Big data analytics are affecting your life

Anthony J. Marolda

If your profile revealed that you are a Bernie supporter and Hillary is the nominee, the script may point out to you how Hillary has adopted a number of Bernie's socialist policies and she will, if elected, govern much as he would. If you are a Republican and a member of the NRA, the caller may remind you of Hillary's strong anti-gun policies, and how Trump has promised to defend the Second Amendment.

Most of us have never heard of big data analytics, but we should understand that it is a real phenomenon that is affecting almost every aspect of our lives, including who is governing us, whether our favorite professional sports team is winning, and which products we buy.

The first thing you need to know is that many companies we interact with, by using their services or buying their products, are collecting large amounts of personal data about us. Then, without our knowledge, they sell it to data brokers. The largest data broker, Acxiom, says that it has, on average, 1,500 pieces of information per person on more than 200 million Americans. This includes data on financial means, residential status and shopping habits. That's the "big data" part.

The people who want to influence us buy these data bases and use sophisticated, computer-based analytics to manipulate and compile the data into a unique profile of each one of us. These profiles describe who we are, including our age, address, contact information, political affiliation, what we like and don't like, what we do, how we do it, etc. Then, using these profiles, the companies or groups that acquired the data can target us with specific messages that they want us to hear. That's the "analytics" part.

For example, the presidential election of 2012 saw the use of big data analytics to impact the outcome of the election. The traditional manner of segmenting voters for political advertising is to define large blocks of people composed of such categories as age, gender, white, black, Hispanic, etc. Advertising has to be broad based, "shotgunning" these general segments of the population in hopes the right people would see the right message. While this approach was still used for most candidates in 2012, some campaigns shifted the emphasis in their marketing strategies to the use of big data analytics in order to make the difference.

The goals of the political operatives are to influence you to get out to vote, and then to have you vote for the candidate they support. With big data analytics, the electorate is seen as a collection of individuals. Each person can be measured one at a time, and then targeted for a customized message. In 2012, these messages were sent by direct mail, telephone, door-to-door and social media channels to contact the chosen person.

The Obama campaign was much better at implementing this approach than the Romney staff. The results speak for themselves; it is generally agreed that big data analytics had a major influence on the outcome of that election.

Today, the Republican National Committee, which learned its lesson from its 2012 experience, and the Democratic National Committee both have large, sophisticated, big data analytics operations. As we head toward this fall's elections, you are likely to be contacted by one or more campaigns, both presidential and congressional, with targeted messages. The people contacting you are going to have scripts designed to push your particular buttons. For example, if your profile revealed that you are a Bernie supporter and Hillary is the nominee, the script may point out to you how Hillary has adopted a number of Bernie's socialist policies and she will, if elected, govern much as he would. If you are a Republican and a member of the NRA, the caller may remind you of Hillary's strong anti-gun policies, and how Trump has promised to defend the Second Amendment. Hillary, as president, they will say, will nominate justices to the Supreme Court that will vote to overturn the Second Amendment, while Trump will appoint judges that stand behind this key provision

In addition to politics, big data analytics is also playing a major role in professional sports. Most people have heard of "Moneyball." It was a reality-based book and movie about the use of big data analytics in Major League Baseball. When Billy Beane was the general manager of the Oakland Athletics in 2002, he was given the job of fielding a winning team while cutting the overall payroll of the players. He turned to big data analytics. By analyzing mountains of player data, he was able to identify the key characteristics that are most important for a particular player to contribute to wins. Beane was then able to identify and recruit undervalued players with those strengths. He put together a team of unknowns with a relatively low total player payroll. Beane's team went on to be competitive with such opponents as the New York Yankees, which had a player payroll twice that of the Athletics. And the Athletics made it to the playoffs that year for the first time in a long time.

Since then, the use of big data analytics in professional sports around the world has exploded. One of the largest big data analytics companies serving the professional sports market is Prozone, based in Chicago. They cover a range of sports including soccer, football, ice hockey, basketball and baseball. Worldwide they have more than 850 professional teams as clients. To highlight the magnitude of the data with which they deal, for a single professional soccer game, they place eight video cameras around the stadium to monitor every player and that player's interactions with the other players. This system tracks 10 data points per second per player, or 13,200 data points per minute for the 22 players on the field. What they do with all of this data is amazing. Automated algorithms analyze the player data in real time and provide information to the coaches on how each player is performing that particular day relative to their opponents. Using this analysis, coaches then select the best players to use, and make more informed decisions about the best strategy and tactics to win the game.

Major consumer products and services companies are also finding that big data analytics can play a key role in their success. Macy's is a good example of companies using this new technology to enhance their business. The retailer's analysts track the social media, like Twitter and Facebook, and do detailed analyses of what their customers are saying about their products and services. The idea is to better understand the positive and negative sentiments that are expressed. For example, through sentiment analysis the Macy's analysts may find that people who are sharing tweets about "suits" are also making use of the terms "Alfani" and "Kenneth Cole" frequently. This information helps the retailer to identify what brands of suits should be the focus in their next marketing campaigns. And then they can inform the customers about "deals" that they know will be of interest.

Big data analytics will only grow and become more sophisticated in the future. There is an increasing amount of detailed data being collected on individuals. Sophisticated analytics are evolving to better microtarget the population on decisions they might be making. Although many people feel queasy about having their personal information used this way, the result can be a positive one. We will be given the information we need to make selections that best meet our preferences, and, at the same time, be spared the deluge of information and advertisements that are not relevant to our lives.

Anthony J. Marolda is a resident of Annisquam and was on the Board of Directors of StratBridge LLC, one of the pioneers in using big data analytics for professional sports applications.