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NEW DIMENSIONS OF PRICING AND RISK SELECTION FOR DIRECT-RESPONSE INSURANCE PRODUCTS

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Panelists: DANIEL C. SNYDER*
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Recorder: PATRICK BRYAN ACHEY

- Multiple dimensional set of assumptions relating response rates
- Expected claims
- Projected persistency
- Customer buying propensities

MR. JAY M. JAFFE: This presentation marks the first time that the Society and the Nontraditional Marketing Section have done a coordinated program with the Direct Mail Insurance Council (DMIC). The DMIC is part of the Direct Marketing Association in New York.

At the DMIC meeting, which was held in Chicago recently (and I encourage all of you who are interested in any form of direct marketing, or new areas of marketing, to track what the DMIC meeting is about and attend that meeting once a year or every other year), we decided that there was a topic that was just of interest to the two groups, the marketing people and the actuaries, and that is the interdependence between the marketing profession and the actuarial profession. To help discuss this topic, we have two distinguished panelists. Also, Pat Achey is our recorder.

Dan Snyder is senior vice president of National Liberty Corporation. He's in charge of its marketing database operations, target marketing, marketing segmentation, competitive intelligence, market research, and all testing. So he really gets involved with the new developments in the company's marketplace. The purpose of Dan's presentation is to set the stage for what Mike and I will be doing. Dan's role is as a marketer. This is how he looks at things, and is approaching markets for which we have the privilege of being in on the ground floor to hear about the new market for which he's going to challenge us to develop products and a marketing program.

I'm then going to talk about some of the actuarial thinking that I have gone through in my practice with receiving directives or requests from the marketing people about certain marketplaces and how this is going to impact what you as actuaries are doing in the future and the changes that should be occurring to your practices and the way you approach problems.

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The last person who will be speaking is Mike Wert. Mike is the CEO and cofounder of DiMark, which stands for direct marketing. DiMark is a marketing outsource company that's involved in the life and health insurance business. That's DiMark's main marketplace. It's a ten-year-old company, and its revenue stream in the last year is now more than $50 million plus on an annualized basis. So DiMark been very successful at what it does. It is a publicly traded company.

MR. DANIEL C. SNYDER: First of all, for those of you who don't know of National Liberty, we're based in Valley Forge, Pennsylvania. We are a full lines carrier: life, health, and property/casualty. We have annual revenues of about $600 million or so. Ninety-seven percent of our business is generated through the direct response channel. We acquired a company this past year with 400 or 500 agents, but it's a relatively small percentage of our overall business.

The thing that I wanted to talk about from a National Liberty perspective is that we, as a company, have really tried to transform National Liberty over the last several years from a company that had been very product based in the past, which I think has many implications in our actuarial area, to a company that is very market focused and at the center of that market focus is a data-driven strategy. We put our customers and prospects at the center of the strategy, and we surround that in the context of consumer information and a database environment and make actual use of that information, quite an investment in our statistical profiling and modeling resources.

What we're trying to do is transform our company from a mass marketer that had been very efficiency based or efficiency driven, to an intelligent marketing model in the front-end that maximizes its use of consumer information.

Starting with our consumer information strategy, we have, as an organization, made a substantial investment in the last couple of years in acquiring consumer information that feeds our database. To give you an example, we subscribe to three syndicated marketing research databases: Mediamark Insurance & Banking, Simmons Database, and Equifax Financial Forum. These are very large consumer panels that we maintain on the database, so as we actually develop descriptions of potential markets, we can map those descriptions back into the syndicated research databases and determine a lot in terms of what that market buys and how it might behave.

We also use the Axium Database out of Conway, Arkansas. It's actually the Infabase, and it's a consortium of consumer databases that have been brought together in one location. There is an intelligent logic that drives that database so that it acquires a data variable about a consumer from three or four different sources, that logic will pick the source that is the most accurate source for that particular variable. That allows us to do business from the data vendor point of view with one company as opposed to going through a whole series of companies. For instance, at that Axium Database you will find the full database there from R.L. Polk, Metromail, Donnelly, and a number of the key data providers across the country.

We also maximize our use of internal customer information along a continuum of variables. I do want to emphasize that in addition to what I've mentioned we maintain a considerable history of information about our customers (and prospects, for that matter), because we collect a lot of information about prospects when they inquire. We do a lot of television advertising, and when they call that 800 number, we collect a fair amount of information from them at that point of contact. We also subscribe to Microvision Clustering System, which is geodemographic clustering program. We use that in addition to all of the other data. We also have the full 1990 U.S. census loaded into our database so that we can relate that information back to any of our audiences whom we might be considering.

We also maintain a stratified sample of the U.S. population base because, as we discover things internally, we like to be able to project them or expand them to the U.S. population base at large. Because we are not an agency-based company one of the advantages of direct response, of course, is that it has extreme reach in terms of a marketing channel, and so we have to be aware of all 100 million households out there as we discover things about consumers in our research and testing.

Analysis also is an area in which we make a substantial investment. We do not believe that all people are created equal. We don't believe in one size fits all. So, we make a conscious effort to take large market opportunities and disaggregate those into reasonably homogeneous groups, and it adds clarity and thinking and focus to our market planning. In terms of our approach to that, we know that where you are in a life cycle is very critical in terms of how that relates to a person's needs. A young family starting out with children represents for us a very different set of potential financial services needs as opposed to someone preparing for retirement. We know that life cycle has a great deal to say, and we orient a lot of our marketing thinking in that direction.

We also make extensive use of syndicated research against target markets, and we use that to study product consumption patterns and media preference of potential markets. If we're really interested in a market, we would likely commission primary research into that market. But all of the syndicated research is available to all of our marketing areas, almost at a touch of a button. So, it's not expensive, and we license those and make extensive views just as we explore markets.

In terms of using consumer information, there are two very critical applications of consumer information, and they are really very different. There is the application of consumer information in a descriptive sense, and when we're using it in a descriptive sense, we're using it to understand who the market is, and what it looks like. We use that to foster ideas concerning products, creative development, and product positioning. An example might be automobile insurance. It sounds fairly generic, but as you're selling automobile insurance to a youthful driver, is very different than selling it to a grandfather. So, it's important to recognize the descriptive differences in those markets and roll that into your market planning.

The other key area is using information in a predictive sense, and in this sense we're actually applying the information in a mathematical sense to rank order the prospects we will use, usually some form of logistic regression to actually score a potential database and rank order that market segment from most likely to respond to least likely to respond. I use response as an example. Actually, the dependent variables that we're looking at are really more geared towards profitability rather than just response. So, there are a lot of things that factor into that.

The last thing on the analysis side is that I see our database as really is a learning repository. It's a place to store information. Theoretically you should become smarter as you go along, and of course, the database helps us to do that.

I don't want to get too technical, but it is critical to have the hardware and the software necessary to actually implement this type of strategy. We have all of our administrative systems, which have traditionally, by the way, been the primary feed of information to our actuaries at a product level. We have all of our administering systems that feed into an IBM relational database, a DB2 platform. But, that is very expensive and very difficult to access from a marketing analysis point of view. So, we download all of that data from the relational database onto a Sun 690 processor, which is a client server, and that is a dedicated box. All of my analysts are actually linked on a Local Area Network (LAN) to that particular box, and, they have 52 gigabytes of Direct Access Storage Device (DASD) hanging on that. So, they have a lot of storage, direct access to the data, and auxiliary storage on there as we expand.

What we're starting with is really a marketing system (Chart 1) and it establishes some parameter for a market (and we're going to give you a description of one of those). From that we would go into a sizing exercise to understand how many people out there (again, from a direct response point of view), are actually in that market. We are also interested only in markets that we can find. We would then go into descriptive profiling of that market. We would apply syndicated research that can tell us a lot of things early on in the process about that market that we've picked. From there, that would lead towards ideas around products. It could be a shelf product. It could be a new product.

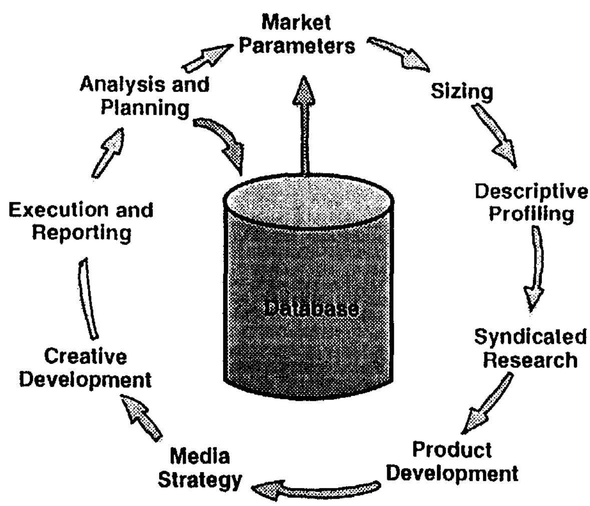
From there we would develop the media strategy. Once we had selected the medium, we would then develop the creative strategy that would be appropriate for the medium. Then, we go to an execution and reporting stage, subsequently analyze what happened in that marketing campaign, and pull that back into the database from a planning standpoint, which may (going back to the top of the circle) actually cause us to reengage. We might change the market parameters based upon our testing.

One point that I wanted to make about this circle, what has happened in recent years is that marketing is really changing in the sense that it's not just a group of people that used to be called marketers who are in a room. At least in our company, marketing is very much a team effort that requires a lot of support from the people who are in the database and market analysis area who work as partners. In our company our actuarial area actually reports to our chief financial officer. So, inside of our financial area we actually set up financial teams that are assigned to dedicated areas of marketing, and those teams actually work just as other support areas work on that overall team with the marketing. So, marketing really has transformed to a larger crew of people and a large set of skill sets that are necessary to make this type of approach work.

The example that we chose, and this was strictly for illustration sake, was a target market where the people age 25-35 had household incomes of $20,000-30,000. We said these people need to be married, they need to have at least one child, and just for point of interest we said we want to go after people who rent, as opposed to people who own homes. When we ran this through the database.

If you recall, I told you we had that stratified sample at 2% of U.S. households. When we ran the criteria against the database we came out with approximately 1.9 million households in the U.S. that can be identified based on available consumer information, that would meet that criteria. We then memorized the profile of that target market, went back in and found all of the people in the syndicated research databases who met that descriptive criteria, and then aggregated that into a look. We're going to look at three areas. We're going to look at the demographic profile, the psychographic profile, and the media preference.

CHART 1
Database-Supported Market Development



What you can see from Table 1 is that there is obviously a very high correlation, no surprise here, with male household, kids under six, kids six to eleven. It correlated very high to blue collar, high school graduate. It was average for some college and very low for college graduates. In this particular marketplace you are going to find a very high incidence of two wage earners. They will be employed full time. Interestingly enough, obviously living in a single dwelling was a low correlation because of the renting piece. But, we did see an average occurrence of people living in an apartment and a very high correlation of people living in mobile homes across the country who would fit that particular description. That may not have jumped out at you as you put that market description together, but that's the reality.

We also see that there is a somewhat high correlation with the Black and Hispanic markets for that target market, and there is a high incidence of alcohol use and smoking. So, when we pick these target markets we let the data speak. You don't have preconceived notions going into this thing.

TABLE 1
Demographic Profile
Correlation to U.S. Population

Data Variables	Very High	High	Avg	Low	Very Low
Male HH		■	■	■	■
Kids Under 6		■	■	■	■
Kids 6 - 11		■	■	■	■
Kids 12 - 14	■	■	■		■
Kids 15 - 17	■	■	■	■	
Blue Collar		■	■	■	■
Professional/Technical	■	■	■	■	
Administrative/Clerical	■	■		■	■
Some H.S.	■		■	■	■
H.S. Graduate		■	■	■	■
Some College	■	■		■	■
College Graduate	■	■	■	■	
Two or More Wage Earners		■	■	■	■
Employed Full Time		■	■	■	■
Gets Interest from Savings	■	■	■	■	
Gets Interest from CD	■	■	■	■	
Resides Single Family Dwelling	■	■	■		■
Resides Apartment	■	■		■	■
Resides Mobile Home		■	■	■	■
Has New Domestic Car	■	■	■	■	
Has Used Domestic Car		■	■	■	■
White	■	■		■	■
Black	■		■	■	■
Hispanic	■		■	■	■
Drinks Beer		■	■	■	■
Smokes		■	■	■	■

In terms of the media preferences for these folks (Table 2), clearly they have a very high correlation with Black Entertainment TV. The Country Music TV channel also correlates very highly. Just so you know, research breaks down media preferences into quintiles one through five. Quintile one means the people are avidly participating in that particular group, and a five rating would be least likely to participate in that. So, you can see that these folks are very high readers of magazines and extremely low readers of newspapers. They are high for radio. They're very high for radio to work. I didn't put it on the chart, but when we ran it, interestingly enough, radio during the day dropped off to very low. So, if you were going to pick radio as a means to advertise for this audience, you would probably invest your radio dollars in that driving-to-work period, which does make sense if you think about it, given the high rate of employment for this audience. They look at outdoor billboards quite a lot, and they don't watch a lot of daytime television.

These types of things are important for National Liberty because we make full use of all of our media opportunities. We do a lot of television advertising. Most of our new prospects are generated through television advertising. But, we also use print and radio and, of course, extensively use of direct mail.

In terms of the psychographic or consumer behavior associated with this market (Table 3), we found that this audience does buy products through the mail and telephone. The people correlated highly for that. They are economy-minded buyers. They are impulsive buyers. They tend to be fine with experimentation for new kinds of products. They believe advertising at its face value. You'll see, if you go into different target audiences, you will see some of these things change very dramatically. But, for this particular target audience, they find advertising very credible at face value. They tend to get most of their life insurance through work and through unions. They make heavy use of insurance through agents. They are not good savers. But, they do make very high correlation with things like Christmas Club accounts, and they make very high use of legal services.

So, these are some of the things that we can learn. There's a lot more you can learn from syndicated research. But, I wanted to just pick some things that came out. There are many hundreds of variables that come out of the computer as you push in a description of a target market, and you're going to get a different read based on the target markets that you put in. If we're interested in this market very seriously, we would also likely pursue some type of primary research into the market.

MR. JAFFE: Dan has given you a very modern, current-day outlook on how the marketing people are looking at their different markets and the type of research and thinking that goes on before. This is a theoretical market. That's one of the antitrust things that I have to tell you about. We are not here to 100% capture that particular market that Dan has described. It is only a sample market.

My presentation is titled "Martuarial Science, The New Methodology for Integrating Product Pricing and Risk Selection." I'm going to talk about three different areas. I am going to talk about the interdependence that exists today between marketing and actuarial science, in other words, marketing and the pricing of products. This has changed tremendously over the last several years and particularly the last few years.

TABLE 2
Media Preferences
Correlation to U.S. Population

Data Variables	Very High	High	Avg	Low	Very Low
Have Cable	■	■		■	■
Sports Network	■	■		■	■
Discovery	■	■	■		■
Christian TV	■	■	■	■	
Arts & Entertainment	■	■	■	■	
Black Entertainment TV		■	■	■	■
CNN	■	■	■		■
Country Music TV		■	■	■	■
C-SPAN	■	■	■		■
MTV	■	■		■	■
Family Channel	■		■	■	■
Nashville Network	■		■	■	■
Quintile 1 Magazines		■	■	■	■
Quintile 2 Newspapers	■	■	■	■	
Quintile Radio	■		■	■	■
Quintile 1 Radio to Work		■	■	■	■
Quintile 1 Prime Time TV		■	■	■	■
Quintile 1 Early/Late TV	■	■		■	■
Quintile 1 Daytime TV	■	■	■	■	
Outline 1 Outdoor Billboards		■	■	■	■

TABLE 3
Psychographic/Consumer Behavior
Correlation to U.S. Population

Data Variables	Very High	High	Avg	Low	Very Low
Buys Products mail/phone	■	□	■	■	■
Economy Minded Buyer	□	■	■	■	■
Cautious Spender	■	■	■	□	■
Impulsive Buyer	□	■	■	■	■
Experimental Buyer	■	□	■	■	■
Brand Loyal	■	■	■	□	■
Believes Advertising	□	■	■	■	■
Plans Ahead When Buying	■	■	■	□	■
Ecology Minded	■	■	■	■	□
Have Car Insurance	■	□	■	■	■
Have Dental Insurance	■	■	■	□	■
Have Disability Insurance	■	■	■	■	□
Life Insurance through work/union	□	■	■	■	■
Life Insurance through Agent	□	■	■	■	■
Member HMO	■	■	□	■	■
No Health Insurance	□	■	■	■	■
Has Educational Loan	□	■	■	■	■
Has Auto Loan	■	□	■	■	■
Has Checking Account	■	■	□	■	■
Has Savings Account	■	■	■	□	■
Has Christmas Club Account	□	■	■	■	■
Has Overdraft Protection	■	■	■	□	■
Has Safety Deposit Box	■	■	■	■	□
Used Legal Services	■	□	■	■	■
Has Bank Card	■	■	■	□	■
Has Any Credit Card	■	■	■	□	■

The actuary's role in this pricing process has changed, and that will be part of my presentation to you. Of course, I will be referring very regularly to Dan's market. I will keep coming back and forth between some of the principles that I'm going to talk about, and some of the ideas that I have and how they relate to Dan's market and if I were involved as an actuary as part of this product development team, I will tell you what I would be thinking about to respond to Dan's request to come up with products and ideas for this marketplace.

To begin, as I said before, pricing and risk selection are no longer independent events. Database marketing has definitely made these two functions interdependent. Database insurance marketing is causing us to go into new vistas today. In the past, direct marketing has provided what we will refer to as supplementary products. You've all seen them: accidental death, hospital indemnity, some of the others. But, database marketing is making our companies capable of becoming a distribution source for primary insurance products, and this is what I see in the future. In many markets, database insurance marketing may be the only distribution source that is available to some people, or it may be the better source that is available to reach those people.

As an actuary, I am concerned that our profession is not developing the new skills and the attitudes that are necessary to make the transition from what was a relatively unsophisticated business of direct mail marketing to what is now a sophisticated world of insurance database marketing. This is really night and day, the transformation that has gone on.

We, as actuaries, have progressed a long way in the pricing of products. The work that we have done has changed greatly. Some of us remember the beginnings of mainframe computers, which took up entire rooms, used vacuum tubes, broke down often, and were laborious to program. But, these behemoths began to enable us to consider other aspects of insurance product pricing, things other than simply completing the basic calculations that we needed to do to get the price of the product.

There are now personal computers that can do more work in a few seconds than the old computers could do in hours. It is very appropriate for the Nontraditional Marketing Section and me to talk about this because an actuary today using a mail order purchase PC has access to more data for insurance product pricing than we ever thought possible. Literally, in some cases, you can hold this data in the palm of your hand.

But, I wonder if this new capacity for information processing has changed the generic actuarial thinking about how insurance products should be priced. In short, while we are doing things faster, are we really doing it better? I think that's a question that we have to ask ourselves. Doing things the old way, doing things the way we maybe learned when we started may be a very nostalgic approach and a comfortable approach to product development, but it is, in my opinion, an unsafe strategy in a complex and rapidly changing environment such as database marketing.

The actuary's role and approach to the entire insurance pricing process must change if the actuary of the future, and the actuarial profession of the future, is to address the realities we now face in the late 20th century and going into the first part of the

21st century. It's my belief that actuaries, and Dan has expressed this thought, need to become partners with insurance marketers. Particularly, we must understand that insurance products cannot be priced on a stand-alone basis. In other words, actuaries need to develop a customer-driven, rather than a product-driven insurance pricing methodology. I wonder how far along we are on that path, and I'm here to help hasten the trend in this direction.

It is not going to be easy to change the actuarial organizational architecture of a company, but it's something that we need to do. I will give you an example of another industry and what it is doing to change the organizational architecture of its business. A very well known major company in this country today is Xerox, and it has dedicated itself to be a company that is customer-driven. It has taken the engineers at Xerox -- at Xerox the engineers are the equivalent of actuaries to the insurance business -- and brought them out of the closet, so to speak, and they are actually visiting customers. This is something that was unheard of in a traditional corporate architecture and certainly in Xerox until very, very recently. The theory behind this is to enable the engineers to meet with the customers to find out what the customers want and as a result, to be able to build more useful machines in less time.

Changing the architecture of the insurance business will not be easy. In the process, it is my fear that actuaries may become extinct if they are not careful to make this transition. It is very possible that out of the actuarial vacuum that will be created, there will now be born a new special profession to develop insurance products in the 21st century and you are here to find out about that. Just think how wonderful it would be to develop new insurance products with a professional that combines the skills of an actuary with the knowledge and talents of a marketer. There's even an obvious name for these new professionals. They will be called martuaries.

The perspective of a martuary is going to be much wider than that of either an actuary or a marketer. A martuary recognizes that we are now living in a world of technology. Technology in this world is a god, and in this world information is king. Communication in our modern world today is instantaneous. There is immediate access to immense amounts of data and information about prospective insurance purchasers, something that hasn't been available until recently. Incidently, rather than this information being proprietary, much of the technology and information that Dan described to you is available to any organization that is willing to pay the price in terms of hardware, software, data, and the investment of time to obtain such information. It's not a closed world.

On the other side of the coin, the consumers, those people whom we are trying to reach, now also have access to tremendous amounts of information about the products that we sell and the products that they want. In this sense, we have developed a level playing field where information is available to both sides of the market.

Now, how have companies reacted? Well, there are three ways that companies have reacted to this modern environment of more perfect information. How do they do it? They compete on the basis of price, price, and price. That's the typical reaction. If we talk about price, we can talk about price to the ultimate consumer. My premium could be a few cents lower than the other party's premium. If we talk about the market as being agents, my commission rate could be a little bit higher than the commission rate paid by another company. I think we have to look at what's happened to the insurance industry in the past couple of years. There have been some failures that in large part, in my opinion, seemed to be traceable to price-oriented marketing strategies that necessitated risky investment policies to support overextended interest rate commitments. That's how they competed on the basis of price.

Even martuaries may not be able to prevent foolish management decisions that lead a company down the wrong path. I think as we build a relationship with the marketers and become more involved, we can bring the skills that we possess to help the marketers and our companies understand how to price products and what the implications are.

Dan Snyder has presented us with his marketplace, and it is not at all unusual in my practice to have a marketer present a problem such as this to me. Just to repeat, it's a marketplace where the target is people who are 25-35 years of age. They have incomes between $20,000-30,000. They are married. They have one or more children, and they rent, rather than own, their homes. What's nice first (and what is going to happen with you as you become more involved in the process), you will find that you are brought into the theorization and the conceptualization at the early part of this process, and that's when you begin to become a martuary, not when you're brought in at the end, but when the marketers have enough confidence in you to bring you in the beginning.

I'm now going to talk to you about the differences between how a martuary and an actuary develop insurance products for Dan's target market, and the approach that the two different professionals might take. There are going to be three major differences between the two professionals. The first is, when we talk about the scope of product development, an actuary develops a single product, one product at one time. A martuary has a customer orientation, and (a phrase that you may or may not be familiar with and we can discuss later) a martuary is very concerned with customer lifetime value. This is a major difference: the single product perspective versus the customer orientation.

Now, product pricing assumptions are different between actuaries and martuaries. An actuary tends to look at one-dimensional pricing assumptions, and a martuary will tend to look at multidimensional pricing assumptions.

A third major difference in the outlook of the martuary and the actuary is, when it comes to product customization, the actuary tends at most to use minimal product customization and the concept of product customization. The martuary, on the other hand, recognizes the need to be approaching one customer at a time. We have almost reached the point where we can approach one customer at a time and develop an individual product for that customer. We know that much about our customers, and we have that much access to our customers.

Now, I will discuss each of these differences with you and how it will affect the product development process. In Dan's marketplace we know certain things about the people here. We know they have modest disposable income. That's one of the things that I observed very quickly and that leads me to my next conclusion, that the initial purchase made by these people may not be profitable, because they simply cannot afford enough premium to enable us to amortize our marketing costs. I also have observed that there are fewer marketplaces where one product can be sold to that marketplace on a profitable basis. So, we are going to have to consider here this problem that it will be a stream of products we develop and not a single product.

The solution to this thing is, as I said before for the martuary, to develop a customer orientation, the concept of lifetime customer value so that we can sell a stream of products (and price a stream of products) to that party, and this is something we are going to have to talk to the marketers about. Lifetime customer value is a common term that you will hear in marketing meetings. It's not very often used in actuarial meetings. The marketplace that Dan has described resembles the debit marketplace. Many of you are familiar with that. But, it's not the debit marketplace. It's roughly the same as that. But, we are trying to sell a product using direct marketing whereas the debit marketplace uses a commissioned salesman and the acquisition cost in those two marketplaces are not the same. I think we can learn something from the debit marketplace. But, I would say to you these are not the same marketplace.

We're going to have to bank on multiple purchases in order to make this marketplace work, and as actuaries we are now going to get involved in something else, the scope of our activities. We are going to have to start to recognize customer buying habits, attitudes, and propensities. We will not only have to know about the proper mortality, lapse rate and expense assumptions, investment income assumptions, and so on for a single product, but also we are going to have to understand how people buy insurance and how that effects the pricing of products. In other words, that means customer buying habits, attitudes and buying propensities. That is something a martuary would look at. An actuary may not look at that.

Regarding multidimensional pricing assumptions, typically in the past, I know I have looked at assumptions on a best-guess basis. I will ask myself what if questions. I certainly am involved in the assumptions such as claims, expenses, and so on. These are very important. However, as a martuary rather than an actuary, I would be approaching these on a multidimensional rather than a single-dimensional basis. I need to also be prepared to present the results to the marketers in a more flexible manner than I do presently. They are asking a lot more question as we go into the future, and I need to be prepared to answer those questions.

We are going to have to be more precise in our assumptions in the sense that we are looking at smaller and smaller markets. We are looking now not at a large market, but we are looking at market segments. We have to be prepared to look at various market segments and the differences and assumptions between those marketplaces. For example, if I have a marketplace that is likely to have a higher response rate to an offer I also need to know if it will have a higher propensity to incur a claim, whether that marketplace will have better or worse persistency, whether it will tend to be future buyers. I need to have all of these questions answered to construct lifetime customer value models. I need to develop the needs/benefits matrices of these people, so that we can go forward and develop customer lifetime values. I need to recognize the buying habits as part of these lifetime value models. That's not an easy thing to develop, but I need to get into that mode.

Why are martuarial-type assumptions, multidimensional assumptions, not used? There are three quick reasons. First of all, there is tradition. It hasn't been done, therefore we don't need to do it. That's wrong, we do need to do it. Second, there is a lack of software. That's because we haven't developed the software and it's not an easy thing to do to develop lifetime pricing. But, we need to begin to do that. Third and very important, marketing people do not challenge the actuaries often enough. We have to expect more challenges from our marketing peers as we go forward. They are going to ask us more difficult questions. We need to change the scope of how we approach the products to a multidimensional approach, and be part of the 21st century of marketing.

Finally, as far as product customization, we are long past the times that one size fits all. We're not in the sock business. You simply can't go into the store and find one pair of socks that will fit everybody. That doesn't work. We have the ability to get individual customer data, and the marketers are going to do that. You can talk to either of these two gentlemen, and they will describe to you how refined their data can get. Modern technology makes it eminently possible to customize products to meet the needs of smaller and smaller markets. You all have to simply go down to your computer rooms and see what a laser printer can do and how sophisticated you can get with policies and offers. It's a different world out there.

On the other hand, I take a look at Dan's market, and there is always an exception that proves the rule. I wonder if, in Dan's marketplace, we will be able to customize products because the policy size that will be sold and the offers that these people want will be fairly limited. So, even though I've said to you we need to get into what customers want as far as their needs being met, on the other hand, there are exceptions to this and the economics in Dan's marketplace may drive us to more standard products in the beginning (but not in the end). Later, as we know more and more about our customers, we can then make offers that are customized to their various needs.

Now, Dan definitely has given us a difficult market, and it's something that the three of us on the panel have pondered from time to time. It's a debit market, but it's not debit. We know that. It's a marketplace where we're only going to get a limited amount of premium from the people. So, I had thought, what am I going to do about this in response to the marketing person, and I do have to advise that person about lifetime value as a martuary. I have to work with the marketers to eventually customize products, but not in the beginning. We need to work to identify the buyers and their buying habits and propensities and as I said before, we just can't customize for this market. So, we have some of the things here that we would normally do, three or four of which we can do and one maybe which we can't.

I would recommend as a martuary possibilities for Dan's market. I would throw these out on the table. We know premium is an issue. So, we would talk about dollar a week offers. These are very popular and something people can manage. An accidental death program is a marketplace that has premiums of the right neighborhood that we need to be in and also has face amounts that would be attractive.

There will be types of dependent medical insurance that we think these people would want to have and they don't have access to that now. There might be juvenile term life, because we think these people have a high degree of concern about their children's well-being, and finally, I would say there may be two-step offers involved in this process, rather than one-step offers.

To the actuaries I would make a comment here very quickly about two-step offers. When you price two-step offers, it is not the response rate that is the important variable. You have to get into the conversion rate, because in the two-step offer, it is the number that actually wind up paying and not just the number that wind up responding that you must track.

There are going to be geographic pockets in this marketplace that may make life easier. It's very possible we've identified a market that might be attached to metropolitan areas, and while it's nearly two million people, it may be in very concentrated units.

I know some of these ideas, when we come down to the end, don't look that much different from an actuarial or a martuarial perspective. But, believe me, the thought process that goes on behind this is very different between the martuarial aspects of it and the actuarial aspects of it. I'd like to illustrate this by a recent article which appeared in a magazine called *Direct Marketing*, and it illustrates what actuaries should be doing and what we're not doing when it comes to developing some of our assumptions. The title of the article was "Can You Predict When Your Customers Will Leave?" Now, as actuaries we're interested in the persistency of customers. But, how many of us have ever gotten down to the point where we're actually finding out when they will leave and then what we can do about it? We have a secondary role to play, and it's important that we gravitate towards that role.

Let's talk about some of the principles that martuarial science provides to us. This is getting towards the end of my remarks, and I think this will help you put everything together. First of all, we are talking about a world in which we are developing processes, not products. I don't think there are more than maybe one of us at this whole meeting who will ever develop a truly new product. The rest of us only are going to develop variations of that product, and what the martuary realizes is going to be successful is the entire marketing process, not simply an individual product.

Second, we have to begin as martuaries, rather than to hoard information, to know how to share knowledge. I repeat, rather than hoarding information we have to learn how to share knowledge.

Next, we must adopt a customer or lifetime value orientation. Without this, many of the products that are sold today will not work. It's the only way they can be priced. It's the way they must be marketed. All you have to do is look at some of your competition outside of the insurance industry, and you realize that the competition is interested in the repeat sale, not the one time buyer.

We have to adopt multidimensional pricing assumptions because things are interre lated. As I just illustrated about persistency, we have to learn about how people persist, when they persist, and finally, the martuary must be prepared to customize products down to the individual customer level.

Now, I am going to announce to you a chance to become a charter member of the new American Society of Martuaries. At the moment, there is only one requirement for membership. It is a take-home exam, which incidently you will be allowed to create and then give yourself. The one topic for the exam is to explain how to integrate product pricing and risk selection at your company using the principals of martuarial science that you have learned. Nobody will fail this exam. Isn't that nice? I look forward to reading your papers when you get them done.

I'd like to leave you with this thought. You've all seen these buttons at the meeting, Ask An Actuary. There are not going to be many actuaries to ask if we're not careful. I say to you look to your right and look to your left, and one of you is not going to have a job in the near future if we are not careful to change the way we approach product pricing and the relationship with the marketers in our companies. I am very concerned about this. So, I urge you to go and speak to Walt Rugland and have him change this button in the future. Instead of Ask An Actuary, let's Ask A Martuary.

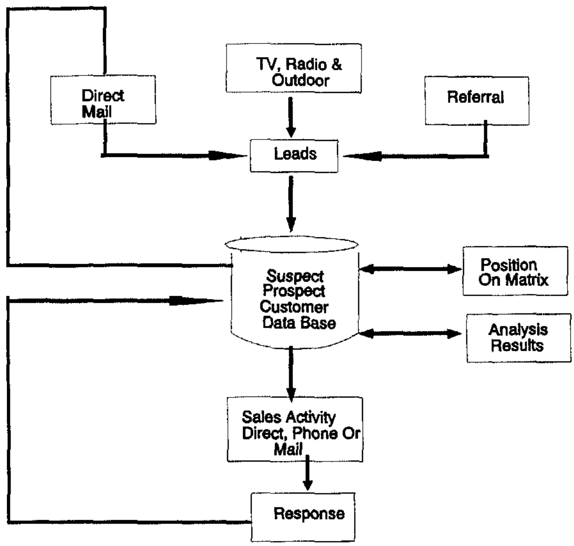
MR. MICHAEL WERT: I'm with a company called DiMark. For those of you who don't know DiMark, it is a marketing outsource company that is primarily focused in the health and life insurance industry. We count among our clients about 15 Blue Cross/Blue Shield organizations as well as many of the commercial insurers.

Dan has given us an excellent market definition with substantial information about our target customers in the aggregate. Some of the key issues that Dan described about the people in our market that I'm going to focus on are the fact that they are very likely not to have health insurance, and a related item, which is that they're very likely to be employed in the service sector and that they are very responsive to advertising, which makes them a very desirable target market for a marketing person.

Jay has given us an excellent pricing strategy, one that considers the lifetime value of a customer, and so, now it's up to me to sell some stuff to these folks. I think Jay indicated that a martuary was maybe a place where they bury dead marketers. Maybe it's a place where marketers go if they don't successfully sell products to prescribed markets. So, as the marketer responsible for designing a promotional strategy to accommodate Dan's market and Jay's pricing strategy of lifetime value (Chart 2), we have to view the market as one that is made up of subsegments and ultimately as a market made up of individuals with specific needs. Our segmentation strategies fundamentally get us to a segment of one, of matching needs in relationship to benefits.

To penetrate this market as deeply as possible we must meet each individual's needs with a broad range of products and continue to meet those needs over time in an environment of change. Certainly change is happening very quickly, especially in the health care industry today and the way the health care industry will look two to four years from now. It's going to be substantially different.

CHART 2
Promotional Strategy



So, our marketing processes have to be able to accommodate for that change. We have to develop a system that will access the market generally as this system described here does; gain information about each individual in the market; convert the aggregate information that Dan talked about into the individual information, which will be stored in the database about each individual; and then offer an initial product and subsequent products that are perfectly positioned to fill the needs on an individual basis.

Dan's market, as we said, works in the service sector and lacks primary health care. Following on Dan's evaluation of the market and our experience with similar defined markets, we would like to have these products available to establish the customer relationship. These are what we would call our primary need products which fill the most urgent need in our target households because acquiring new customers requires us to fill urgent needs. From a product development perspective, this will require substantial product development to fill the various niches within this target market. We would want adult primary health. Ideally, we would have the full spectrum. We would have an indemnity plan, a PPO and an individual practice association HMO. We would have adult major medical. We would have children's primary health. We would have adult and children's accident-only hospital medical insurance.

Other products we may want to offer for cross-sell or secondary need lead offers would be perhaps some sort of guaranteed issue life product, perhaps hospitalization income products; certainly an AD&D product and again, another accident-only hospital medical product (but repositioned as a supplement); an accident-only disability rent payer product -- Dan's market is comprised of renters; and an involuntary unemployment rent payer product. If we want to look at the market holistically (that is, consider other channels via which we can fill needs in this product), we may consider credit life disability and accident via the finance company market channel, or some sort of involuntary unemployment protection via the auto financing channel. These have been very successful products through those channels and to this particular market segment.

So, for Dan's market, our strategy would look like Chart 2. We would acquire qualified leads from the market via various media, and in the course of acquiring those leads we would learn further information about each household that would allow us to position them on an offer matrix. The prospect's positioning on the offer matrix determines the product and the product's positioning for the resultant sales activity offer. Now, this isn't quite a segment of one, but we're moving in that direction. Each contact with the prospect yields successively more information. When you saw Dan's circle, it was a process of gathering more information about the prospect. Especially important will be actual purchase history, and we will also collect claims and payment history to help us through this.

There was recently a *Harvard Business Review* article that was called "Customer Intimacy," and it defined customer intimacy as continuing to shape services or products to fit an increasingly fine definition of the customer. That's what we're doing here. We're ultimately moving to a segment of one.

So, as we go through this process, as we get to the bottom of the chart the response or lack thereof is recorded, and if we get an application through this process, we've made a major leap forward in our pursuit of gathering very specific household information (and for you product designers, an important ingredient of product application design is to include information in that application that sets up future product sales). If you know that your product offer stream is going forward, why not ask for that information in your application design for your initial products? That response information is then used to reposition the individual on the matrix for a subsequent offer. So, we're using purchase history to set up all of our future offers.

To begin this process we would prime the database pump with some names from commercially available files. That allows us to use highly measurable direct mail to control our program. But, for Dan's market I suspect that populating the database will be primarily a lead gathering process, and the lead gathering for Dan's market will be fundamentally a media exercise. Dan's market probably has some geographic concentrations, as Jay discussed, and we would probably start with a very limited geographic area.

We select our media based on what data each medium can provide us, relevant to the penetration into Dan's market. Of course, mail provides us with the most data. In fact, with the criteria that Dan gave us we can go to various compilers of mail lists and files and target that market very specifically with mail. But, mail, of course, is a very expensive process to get to that market. We would also use our pro forma cost/income ratio assumptions in selecting our media (as in our pricing strategy). Of course, we would develop specific allowable marketing costs, and we would use those marketing cost components in selecting the media. We would have some sort of response cost per lead projection, which would determine the price we were able to pay for each individual medium that we would select.

We would probably choose television and radio as well for their speed to market capabilities and flexibilities. Our greatest speed to market today in the direct marketing business is television and radio. We can literally buy tomorrow's television based on today's results through the integrated database processes we have for monitoring what's going on in the market, and we can modify the offer within five to seven days. So, if I know that an offer isn't working for me in a specific market segment, I'll know that today. I will change my media by tomorrow. I'll have my offer repositioned in a few days. So, one of the things with regard to accomplishing a lifetime value customer relationship is being able to change positioning and products rapidly within the market.

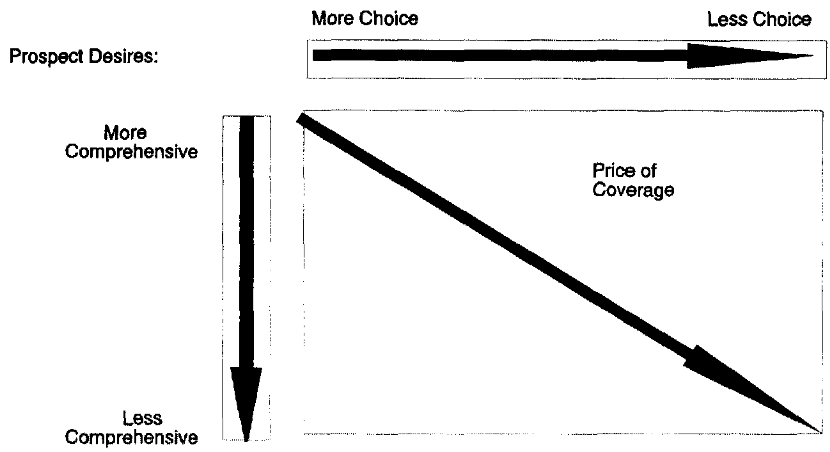
Our lead solicitation would probably be based, in this situation, on the need/benefit relationship of health insurance for the entire family. Our creative positioning would probably position the need for coverage on a not very specific basis, but along a spectrum of family obligations (and when we do that, from a creative standpoint we highlight the consequences of failure to fulfill your obligations correctly). We want a prospect whom we can accurately position on the need/benefit matrix. So, our lead process is going to gather leads that are qualified based on their need/benefit relationship on the product. So, in gathering our lead, our response devices, and the scripting and so on that we would use, we would ask for specific information about the household and provide specific information about the prices.

This is a very interactive marketing process. We've identified someone who has a general need but we don't know about his or her willingness or ability to pay. We don't really know where the person fits in a much finer matrix yet. So, through the scripting process we're determining what the specific needs in that household are and what the willingness to pay is, and we actually put the prospect in a trade-off situation through the scripting process where we determine what their wants are, then give them pricing for those wants and gauge their reaction to that pricing and then ultimately move them along a continuum that will get them to the acceptable pricing and benefit structure.

The lead is loaded onto the database and evaluated for positioning on the matrix. All this information we gather then allows us to position the individual on a matrix of products. The offer, of course, is the correct mix of benefits to fulfill the specific prospect's needs. In most cases the prospects have told us exactly what that is by the time they've gone through the process.

Let's look at a very simplified matrix (Chart 3). Here we're using prospect needs and wants for primary health products. In our information gathering process we're focusing on the prospect's desire for choice indicated by the top axis. By choice we're talking about the varying degrees of freedom to choose positions, hospitals, and other providers in an open market or in a closed market. So, fundamentally, on the left hand side you're looking at indemnity plans, and the right hand side you're looking at an HMO and varying degrees of freedom to choose providers in the middle. Then, on the vertical axis we're looking at the comprehensiveness of benefits. At the top of that ladder you may be looking at a program that includes dental benefits, long-term care, and so on, and in fact, resembles the grandiose plan that's being proposed at the federal level today. At the bottom you may be looking at something that includes only basic hospital benefits.

CHART 3
Price Relationship to Needs/Benefit Matrix

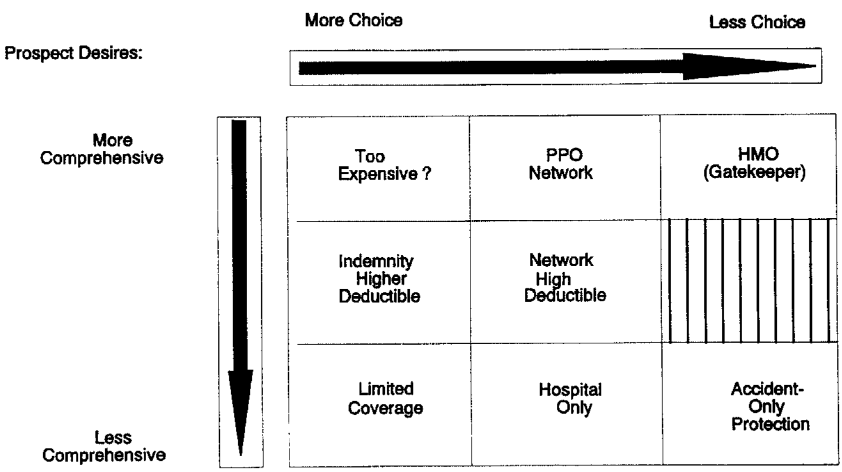


Market price is critical. So we're providing pricing information during the lead gathering process, in order to accurately place the individual on this matrix.

We talked originally about products. So, given the range of products we have selected, the resultant matrix may look like Chart 4. We have determined desire with regard to choice and benefits along with a willingness and ability to pay. Now, as I mentioned before, this requires extensive product development and rating processes. It's integral to this program to have products to fit within the matrix, and that products fit needs specifically and are affordable within those need/benefit relationships. So, in this case, for instance, someone wanting a high degree of choice and a very comprehensive coverage would probably find the coverage too expensive, and we don't even have the products slotted in that upper-left-hand corner. But, we would move them along the continuum of choice, perhaps, to a provider network plan that would be less cost, some sort of PPO or ultimately to an HMO full gate-keeper system or downward along a continuum of decreasing benefits. Each direction reduces cost, reduces price. The ultimate lower end of the spectrum would be some sort of accident-only protection.

Our initial product offering would be what the individual consumer selected through the information gathering process, and of course, within each of these cells there are several permutations as well. Now, we talked about the impact of pricing in this. We actually have to be able to provide very accurate pricing during this information-gathering process. DiMark does this type of program for various health insurers, and for one of our Blue Cross associations, for instance, there are 2,400 permutations in this single matrix that we're able to develop through a dialogue with the customer that lasts less than ten minutes. We were able to position the customer within a very specific product offer and their net product offer is constructed by the computer, by the laser printers that Jay talked about. The system construct is printed out and mailed to that consumer the very next day. It accurately reflects the phone conversation that the customer had. There are as many as 2,400 permutations because we have to give very accurate price/benefit relationships. So, we have to find out if the consumer smokes. We have to find out exactly where he or she lives from an area rating standpoint. We have to understand the stage of family life cycle with regard to dependent benefits. We have to understand a lot about the customer to give him or her very specific pricing information. So, you can understand the range of pricing with all of these products that has to be loaded on this system and delivered instantaneously to the teleservicing person who is developing the initial customer relationship with the prospect.

CHART 4
Needs/Benefit Matrix for Health Products



This sale may be made by direct sales or direct response (see Chart 2). In many cases we can even make that the customer's choice as well. In other words, does the customer want to receive this information via direct response, does he or she want to continue to have a telephone and mail relationship with the insurer, or does the customer want an agent to come to the house and explain this? We can do that, too. In fact, this package that we create down to the level of sex, segment of one, can be sent to an agent, and the agent merely takes it to the household and delivers it.

In either case, the system creates very specific marketing materials that are positioned where the individual ended up in the matrix. Only the exact product, the exact set of benefits and price is disclosed in the marketing material. The consumer has made all the choices. Now, once we have the material in the customer's hands, it's specific to his or her needs.

Ultimately, we're closing the loop. Response information is gathered. Jay's strategy requires continuous improvement to pay off in the long run. Dan must continuously feed that hungry database that he's developed with more and more information. So, to improve efficiency of the program as we gather information, the response information goes onto the database and we go through our results analysis process, and we can begin to place the person earlier on that matrix, that is perhaps by acquiring some demographic information and relating that to the actual purchase activity that has occurred.

So, now that we have response information, for instance, we may learn from Dan's modeling process that a 25-year-old who is already in the $30,000 income range has a more value-minded approach to the purchase than a 35-year-old who is still in the $20,000 range, and that's a very clear subsegment (Table 4). When you think about it, Dan's target markets seem very specifically defined. But, clearly a 25-year-old who's in the upper left hand corner of that matrix, who's already at the $30,000 level perceives of himself as someone substantially different in purchasing capability than the 35-year-old who's down in that $20,000 range. We would verify that, of course, with actual purchase information. But, this may enable us to begin positioning the person earlier on the matrix. Remember in that price graph, how the price declined from upper left to lower right.

TABLE 4
Example of Potential Market Subsegment

INCOME (30K to 20K)	Product Positioning		
30K	A	B	B
	A	B	C
20K	B	C	C
AGE	25		35

Here, in this situation, A may represent a value/benefit positioning. B represents value/price, and C probably a pure price positioning of the product, and our lead creation would be much more product-specific and use a very tight need/benefit positioning. So, when we finally got them in to place them on that matrix and do that call, we have a much tighter view of what their specific needs are in the target market.

Programs of this sort require some sort of direct qualitative understanding of the market. Well, it's a process; we have to confirm our assumptions early, long before we begin the actual implementation of the program. So, prior to implementation we generally test programs of this type in a limited geographic area. We would look for a geographic area that has a high penetration of the market segment that we're targeting and much of the promotional matrix that I described where those need/benefit relationships are set up are developed through an interactive qualitative testing of perceived need/benefit relationships. We actually have computer systems in which we can present to groups such as yourself, present options and let them perform tradeoffs between price and benefit, and that's how we begin to place these people along the matrix prior to developing the programs.

Then, we test the programs live, but, in very limited geographies that allow our marketing people to have a hands-on approach to developing the program, and of course, tolerance for price is very difficult to test until you go live. Well, we can do some tradeoff price testing in the qualitative aspect. We really don't learn where price is until people actually make purchase decisions. Once we've tested live, we're ready to implement, and the importance is that the program be developed in a way that's very flexible and continuously evolving. That's important to support Jay's lifetime value program.

So, to summarize, we're identifying prospects based on their actual needs or what their needs are likely to be based on our knowledge about them. We customize our promotional effort for each individual using our system, which is integrated with the database and we establish all future promotional activity based on the actual purchase history. So, Dan's market needs are served, and Jay's pricing strategy pays off by developing a long-term customer relationship, and the company that's doing this is using process to establish differential in the market. As Jay said, very few of us are going to develop the next great new product. But, we can develop the next great process, which will assure that our customer's needs are met and that our companies will be in the forefront of providing products in a needs/benefit relationship.

MR. JAFFE: If there are questions, the floor is open for discussion.

MR. JOHN M. FENTON: Is there any way that the techniques that you've talked about can be utilized with agency forces to improve their productivity? I'd be interested in your thoughts on that.

MR. WERT: In fact, we have developed several programs that use the processes described here, but ultimately deliver the information to the agent in the field. Fundamentally, we've provided the agents with a system at their facility. It's a PC-database lead-management system, which is integrated with our mainframe on an upload, download process. So, we perform all of the front-end aspects of the program, the lead generation, the database, and the positioning on the matrix. Then, we deliver that lead to the agents via upload, download process to their PC. So, fundamentally what happens when the agent comes in to work in the morning, he or she turns on his or her PC, and there is a list of contacts for that specific day and a substantial amount of data about those contacts and what those particular prospects indicated through the needs/benefit relationship, were the products that they were interested in. So, this goes a long way toward developing that agent's relationship, and of course, that individual, during the lead generation process, has already agreed to meet with an agent, so that the prospect is merely expecting the agent's call at that point. Now, it does create a good deal of efficiency from an agent contact standpoint, but also, it allows the parent company to aggregate the information because the system records all of the interactions that the agent has with the prospect and has attendant costs associated with those interactions, so that we can measure the cost of agent contacts. We aggregate that information and model it and look at what the most efficient leads are to provide into the system in the future. So, yes, it is in use.

MR. FENTON: Let me make one other comment. That segues very quickly into the next topic in the track, which is underwriting. It segues very nicely into it because the topic is underwriting, and there are going to be things in there to show you how direct marketing can work with agents in the underwriting process to develop underwriting as a marketing process and not a product-driven process.

Presumably, when you do have these techniques used to deliver the leads to the agent there is some sort of tradeoff in their commission.

MR. WERT: There are several tradeoffs associated with this. In some cases, the system is perceived to have such a value by the agents that the agents pay a substantial sum for installation of this system, up to as much as $15,000. That's been our experience. But, there are tradeoffs. There are reduced commissions for leads provided through this system, or there are simply fees on a per lead basis that are paid by the agent, and in some cases, the agencies have been moved to simply pay processing fees, that is, per transaction fees through the system, which is really a more accurate way to have the agent pay for the service. It would be the same way that you would pay for any subcontract in a computer service.

MR. NATHAN F. JONES: I realize, because of Jay's description of the products, that the supplementary as opposed to primary has something to do with what I'm asking. But, I didn't hear anything about how you handle the customization for the individual customer with existing coverage. I mean, there are probably a number of cases where even within the categories of primary or supplementary the customer already has some coverage, but let's say that the customization determines that he doesn't have enough insurance, particularly if he had a small debit product or a couple of them and he ought to have more now because that was bought when he was five years old and he needs to have more now. I'm sure that's a matter that you can deal with.

MR. JAFFE: I think what I'd like to do is ask both Dan and Mike to talk about how you identify specific customer needs for an existing customer, and certainly National Liberty is very expert at that and Mike has other experience along the same. Would both of you please answer that question?

MR. SNYDER: Quickly, everything that you heard from my standpoint dealt with establishing the initial connection with a prospect out there in the market and certainly in the early testing phase there was some attempt to get at what product best met that particular client's needs. In our model we operate our business in really two areas, a front end and a back end. So, a lot of our marketing planning deals with getting someone to initially raise his or her hand or inquire about a product or an offer that we've put out in front of the marketplace. We are deeply committed on the back end to doing an individual level needs analysis in the course of dialoging with that particular prospect. We have different levels of investment that we make against that needs analysis. We have some parts of our business where I would tell you that needs analysis is reasonably superficial, light involvement on the front end. We have other areas of our business where the model itself is designed to explore as far as that individual consumer is willing to explore via the direct response channel what his or her situation is and trying to match that appropriate product.

We have a continuum of not only supplemental products, but also primary products, available to us, and of course, in our instance, we also have a range of property and casualty products. So, there is ample opportunity, and it would unintelligent on our part not to pursue that type of discussion that you were talking about. Also, just building on some of the points Mike made, National Liberty is part of the Capital Holding Corporation in Louisville, and as an organization we have about $20 million dollars in assets under management, and we have revenues of about $2.5-3 million. Our four business units are about evenly divided. We have about 4,700 agents in the field in our agency group, and one of the interesting projects I've had for 1992 and carrying into 1993 is a pilot project in a test market area, one area of the country where we're integrating those two distribution channels. Our actuaries right now are struggling to construct a new economic model that would be associated with that hybrid approach of integrating those two distribution systems. Of course, it's not simply just a matter of double acquisition costs, there are a lot of different factors to consider. When you go into a hybrid situation (I'm going back to John's point), it becomes very difficult. There aren't any real strong footsteps in the sand in terms of that particular model. So, there is not a strong historical base; that's riskier in terms of some of the projections you might make.

MR. WERT: Just following on the issue of meeting the needs of existing customers, the process, as described here, is very similar to where it becomes different. I guess the fine-tuning is related to the fact that you have substantially more knowledge about that particular customer that you already have, particularly if you've done your homework and gathered the information as you've developed the customer relationships with regard to application information and so on. Once you've gathered that, you will proceed to make a series of offers to your market. Now, how those offers are made, whether on a one step basis, or a two-step basis, really isn't important. What's important is that you begin to gather purchase history and relate that purchase history to the factors that are measurable on your database about the individuals.

MR. JAFFE: We hope that we've given you a little bit of an introduction to some of the other aspects of actuarial/marketing work, and I hope you'll all become martuaries and join me in my new Society and new venture.