a specific target group. Analysis of these groups can be as important as the analysis of the target zip codes.

2. Supplemental Data
   a. Zip Code Descriptions Availability - explanation of how to get more information about the zip codes. By either purchasing or acquiring this information from the WWW you can get additional information about the zip code region - including but not limited to City, State, County, and Area Code. You can also combine this with other institutional data such as alumni chapters.
      i. WWW
      ii. Post Office (Purchased)
   b. Data available for each Zip Code
      i. City
      ii. State
      iii. County

3. How to store target grouping with prospects - there are numerous ways to store the data that is provided to you about geodemographic marketing. The best way is to have the data be incorporated directly into your prospective student system, but if this is not possible there are ways to store the information supplementally and still include it as part of your recruiting efforts
   a. Directly into current Prospect System
      i. Relational Database
      ii. On line update routine
   b. Supplemental Data (PC) - brief description of what is involved with importing the data into each of the following PC applications
      i. Databases
         (1) MS Access
         (2) Fox Pro
      ii. Spreadsheets
         (1) MS Excel
         (2) Lotus 1-2-3
         (3) Quattro Pro
      iii. Word Processor Macro
         (1) MS Word
         (2) WordPerfect
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4. Type of reports that can be run - this is a segment on what types of reports can be generated from a combination of geodemographic data and institutional data.
   a. Classify High schools - In this report you can target specific high schools for recruitment efforts based on the dominant geodemographic target group for the student population
   b. Identify Target areas - In this report you can target specific neighborhoods of a city based on the target group segments of the students
   c. Yield data for individual students - The results of this report will show how geodemographic marketing can be used to predict yield rates (percent of accepted students that actually enroll) thus enhancing enrollment projections

5. On-Line applications of data - this segment will concentrate on how the geodemographic marketing can be used to recruit individual students once they have been identified with the aforementioned reports.
   a. Customize letters
      i. Macros
      ii. Built in functionality of software
   b. Scale down search mailing

From the above, you can see the options for using the geodemographic research to enhance recruitment increase with cooperation between these two offices. Unfortunately, in a figurative sense, we succeed so well that I am now working with both the financial aid office and the computer center!

XI. CONCLUSION

The results of using geodemography for recruitment will be recruitment of a larger number of students with a lower drop-out rate. Overall recruiting cost per student should be no more than usual and, with time, should become less! This research posture, supported by effective equipment, will assure that seemingly instantaneous obsolescence will be minimized, and wonderful capabilities to customize the process to your college's needs will be maximized. What's more, you will have had a chance to play in one of our most fascinating synergistic sandboxes!

As for recruiting through the Internet--another fascinating sandbox or quicksand, depending on your point of view--like it or not, the Internet (or some incarnation of it) is here to stay. It will get larger, more pervasive, and as common as the telephone and cable TV--if AT&T and the cable companies have anything to say about it. Colleges and universities that are "just playing around" with the Internet now will have the jump on those that can't be bothered.

Students, parents, and guidance offices will increasingly turn to the Web for the information they seek, as will savvy admission officers for a way to accomplish enrollment functions quickly and inexpensively.

Now is the time for research offices, computer centers, and outreach personnel to work together to capture the high road. I can never remember which baseball player said this, but it applies to using the Web to catch students: "Don't look over your shoulder. They're gaining on you."

I end with this bit of foolishness:

Little Miss Muffet
Sat on her tuffet
And used her computer to play.

Along came a Spider
And sat down beside her
To show her a better way.
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Little Miss Muffet
Got off her tuffet
To jump on the info highway.

Now she, with the Spider
To coach and to guide her,
Works the Web to draw students her way.