IMPLEMENTING ANALYTICS IN THE NONPROFIT WORLD

By

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Abstract

From Netflix recommendations to precinct predictions during elections, most people are familiar with and have benefitted from analytics even if they do not know it. Analytics refers to the analysis of big data and the creation of strategy based on the results. Unfortunately, the use of analytics in the nonprofit world is a fraction compared to its use in the private sector. Through the adoption of analytics, including the use of information nonprofits already collect on themselves and their constituents, organizations will be able to reduce operational spending and increase fundraising campaigns.

My research outlines how nonprofits can mimic the ways certain private sector companies are taking advantage of analytics; how nonprofits can make use of their own data, and the obstacles that arise in the implementation of analytics in a nonprofit setting. I conducted interviews with employees at various Jewish nonprofit organizations, ranging in size, scope, and location, to learn how they use their data, the problems in the organization surrounding these efforts, and how they could improve.

My research pointed to several trends: organizations comparing campaign success to previous years, organizations using analytics and needing more data, and organizations not using the data they have readily available to them. The main obstacles these organizations encountered were: a lack of employees' technical knowledge, a dearth of institutional support for analytics, and having poor data.

Implementing new technology can often be a slow process, but organizations need to crawl before they can walk. In order for analytics to be implemented

effectively, organizations need to assess what their needs are and what information they have. Knowing oneself and having clean data are key first steps that are often overlooked and can save an organization time and effort when battling employees who are resistant to change.

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Introduction

Before I started graduate school, I worked at a Jewish Nonprofit where I often found that when brainstorming for solutions with my colleagues, I would conceive a method of solving a problem but was almost always told that it would require too much work, or we didn't have the right information readily available. It was never that my method of solving the problem was actually too complicated; it was that the answer could almost always be found in information which already existed, but which was housed in several locations and not centralized. Unfortunately, this anti-data mentality is rampant at both nonprofits and for profits. Big data can seem unwieldy but if you know how to use it effectively, it could be the answer to your prayers.

In deciding on a research topic with the goal of improving the Jewish communal world, I sought to find something new, different, practical and implementable. While studying for my MBA at USC I discovered the field of analytics and set to work brainstorming the applications for Jewish organizations harnessing the power of big data. By and large, analytics are unused not just in Jewish nonprofit organizations but in the whole nonprofit sector, so I decided my research would focus on outlining the uses and hurdles in the implementation of analytics. This paper is not meant to delve deeply into the mathematical equations, theorems and theories that make analytics possible but rather provide a blueprint for nonprofit managers to follow and improve their organization while navigating the pitfalls that will impede their progress.

Before we delve into the research, a few definitions need to first be established. The general definition of analytics: the systematic computational analysis of data or statistics is somewhat bland. More telling is the difference between reporting and analytics. Reporting is the act of summarizing an event that has happened. Analytics takes the data from the same 'event' but uses it to maximize future processes by integrating a strategic component. Many more organizations use reporting than they do analytics. It is cheaper, easier, and answers questions people have been asking for years: why or how did something happen, and what were the results. This isn't to say that reporting isn't useful; it certainly has valid applications. Reporting is a reactive approach whereas analytics is more proactive; it can still inform you how and why something happened but can also tell you how to create or prevent potential results. Unfortunately, implementing analytics tends to create a few hurdles.

The training process for a new program and a new method of doing something will always take time and can potentially frustrate employees who are slowed down by the learning process. More often than not, they believe that what they were doing before worked perfectly well. It is important to remember that the end result of adopting an analytics based approach will not only make life easier for a wide range of departments but also the information being processed will inform the organization what they are doing and who their supporters are in a much more effective way than before.

From a development standpoint, analytics in a nonprofit setting would allow an organization to more accurately segment their donor bases for more targeted

events, improve attendance or location selection (especially in a large city such as Los Angeles). A good example of using this strategy would be a camp using the zip codes of campers' parents home and work addresses as a means of evaluating where to send marketing materials for next summer rather than repeatedly sending them to the same addresses as the previous year because that was the way it was done in the previous year and it was successful. Just because it has worked in the past does not mean that it cannot be done more effectively.

In addition to creating better-targeted marketing campaigns, nonprofits using analytics would plan events appealing to prospective large donors by using their profiles and past donor history. Operationally, analytics 'dashboards' would allow organizations to see how much time their volunteers spend making calls during phone-a-thon calls, how on track they are with spending or projects, etc. The creation of dashboards to track analyze their progress would allow them to see what factors are contributing to or taking away from their success.

For my research, I interviewed key employees at several Jewish nonprofits regarding their department and organization's collection and utilization of data. I focused on the usage of data rather than asking specifically about analytics because many Jewish nonprofits do not currently employ analytics-based strategies. Understanding how they use their data provided a window into how the organization is positioning itself for the future. The questions were intended to give an accurate portrayal of how much organizations value their own data and how frequently, if at all, they make use of it. Finally, I sought to understand what hurdles stand in their way. The impetus for this research was to find out how these

organizations can improve and highlight which ones and are making the best use of their data so that they can be a model for others. Additionally, by identifying the impediments, we can address the issues organizations face in implementing an analytics. The end goal of this research is to provide an outline for how organizations can generate additional insights about their current and prospective donor bases, grantees, and/or email marketing audience without being stymied by obstacles during this process.

Literature Review

From customer cards in supermarkets showing the different items people buy together, to Pandora predicting what song you will want to hear next, most people are familiar with the many traditional uses of analytics even if they are not aware of it. Unfortunately, analytics has not permeated the nonprofit world at the same speed that the field has been adopted by the private sector. While there are prominent examples of nonprofits using analytics, by and large the industry is lagging behind.

The usage of an analytics-based strategy has the ability to help improve fundraising campaigns as well as to better keep track of operational spending. However, before an organization can take advantage of the benefits of analytics, it must first overcome the stumbling blocks it will face during the implementation phase.

Nonprofits encounter the same roadblocks that many companies have and continue to experience with Customer Relationship Management (CRM) software,

such as Raiser's Edge or Salesforce. In a Harvard Business Review article entitled *Avoid the Four Perils of CRM*, it explains, "Our research suggests that one reason CRM backfires is that most executives simply don't understand what they are implementing, let alone how much it costs or how long it will take" (Rigby, Reichheld, & Schefter, 2002). However, once executives and other employees better understand their data and how analytics work, there are a few steps that every organization—whether in the public or private sector—must take to achieve success in integrating analytics into its business model. As pointed out in a recent article in Harvard Business Review, the organization must manage and synthesize its data to be standardized and digestible; they must establish what they want to measure. Then, the organization must have the power behind it to enact the data backed decisions (Barton & Court, 2012).

Creating standardized and easily digestible data is often part of a process called data governance, which is commonly defined as, "the overall management of the availability, usability, integrity, and security of the data employed in an enterprise. A sound data governance program includes a governing body or council, a defined set of procedures, and a plan to execute those procedures" ("What is Data Governance," 2007). Before nonprofits start trying to constantly collect information from their grantees or departments, they need to address the issue of data governance and to establish rules and guidelines for their organization to follow when recording data so that they do not spend an inordinate amount of time trying to standardize the data before analyzing it. Failing to do this can very quickly give an organization misleading results and frustrate employees.

The implementation process is bothersome to employees because of the time it takes away from their regular duties and because they are being forced to learn a new technology. But standardizing the data before moving forward will save a lot of time and pain in the long run. Along with data governance, and before any decision is made on how to capture the data, the organization should assess its needs so that it can channel the information into the proper categories and set up the necessary tools. Whatever protocols are put in place also need to be retroactively applied to data already collected. Once this process is completed and all the data is organized in a standardized manner, the organization is ready to use analytics to take itself to the next level.

The analysis provides a fresh look at the organization so management must be willing to accept the new perspective. The organization must also be ready to change its current strategies and create new ones based on the newly found results. In *Big Data: The Management Revolution*, an article in the Harvard Business Review explains, "simply put, because of big data, managers can measure, and hence know, radically more about their businesses, and directly translate that knowledge into improved decision making and performance" (McAfee & Brynjolfsson, 2012).

Many organizations, even if they don't know it, are already familiar with one of the building blocks of analytics, 'medium data'. In an article with the *Harvard Business Review*, Jacob Harold extrapolates on the state of data analysis in the nonprofit world by explaining, "For nonprofits, medium data is a humbler but essential prerequisite: structured information about who you are, what you're trying to do, and what's happening" (Harold, 2013). The data are tied into the core

identity of an organization, whereas big data can be helpful in better understanding the organization itself and its constituents. The most common form of medium data analysis tends to be email-marketing data. By looking at email campaign metrics such as: open, bounce back, and click through rates (among others) an employee can gain a lot of additional information as to who is opening their emails and how successful they are at accomplishing their campaign goals. They can also improve on their goals by utilizing A/B testing to isolate key performance indicators. This ability to single out metrics in order to make something more effective is the simplest task of analytics.

While many NGOs utilize an email marketing program or CRM software, Chief Marketing Officers may not be accustomed to analyzing the results provided to them by their system and adapting organizational best practices; instead, they tend to use the traditional "one-size fits all" mentality that was adopted with traditional physical mail campaigns. This strategy made fiscal and operational sense when organizations were just able to look at the donors from the previous year and wanted to send them a high holidays card that reminded them to donate. However, organizations can now look at their data and, through the use of analytics, determine what methods and messages their constituents would react to best. This allows an organization to customize a few versions of the same campaign and effectively divide their recipient list up by interest, location, age, family status etc.,

The ability to have such insight into one's donor base can be extremely helpful and can also save an organization money. In an *eJewishPhilanthropy* article, Sacha Litman explains, "The days of donor communication using the "one size fits

all" mass marketing approach are largely history. To keep a donors' attention, you need to target messages to them highlighting aspects of your organization's work that are attuned to their interests and demographic profile. That requires that you use your database as a CRM strategy instead of using it to just hold contact and past giving information" (Litman, 2010). To extrapolate, instead of designing a one-size-fits-all approach, an organization can create a plan geared towards a group with a specific interest. This technique has gained a lot of publicity; especially after the Obama campaign used it so successfully. A *Fast Company* article by Simone Baribeau gives the narrative of how the 2012 Obama campaign used market segmentation to create targeted solicitations,

> They used the data—not just the basic age, sex, race, and neighborhood—but also consumer information, to figure out not just that, say, Joe Smith of Anaheim was likely to donate, but that he was most likely to donate the most online when sent an email by Michelle Obama offering him a chance to enter a raffle to eat dinner with the president, while his neighbor would likely give more after receiving a phone call from an in-state supporter. It was no longer a numbers game, a hope that their supporters would know how to best approach people. The campaign had, scientifically, figured out the best way to ask people for money and votes. (Baribeau, 2012)

Of course the segmentation, the ability to break groups down into smaller, more easily definable subgroups, will only be as good as the data the organization collects

("Market Segmentation, n.d.)" It should be obvious then that the better the information, the better the insights generated will be. Andrew McAfee and Erik Brynjolfsson echo this in *Big Data: The Management Revolution* in the Harvard Business Review, "simply put, because of big data, managers can measure, and hence know, radically more about their businesses, and directly translate that knowledge into improved decision making and performance" (McAfee & Brynjolfsson, 2012).

The ability to cluster data and dive deeper into it has benefits outside of marketing. The impact is apparent when comparing how the CJP study in 1967 was run to the 2013 Pew study. At a cursory glance it is apparent that the technological resources available in 1967 were far less developed than we have now. The survey mentions in their process section, "the responses to the questions were then coded. These codes were punched onto IBM cards which were processed on a variety of data-processing equipment and computers" (Rabb, 1967). The need to mention that it was processed on a computer should be telling enough of the processing power available at the time. The Pew study's section is able to break down the survey subjects into different categories and address the confidence level and margin of error because they were able to delve deeper into the research they had collected ("Jewish American Survey App A Methodology, 2013). Once an organization has all the information they desire, or set up the processes to collect it, they can start delving into the applications of analytics.

For ideas on how to utilize the information, many private sector companies can be used as a reference. While their missions vary from those in the nonprofit

sector, how they organize themselves to collect, analyze, and create a strategy around their data is transferable. A great example of leveraging data to understand the needs of the client base is Target's ability to know their customers better than they may know themselves. Understanding how they approach data would help nonprofits fundraise, create better auctions and increase attendance at their events.

In the private sector collecting information from customers has become such an integrated practice in many industries that the customers are not even aware that it is happening, in part because they are incentivized to do so. When most people shop at a large grocery store they are asked if they have a customer rewards card to scan when they check out. If they do, the customer usually receives some sort of discount on certain items or points to be used towards their gas bill. Most customers are also unaware that while the scanning of their card reduced the price they pay for a can of tuna fish, it also allows the company to tag the purchase as theirs and file it with all the other purchases at that location and all other company locations. The company is able to look at customers' purchases from all their locations, and after breaking down the information, figure out what items are often bought together, and what patterns can be extrapolated from the purchase of these products. "The desire to collect information on customers is not new for Target or any other large retailer, of course. For decades, Target has collected vast amounts of data on every person who regularly walks into one of its stores. … "We want to know everything we can"" (Duhigg, 2012). The article, entitled *How Companies Learn Your Secrets*, also mentions how marketers inside the company asked a

statistician if he would be able to figure out if a customer was pregnant before the customer herself knew.

While nonprofits will not be able to predict when a donor or board member will become pregnant, organizations could figure out what items to place together at an auction by looking at bidding history in the same way that Target strategically places items together in the store based on purchase history. It will become clear what events members would be interested in, or who the social linchpins are. By understanding the donor base better, nonprofits will be able to provide them with a better experience, which can translate into a stronger emotional (and monetary) connection to the organization. If a donor that is usually thought to be unimportant because of their lack of large donations is found to be the reason large donors are showing up, an organization may start to treat certain donors better and try to form stronger relationships. However, the idea of looking through the data to locate free money is not constrained to event attendance.

Another use of analytics for nonprofits is the ability to find the 'diamond in the rough donors.' Many organizations are able to identify up and coming donors, or those who have not yet reached their potential, because they are friends, family or business acquaintance of a board member. This all but eliminates the ability for a newer donor who is not as well connected to the organization to be perceived as someone with as great a giving capacity. Progressive's Snapshot and Name Your Own Price tools demonstrate the ability to find untapped market potential. Through the analysis of information it collected on an unattended market, Progressive realized it could provide insurance to those who were previously being gouged. Its

snapshot tool currently does this. It is provided to drivers free of charge so that the company may uncover even more information about drivers' patterns and trip histories. This allows Progressive to provide a customized price to each of their customers. The same principle is true for their "Name your own price tool". The tool provides users with prices from various insurance providers so the customer can pick the one they prefer in exchange for their information and history. By exchanging personal information for an aggregation of prices, Progressive was able to build better pricing models because the tool acted as a data aggregator, the analysis of which is used to better understand what different segments of their audience are willing to pay for coverage ("Progressive Corporation, 1998").

For nonprofits, incorporating demographics, general employment and personal data, information from services like Wealth Engine and iWavePro (see Appendix), and updated giving trends, an organization could mine its data for large donors to increase its revenues. There is an emphasis nowadays on cultivating relationships with donors and lay leaders; the idea is that they may be willing to give more because of a strong relationship. However, small and seemingly less important donors do not always get the face time larger donors do. It may seem counterintuitive but exactly what Progressive did after analyzing their data. By focusing more on an underserved and underappreciated market, motorcycles, they were able to significantly boost one of their revenue streams. It is an example that while prospecting for donors takes time, it can also pay big dividends in the end if organizations are willing to invest in the technology and dedicate the right people to make this happen. Alternatively, nonprofits could look inwardly and focus on how

their employees are performing so they can optimize their operations like many companies do. By looking inwardly and measuring how long certain projects take, a manager can understand the elements that have traditionally help up an assignment and set about fixing it, potentially saving the department time and money. However, all of this is only possible if the organization has the right information.

In the nonprofit world, the quality and quantity of information an organization collects on their grantees varies from organization to organization and grantee to grantee. If nonprofits were to adopt a responsive reporting system they would have the luxury of being able to intervene and prevent a problem before it arises. The problem nonprofits face with their grantees is that there can be a separation between where the money comes from and where it is being spent. While this disconnection often provides a department or organization with autonomy and the confidence that they do not have somebody looking over their shoulder, it can be problematic when the organization runs out of money. If the information were to be centralized and updated regularly, then management would be able to address budgeting issues before any problems were to arise. The Otis Elevator Company tackled a similar issue in the early 1980s when they centralized their customer service so they could uncover key performance indicators in the different regions where they were operating and the models of elevators installed. F. Warren McFarlan and Brian J. Delacey detail the transformation Otis made in their *Harvard Business Review* article, "Otis Elevator: Accelerating Business Transformation with IT" (McFarlan & Delacey, 2004). The main goal was to improve their ability to react to maintenance problems as a means of improving customer

satisfaction. Their aggregation of data was vital to this process; for nonprofits it could allow an organization to address a problem with a grantee before it arises or potentially even identify operating trends across grantees so they can be addressed in the next grant cycle.

Many nonprofits would love the ability to scan a list of names and assess with a fairly high level of confidence in who will be able to donate large amounts to their organization, or attend an event and know who has not contributed in a meaningful way. This ability is not that far off so long as organizations are willing to track and record this information effectively and are able and willing to think and act outside 'the box' that is familiar to them. The examples above taken from the private and public sectors, but regardless of the setting they can and should be used as models by nonprofits to prosper. Analytics will provide organizations a deeper look at themselves, their grantees, and their donors. The organizations I spoke with for my research varied in terms of the investment in technology and their ability to take advantage of all it had to offer. But regardless of where they fell on the spectrum, most organizations agreed that they would like to be able to have the aforementioned capabilities.

Through the articles, case studies and my interview responses, nonprofit executives will fully understand what exactly analytics are, how they are used successfully in the private sector, why they should use them and what obstacles they may encounter when looking to implement them in their organization. Many of the sources I was able to find are from business journals like Harvard Business Review,

a few are from independent academic articles and some are from Jewish sources such as eJewishPhilanthropy.

Methods and Expected Results

My firsthand data was gathered from interviews with Jewish nonprofit professionals to understand how their organization and department approaches collecting and utilizing data, as well as the issues they encounter, so that I could get a well-rounded understanding of the analytical processes these organizations have in place and address how their problems could be solved. By speaking with the subjects, I was also able to make recommendations based on their current use of data and explore why they do not use their data to its full potential. The interviews were conducted primarily over the phone or in person with a few done via email. The identity of the interviewees and where they work has been changed to protect their privacy but will provide insight as to how organizations view themselves in relation to their data, as well as their frustrations about their processes. Negative reactions were based around the organization's lack of time or belief that they need additional resources to oversee data management. This correlated with most of the existing outside research I found which validates why and how organizations can use big data to their advantage.

Supporting evidence and examples of how organizations can be doing more are pulled mostly from *Harvard Business Review* cases used to teach MBA and Masters of Analytics students about what companies are doing with their information and how important it can be. Furthermore, sources reporting on how

nonprofits have and are using the data they collect will be used as supporting evidence.

Unfortunately, I was unable to shadow the professionals I spoke with which would have allowed me to witness firsthand the uses of and frustration with the data and, therefore, have to rely on anecdotal evidence. In a few instances, some of the questions were emailed due to the subject's schedule. In these cases it was more challenging to dig deeper and but I had to make do with the information they provided. Before I started the interview process I expected to hear a few stories of employees having negative reactions towards using analytics; however, the number of subjects I spoke with who were eager to use analytics in a larger capacity was a positive finding. Regarding the utilization of analytics in organizations, I believe that some of them are doing the best they can with what they have, while others believe they could be doing more. I based my evaluations of the organizations' use of analytics around their available resources rather than holding each organization to the same standard. This was in part due to the variety of organizations I spoke with. On one end of the spectrum were large, well-funded, international organizations while on the other end were smaller, domestic organizations with significantly less resources and/or in the start up phase.

Practical Applications and Audience

While analytics can serve many uses to many organizations, I believe this research will be of most use to executives of Jewish nonprofit organizations who are dedicated to implementing technology. While I interviewed people at a wide variety

of organizations, the best performing organizations in terms of analytics were ones with the financial resources to purchase analytics tools, information, and invest in the training of their employees. This was predominately independent of the size of the organization. Most of the organizations that used analytics effectively were large. However, I believe this to be a correlation, not causation. The success and size of the organization were not a factor. There are large organizations that, in my opinion, do not use their information as well as they could while a startup I interviewed uses its information exceedingly well.

This paper can be used as a conceptual jumping off point when looking for ideas on how to implement analytics and what obstacles will be found along the way. Additionally, the paper is a good resource for upper management to use as a quick way to study up on the subject.

The final results of my research can be published as an article on *eJewishPhilanthropy* or *The Chronicle of Philanthropy*. The article would be a short summary of the capstone and could be used to start internal conversations on analytics within organizations.

Trends in Information Usage

To avoid confusion, below is a table of the interview subjects' pseudonyms and a description of where they work.

Name	Role and Organization Description
Laura	Development department of a large international Jewish nonprofit
Alexandra	Development department of a large national Jewish nonprofit

Marion	Development department of a large international Jewish nonprofit
Sarah	Regional director of an umbrella organization with many satellite offices
Rebecca	An executive at a large synagogue with schools and camps
Rachel	CEO of a small start up nonprofit
Stephen	Alumni Relations for a University
Abraham	Grants officer for a large national organization

For my research, I spoke with people at eight organizations to understand how they, and their departments collect and utilize information to see what more they could do. The object of the interviews was to demonstrate how organizations are currently using their information, identify what the trends in the Jewish nonprofit community are, and create solutions for the problems the subjects face. Of the subjects I spoke to, three work in development departments, three provided a holistic perspective, one gave a grant management perspective, and one subject was involved in alumni relations. Even with a fairly small sample size there was a wide range of answers regarding the collection, utilization and even the impetuses for the former. Almost all of the subjects I spoke to requested that their responses remain anonymous so the information in this chapter will be described by using pseudonyms. In order to best demonstrate the value of the interviews, their responses are broken down by the trends developing between, and the obstacles facing, each of the organizations in regards to how well they collect and use information. Of the trends, the biggest were: the prevalence of organizations using

trending or reporting on a frequent basis, organizations that actually use analytics needing more data, and organizations not using the data they have readily available to them.

While a majority of the Jewish nonprofits I spoke with do not use traditional analytics, the fact that a majority of my subjects' use of reporting indicates a developing predilection for a data based strategy within the Jewish nonprofit community. Alexandra mentioned that her employees, during the weekly development department meeting, review their fundraising numbers so they are able to track their weekly revenue by campaign, and to compare its progress over the last four years. The variances and causes are discussed and explained to the department and to the members of the board. Everyone understands that, in addition to individual efforts, external factors play a significant role in the success of their campaign. In short, her employees "live and die by their data." The ability to dive into the data and look at trends is incredibly useful, even on the individual level.

Laura mentioned that her organization often uses data to track donors' giving—increases or decreases compared to previous campaigns—they also collect and update information on their interests as well as which donors are connected to others in the event Laura needs to call upon a donor to influence another to give (peer to peer solicitation) or sit on the board. While her usage of the data cannot be considered analytics, reporting and recording at the donation group level allows Laura to use the data in a significant way. Unfortunately, not all organizations are

lucky enough to have the data they require. The second trend voiced by the interview subjects was a strong need for more data.

Part of gathering the right data comes from an understanding of the context the data is being generated and how you can and will use it at a later time. Without being aware of what and how much of it needs to be collected, an organization that starts to implement analytics will become frustrated when it becomes aware that so much more could be accomplished if only they had asked the right questions. Alexandra noted that, notwithstanding her department's use of data, it is unable to distinguish which spouse (in a couple) has contributed to which affinity group. That becomes a hindrance when they try to track personal interests or consider who in the couple would be a good candidate for a board position. By simply having added another question on their giving page or mail solicitations they could easily solve this issue. The same is true of Abraham's department. Overseeing grants allows his department to pull information from many different sources at once, but because the grantees do not all report the same information they are unable to create a well rounded picture when it comes time to generate a report.

Similarly, Marion felt that her organization could be doing more to acquire data but she also realizes that, with limited resources, "we have to decide how much time we are going to spend on doing the right work and doing it well vs. the work we're actually doing." Marion's organization has started to invest more in analytics, and is building out their research department, which supports the development team. Even more encouraging is that they are not finished with their investment in data and are still in the process of scaling up. Similarly, Rachel's organization is also

in the process of scaling up their commitment to data. Due to the small size of her organization, Rachel employs outside consultants to get an independent analysis on the data. It is an effective measure for the start up, but it may not be replicable in a larger organization that does not have a lot of excess capital. Organizations that fall into this category should consider themselves lucky though, as they are on their way to better integrating analytics into their organization. Unfortunately, a couple of my subjects are not even thinking about how they could better use their data.

Earlier in the paper I wrote about how organizations can potentially leverage their data into additional revenue or a decrease in spending. While most of the interview subjects indicated that their organization was making an attempt to maximize the use of their data, a couple of the subjects have not yet started. When asked if she thought if her organization was underperforming in any area regarding data, Sarah replied, "no." She is satisfied with how the use of their data; they even share their data with other organizations, which is more the exception of how nonprofit operate rather than the rule. But their willingness to share data with outsiders belies the value they believe data has. The lack of importance data has in Sarah's organization may go back to an issue of data governance. By not keeping the data together or having it recorded consistently, the central office has no hope of easily looking at the records and learning new information. Instead, the subject's organization has their satellite offices send them attendance lists for each event and the budget for each but does not actually aggregate the individual lists to see who has shown up to which events over time. The budgets are meant to update the central office so they can ensure that each satellite has enough money to maintain

their operations. There is no investigating as to what factors contribute to event attendance, which would be fairly simple to do and make the planning and budgeting easier. The lack of data analysis is unfortunate, the additional effort would go a long way in discovering if the unexpected increase in spending is a result of poor planning or an unnoticed increase in the price of certain event supplies. Even simple data analysis would make her organization more responsible and would give the central office the power to hold the satellites more accountable for their actions. Furthermore, it would allow the main office to anticipate the satellite office's needs for additional operating costs instead of being reactive.

Rebecca's organization does not have this problem as its organizational functions are centrally located in the greater Los Angeles area and their spending and budgeting are more directly controlled. Unfortunately, Rebecca's organization does not analyze the data they have, but only because they are just starting to create the infrastructure to utilize analytics.

Rebecca's lack of analytics is not for lack of desire or trying, as is the case with Sarah's, but is more indicative of what many nonprofit organizations will most likely go through as the notion of using analytics starts to gain momentum and becomes integrated in an organization's culture. Rebecca keeps a lot of operational data that is only used as a reference. She indicated that, in the future, they would like to start using the addresses they have on congregants, (parents of) students and campers as part of their marketing strategy. However, until then, they just use it much in the same way they use allergy information or who is allowed to pick

children up. This information, taken a step further, would paint a useful profile about the population Rebecca's organization is dealing with.

Rebecca understands that all this information could be valuable in segmenting their constituents for marketing purposes but unfortunately, when asked about how her organization could improve, she stated, "we really don't have anybody who understands the database." This problem creates a domino effect because the analysis of the information they have will only be as good as the quality of information. Additionally, her staff is worried that the added responsibilities of learning the system and entering information will negatively impact their time and other responsibilities. As Rebecca noted, the change will need to come from the top because currently, "the supervisors don't particularly like learning the CRM software. But, if they don't know how to use it, they can't effectively ask their subordinates to use it." Rebecca's issues both highlights a trend of not using available data, and demonstrates an organizational stumbling block that appeared during the interview phase.

The intent in interviewing people at the selected organizations was to provide a spectrum of organizations by size as well as mission. It was fortunate that they also provided a range in terms of their use of analytics. It is encouraging to see organizations like Alexandra, Laura, Marion, Rachel and Abraham's that are either craving more data to use and/or using reporting to learn more about themselves and their constituents. While not surprising, it is disappointing to see organizations like Rebecca, and Sarah's, which are not taking advantage of a resource they have at their disposal. However, much like Rebecca's organization, when an organization

wants to implement analytics they must first address the problems that present themselves.

Identifying Hurdles to Implementation

Change is hard and people tend to fight it; especially when they believe that doing something new means having to spend time in training instead of working on what they are supposed to be doing. This resistance, coupled with other factors that plague nonprofits like short employee tenures, creates multiple stumbling blocks for organizations to overcome. A bad situation can be exacerbated when administrators are not fully behind an initiative; it prevents even the most motivated of subordinates from pushing the organization forward. However, even if an organization has all key employees on board, and everybody has the proper technical knowledge, there is often another major obstacle to overcome. During the interviews it became apparent that having poor data causes even the most technically savvy, cohesive organization to stumble. A frequently used term in computing and analytics is, 'garbage in, garbage out.' It expresses the idea that even if all correct processes are followed, but the data you have is flawed, your results will be just as flawed. Fortunately, these are issues that can be dealt with if you are able to diagnose the problem ahead of time.

It should come as no surprise that a process that requires computers also needs people who understand how to use the programs. Yet a lack of technical knowledge is a frequent hurdle when it comes to analytics. Most schools house their analytics courses in the Business school, Mathematics or Engineering departments.

This means that nonprofits that want to employ recently graduated students need to have offer them financial incentives to pull them away from the private sector or find employees already within their organization who are both development and analytics minded. If, however, an organization lacks someone who is proficient in analytics or statistics, it is still fairly easy to teach employees how to use CRM systems and a variety of visualization programs to run some analytics.

Earlier, I mentioned how supervisors in Rebecca's organization slow down everybody else by not wanting to learn the CRM system, but a scarce knowledge of a program gets magnified when, like Stephen's, an organization has a high turnover rate. When people are lucky enough to overlap at their job with their predecessor, they often get the base knowledge they need to run the day-to-day parts of their job effectively. This means that without proper training, and retraining, on the software being used an organization can lose competency on a program. The more turnover the organization has, the increase in likelihood the employees will know less about the tools.

A personal anecdote that exemplifies how bad this can be: while working in a communications department, I was one of the most frequent users of the CRM and email marketing system that the organization used. I had become fairly fluent in it but other employees used it only to run reports. In short, because they only knew how to perform the same repetitious actions, when they wanted to do something else they would ask me. This would invariably slow me down since people wanted the reports run rather than being taught how to do it. People were so unhappy with the system that a consultant was hired to assist us in deciding what system to switch

to. After speaking with employees from all over the organization it was decided that most employees just needed to be (re)trained on the existing system so they could learn to prepare custom reporting themselves.

Stephen's organization suffers from this exact situation. He mentioned that, "a lot of times our databases are not up to date," but in addition to this, they have an incredibly high turnover rate. If they would just have somebody come in to do training courses as a refresher every now and then, document in detail how to run the program, or send employees to conferences where analytics were discussed they could easily overcome this hurdle. Admittedly, this is harder to overcome when stakeholders are not in agreement about collecting and utilizing the data.

While no organization I spoke with is completely against the idea of using analytics, or thinks that using analytics is a bad idea, Sarah was definitely the most opposed to using analytics. Our interview was done over email so I could not press for more details but she seemed fairly complacent with the results her organization has received with their current state of never analyzing the information reported by the regional satellite offices. This differs from Rebecca's organization, whose employees are resistant to the idea of using CRM or analytics tools. As noted above, the employees' decision to not learn new tools and techniques reduces the efficiency of the organization. For a manager, the training on using these tools could be made mandatory, learning the tools can be incentivized, or having the necessary skills can be made part of the job description the next time there is turnover. Fortunately, only two of my interview subjects seemed to have a systemic resistance to maximizing the value of their information. However, as noted before, if the data being collected

is inconsistent, has reporting errors, is inaccurate, or has other problems, the results of the analysis will steer the organization in the wrong direction.

Analyzing bad data can be caused by a variety of reasons; however, understanding on a conceptual level what the data means and how the data is collected can help employees better identify bad data. Unfortunately for Abraham, this is an issue that he deals with regularly, and if Sarah were to collect and use more data she would also have this same problem. As noted above, Abraham collects information from his grantees and can pull the information together to get a broader understanding of what issues are prevalent and remain unsolved in his community. As a result of working with many independent organizations, Abraham has a data governance issue. Unless he combs through all of the data, he has no idea if all columns are being filled out in a consistent manner. He needs to spend extra time looking for outliers or misinformation within the data set. Abraham does have a plan for fixing this though; by having the grantees attend seminars on reporting, Abraham is trying to drive home the importance of proper record keeping. The benefits are two-fold: for him, he can do more research with less effort; for the grantees they get to be evaluated better which could allow them to get more funding in the future.

Stephen's organization also suffers from not having an adequate data pool on which they can run queries. From an alumni standpoint they can look up which alumni live in certain cities so they can coordinate the travel plans of top employees with large donors in those cities, which is often enough. However, Stephen notes that, "a lot of times our database is not up to date." With better cooperation from the

individual schools that keep track of their alumni, and even better event attendance data, Stephen's job of interacting with and understanding the alumni population would be much easier. Although cooperation will help Stephen and Abraham, there are also other ways to prevent bad data from corrupting the analysis results. Datasets can be purchased, or found for free, from various sources that may be able to append an organization's data. Also making sure that the data collection process, as well as data governance rules, is well known and implemented uniformly through an organization will help.

The prevalence and impact the three hurdles have on organizations should not be underestimated but often those on the inside do not notice them. The spectrum of hindrances provided by the interview subjects demonstrates the main problems that organizations have with implementing analytics. It is worth noting that many of them relate to the usage of CRM systems. It is because of these pitfalls that Darrell Rigby, Frederick F. Reichheld and Phil Schefter noted, "Our research suggests that one reason CRM backfires is that most executives simply don't understand what they are implementing, let alone how much it costs or how long it will take" (Rigby, Reichheld & Schefter, 2002). It takes time to make sure an organization has the right technical knowledge, backing, and data, but those efforts will be worth it when they are able to gain a new perspective.

Conclusion and Recommendations

A professor of mine once said during a lecture, "90% of data collected by companies on a given day goes unused. Given what they know about their customers now, imagine how much more they could know and do if they evaluated even an additional 10%." While not an exact comparison, I liken it to the idea of how much more intelligent a person could be if the other 90% of their brain was unlocked.

In a nonprofit context, think about how powerful a development person could be if when a donor walks into the room they could know how much in the next year that donor will be able to give. Better yet, they would know how to effectively market to that person so they give more than they usually do. If their (adult) children walk in, the development officer could see what committees or boards might interest them so they're more inclined to be involved and engaged in the organization. They'd be able to understand that the friend they brought cannot afford to donate at a high level now but can in the future because they are in law school. They could introduce the law student to a board member who is a partner at a law firm and be the connector between the two. .

When speaking with organizations for this research, the most telling question I asked the subjects was not about how they use the information, but if they were happy with how information was used. Most organizations know they can do better, but fewer are putting in the necessary effort. Some do not have the money to spend on the resources and technology, while other organizations lack the time to train people to correctly use the CRM programs or how to analyze the data. Finally,

some organizations have the resources and skill set but lack good data. Looking at examples of how companies and nonprofit organizations alike leverage their information to increase revenue, improve efficiency and decrease operational problems, one should wonder why Jewish nonprofit organizations have not more readily taken up the practice of looking inwardly at themselves and their supporters.

When groups of Jews meet each other for the first time they play a game that is affectionately referred to as, 'Jewish geography,' in order to see who everybody knows and if they know anybody in common. As individuals, we use this information in our personal lives to create new connections and form new relationships. Jewish organizations should be able to do this as well. Not by talking to other organizations, although some do, but by looking inward and seeing what they really know about each constituent or partner organization. Jewish nonprofits have come a long way from looking at the back of Rolodex cards to see what notes they wrote down about a donor. Through the use of CRM programs, they have started recording their relationships with better and more granular details.

The purpose of this paper is to provide readers with examples of how organizations can adopt techniques used by corporations and evaluate a few organizations on how they currently use their own data as a way of demonstrating the successes and failures that happen in the process of adopting new data protocols. Unfortunately, as we saw from the interview subjects, there are a few traps that organizations can fall into when trying to make better use of their data: organizations that have mismanaged databases are going to need to take the time

and effort to standardize how they record attributes and events, employees need to be trained effectively on entering and accessing the information into CRM software, and organizations need to make looking at data a priority. Technology moves quickly but when it comes to analyzing data you need to be able to crawl before you can walk. Having the right training in place is important but means little when the organizations is not on the same page. Data governance plays a huge role in implementation, not only because it means that the organization, departments, and/or grantees are all in lockstep about recording data, but it is also usually a command that only works when given from a person in position of authority and then relayed down the ranks. This collective action will help the data flow better and more efficiently.

Additionally, having a research department or using a service like Wealth Engine or iWavePro can help as a supplement in organizations that are larger and have more resources, but smaller organizations can also easily identify where their areas of need are and use analysis for their specific purposes. Rebecca's organization is a key example of this. They seem perfectly content continuing to proceed as they always have, but if they looked at their operational spending over time they would very easily, and cheaply, be able to reduce it. While organizations may not need to go as far as Target and record everything possible, organizations should at least use what they already have in order to improve the overall value of their efforts. Like CRM systems, organizations will eventually get on board the analytics train, but if they start thinking about their data strategically and start making it work for them they will be ahead of the pack because analytics provide

insight on the organization itself as well as the constituents who support it and the clients they serve; a fresh perspective on these groups is not an opportunity organizations should overlook.

Appendix

Chandler M. & Monica Bing
Profile – January 2016

RE Record: 00001 (Chandler) & 123490 (Monica)

Family

- Wife Monica Geller Bing
- Two children: Jack (19) and Erica (19)
  - Both are alumni of Solomon Schechter Day School, Camp Ramah of the Berkshires, and Ethical Culture Fieldston School
  - Jack currently attends Columbia University
  - Erica currently attends USC
- Brother-in-law Ross Geller lives in Manhattan, NY with wife Rachel

Home Address

45 Sheldrake Road
Scarsdale, NY 10583
**Valued at $3,1415,926, according to iWavePro, and $3M-$4M by WealthEngine*
Home: 718-555-5555
Cell: 917-555-5555
Email: mschanandlerbong@gmail.com

Occupation

- President, Archie Comics Publications (http://www.warnerbros.com/tv/friends-complete-series-collection)
  - Founded in 1939, serving chief joke creator and writer
- Founder, Poultry Therapy Pets Organization (PTP)
  - Founded while living in New York City
  - Helps train and provide chickens and ducks to people as therapy pets

Business Details

Archie Comics Publications
One Riverside Drive

Mamaroneck, NY 10543
Office: 718-555-5555

Professional & Community Affiliations

- ***UJA-Federation of NY Board Member since 2007***
  - Current member of Interfaith Family Taskforce
  - Current UJA-Federation of NY giving - $1,000,250
- HUC-JIR Governor since 2012
  - Cumulative HUC-JIR of NY giving – $1,250,450
- Member, Park Avenue Synagogue– New York, NY
- Past Chair, Jewish Endowment and Foundation Investment Institute Advisory Council of JFNA
- Member, JTS Board of Trustees
- Member, J-Street National Council
- Former Board Member, JNF
- Former Trustee, American Friends of Hebrew University

Monica's Community Affiliations

- Past Chair, PETA (2011-2013)
- Past Chair, Meals of Wheels (2004-2007)
- Former Board Member, Museum of Jewish Heritage (2006-2010)

Awards & Accolades

- Jugghead Golden Crown Award, 2014

Education

- Creative Writing, Columbia University (1991)

Wealth Prospect

- iWavePro lists estimated net worth of $6M-12M
- WealthEngine lists net worth/total assets as $2-8 million, with a gift capacity range of $400K–875K over 5 years

Visible Charitable Contributions (as couple and individuals)

- Hebrew Union College – Jewish Institute of Religion
  - 2012 gift in $75-125K range; 2008 gift in $2-8K range
- Ethical Culture Fieldston Schools
  - 2003 endowment gift and numerous other gifts of unspecified amounts
- Museum of Jewish Heritage
  - 2006-2007 gifts in $15-30K
- UJA-Federation of NY
  - 2013 gift in $75-100K range

- Strong democrat – consistent political contributions since 2006 to NY campaigns totaling almost $25K

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