5-1-2013

Harvesting the Twittersphere: Qualitative Research Methods Using Twitter

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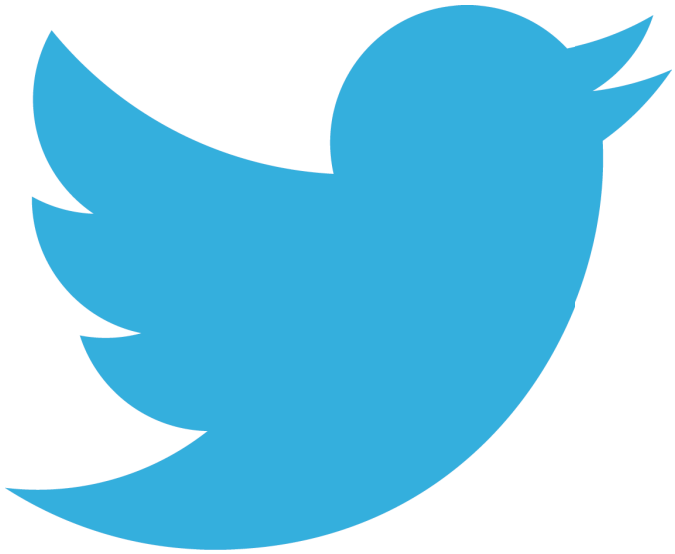
Spring | 13



Harvesting the Twittersphere:

Qualitative Research Methods Using Twitter

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May 2013
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Abstract:

Harvesting the Twittersphere explores the current state of research, by comparing quantitative to qualitative and analyzing the current market. In a consumer driven market, it seems that most businesses are neglecting performing qualitative research. It could be because of the falling cost and increasing convenience of quantitative research methods provided by cloud systems such as: Salesforce.com, IBM, SAP, and McKinsey. Another reason may be that there is no efficient or inexpensive way to conduct qualitative research on a digital platform. While certain companies try to conduct qualitative studies online by using chat rooms, discussion boards or Facebook prompts, there is no method that is as widespread or respective as the traditional methods.

While focus groups and participant observation offer unique insights into consumers, both methods can be costly and difficult to set up. *Harvesting the Twittersphere* proposes a new methodology of using Twitter to conduct a qualitative study. By search a specific term, a researcher can search through the constantly generated tweets to see what people are saying about the term. The tweets should be captured, sorted and analyzed in order to provide a unique insight from the consumer. By nature, Twitter offers feelings of users since what they tweet is usually their individual perspective on a subject. This is the perfect field in order to conduct a qualitative study since it is about sharing emotions, sentiments and feelings, rather than numbers, facts or statistics.

The paper also presents an example of this methodology by conducting research on Spotify, a music streaming application. The case presents how collection, sorting, analysis and the report were conducted and prepared in order to give readers a deeper understanding of the type of insights that can be gained from this method.

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Introduction:

On November 15, 2011, I remember sitting in my bed in my dorm room in the Financial District of Manhattan. Around 1 a.m. my roommates and I heard a strange commotion from outside the window. We were unsure of what it was, but at first none of us were alarmed, strange noises in New York City are not uncommon. But it became louder and more distributive than the normal stir in the streets. Like most college students, I was on Facebook at the time, and I saw a status update that said "Zuccotti Park is being raided by the NYPD." This was during the time that the Occupy Wall Street movement had camped out in the park, and there had been several incidents already between the protestors and the NYPD, but this one was far louder than any we had previously heard. I told my roommates of this status update and we all began to search for more answers. One of us turned on the T.V. and was surfing through the news channels for information, but couldn't find a single mention of what was happening.

The rest of us began to search online, we tried to find any information on every news site and search engine we could think of, but turned up with nothing. I scrolled through my Facebook page, and decided to check my Twitter to see if any of my friends walked over to the park and tweeted news, but found nothing. Then I came up with the idea to search Twitter. I opened a few different tabs and search the following terms: "Zuccotti Park," "Occupy," "OWS." Immediately I was flooded with tweets and constant updates about what was happening. The park was being raided by the police under the orders of Mayor Bloomberg. All the tents, sleeping bags, books, any possession were being taken from the park and thrown into dumpsters. Not only did I have text updates from users, I was also able to see pictures, and videos of what was happening. I was sitting there reading to my roommates tweet after tweet describing the events, and they still could not find a single media outlet reporting on it. There was no coverage until the next morning, the

only people who knew about it were those who were at or near the park, or those searching social media.

While I never was involved with the Occupy Wall Street movement, the raid on November 15 left a lasting impression on me. It was the first time I remember really using Twitter as a search tool; in the past it had just been a fun way to tell my friends about the all-nighter I pulled or how the vending machine gave me an extra candy bar. But the raid changed my view on Twitter, it now was something of immense power that I had not previously realized it wielded. My realizations about Twitter continued to occur with events like the Arab Spring uprisings and the 2012 Summer Olympic games. While these are all extremely different events, they have all helped me to see the same thing, that Twitter not only gives information that can be searched and aggregated, but it allows for something that has always existed but never in a large scale like this: personal perspective. When I conducted my search on November 15, I saw the raid from inside the park, I was standing next to the dumpster while a macbook pro was being thrown in. During the Olympic games, I was standing in the center of the stadium on the east side of London looking out at the crowd. This wasn't a news crew giving me a third person recount of what happened, it was a first hand experience in the digital world. Understanding this has led me to devise a method of using Twitter for marketing research.

The Current State of Research:

Research methods take on many shapes and forms depending on the type of data that is trying to be collected. Data can be divided into two main categories: quantitative and qualitative. Quantitative research largely deals with numbers and statistics to test hypotheses and generalize findings to a large population (Morrison 23-24). In recent years, quantitative data has become increasingly popular for many companies. It has become the driving force behind many CRM

programs and customer experience initiatives across industries. As stated in a recent RCR article, quantitative data "…will allow a company to consistently track how it is performing over short- and long-term periods, as well as measure performance across geographies and channels," (Hasan). Companies like McKinsey & Company, Oracle, IBM, SAP, and Salesforce.com Inc. dominate the field by offering "big data" services to other companies at cheaper and cheaper rates.

Qualitative data helps to answer questions about "how" or "what" consumers are doing (Morrison 24). It deals less with the physical or tangible principles of consumer-brand interaction but can help to engage emotion, sentiment and feelings about the relationship. Qualitative research also aims to "…express reality and attempts to describe people in natural situations," (Krueger 27). Most data collected in qualitative research methods should not be applied to general populations, as findings in quantitative studies would be.

While both qualitative and quantitative research are equally important for companies to conduct, it can be difficult to do. Seldom can one person oversee and create studies to obtain both types of research because "it is unusual for one person to be equally skilled in both quantitative and qualitative research or to be equally enthusiastic about the ability of the two approaches to find the truth," (Morrison 23). Despite the difference between the two, there is always a need for research, and recently there has been an increased demand for it.

When looking at the changes in consumers over the past two decades, it is clear why there has been an increased demand for consumer data. After the advent of the Internet, marketing communications could no longer be one way. Seth Godin, who Bloomberg BusinessWeek has deemed a "Marketing Guru" (Scalon), has published numerous books on the changing environment of companies' communications with consumers. His prevailing theories

are that traditional mass-media advertisements have a decreasing effect on consumers, and that capturing their attention is increasingly difficult. He also preaches the notion of "turning strangers into friends and friends into customers," (Sanlon). He describes interactions with customers as conversations. Firms no longer rule the market, the power lies with the consumers to dictate trends. This means that corporations can no longer flood the market with products or services they believe consumers will want, and use sales pitches or advertisements to increase demand, there must be contribution and input about what expectations the consumers have.

One of the challenges that corporations were faced with when adapting to this shift in the market and communication was the diversity within markets. When each consumer has an opinion the results, while sometimes falling into similar spectrums, can be various. The realization that "…customers can no longer be lumped together in a huge homogenous market, but are individuals whose individual wants and needs can be ascertained and fulfilled," (Pine 6) helped companies to begin shifting strategies to make relations and even products customized and unique for each individuals. Techniques like mass customization and more developed CRM plans were enacted and utilized to help reach the new customer-centric market.

On one hand, the shift in the market helps to explain the growing trend of companies gravitating and emphasizing quantitative data. In order to understand who is interacting with a company, how frequently they do, and what amount they spend, in addition to a myriad of other personal details about the consumers, helps the brand understand who their customers are. However, there also seems to be a disconnect with this trend. In a market where consumer opinion, needs and feelings (sentiments that usually are defined by qualitative research) are becoming dominant, it would be reasonable to assume that qualitative measures should have a vital role in a company's research. It is true that qualitative studies often lead to quantitative

ones, but with programs like Salesforce.com, which are almost exclusively quantitative-based, becoming the standard, it seems that qualitative research is being left out of the equation. This could be in-part due to a failure of qualitative methods to adapt to the digital world as well as quantitative methods have.

Traditional Qualitative Research Methods:

Traditional qualitative research methods are numerous and diverse, but all have some basis in understanding the consumers and their thought patterns. Two popular ways of gathering this information are participant observation and focus groups. Understanding these two methods is crucial to understanding how qualitative research can make the jump into the digital world.

Participant Observation:

Participant observation is an emic ethnographic analysis, meaning that it is an analysis of a culture from within that culture. This method of research and analysis can "…give us access to our participants' thoughts and feelings so we can understand how they create their worlds," (Morrison 44). This can be an ideal source of qualitative data because it not only helps a company to understand the mindset of a consumer, but their environment, interactions and day-to-day lives. In participant observation, a researcher must participate in some capacity in the activity or habit that they are studying. For example, if they are looking to learn about shopping habits of suburban mothers, they could select specific subjects who fit the requirements and shadow them on a typical day of shopping.

Researchers must be careful and spend time selecting the subjects for participant observation. There are many different methods to finding subjects, from references from clients, to subjects recommending other subjects; there is no right or wrong method, as long as the subjects are correct for the study. After subjects are selected, it is the job of the researcher to

begin earning their trust. While it may seem like a strange step in a research project, it is necessary to overcome the observer effect. The observer effect is a term given to the reaction that most people have when they are conscience that they are being watched. There is a change in behavior, which prevents them from going about events, or saying things that they normally would (Morrison 54). If there is a strong presence of the observer effect, the data will be rendered useless, since it is not the natural reactions of the subjects.

Shadowing subjects or actually participating the activity being studied, are the most common ways that participant observation is conducted. The researcher may record conversations and interactions, but they must be careful with this, as it can increase the observer effect, and skew data. The data that is collected is aimed at giving the client a rich and comprehensive experience, which the researcher has experienced first hand (Morrison 53). This can be difficult to convey but use of pictures, videos, transcripts, etc. assists in the reporting process to put human faces to the experience.

Focus Groups:

Similar to participant observation, focus groups have been a traditional way to gather qualitative information. The theory behind focus groups is simple, gather a relatively small group of people together with a moderator and have a conversation about whatever topic is trying to be understood. Similar to the way friends would discuss any event or topic, the group should be comfortable with one another, open and honest. The way data is collected is by listening to what is said, and later analyzing the word, expressions, gestures, interactions, etc. of the people in the group.

As simple as this method sounds, constructing it can be difficult and focus groups "..demand[s] resources- specifically, time, talent, and money," (Morgan 65). Despite the casual

nature that some focus groups can be conducted in, the planning of it must be taken seriously, and this is where the factors of time, talent and money come into play. First it must be determined whether or not a focus group is correct for the study be conducted. In order to do this, a firm should outline specific questions they would like answered and goals of the research they are looking to do. After that, they can determine whether a focus group is right for them; if the goals are qualitative in nature, a focus group could be the right choice.

The next decision that must be made is whether a firm wants to do the focus group in house or hire an outside company to conduct the research for them. Hiring an outside company can be motivated by several reasons including "lack of internal staff to conduct the study, the need to produce high-quality data, or the desire to have a neutral party conduct the study," (Morgan 76). Outside researchers can be involved in many capacities from just moderating the actual focus groups, to being the lead on every step of the project from initial planning to final analysis and reporting. The firm doing the study must also determine the researcher's capacity and involvement.

Many firms chose to use outside researchers for moderating focus groups since they have had experience doing so. Morgan defines it as one of the biggest myths that individuals have about focus groups. While professional moderators have experience moderating groups, they may not have any experience in the field they are conducting research about. As Morgan states "the best moderator is…the one who can help you learn the most from the participants that you need to listen to," sometimes this can be a person close to the situation with no moderating experience because the group is close and comfortable with them, and other times it can be a professional who knows how to extract the information that is not easily attainable.

Moderators can have a significant role in the data that is generated and obtained in focus groups. Sometimes participants in the groups are not readily willing to give information because they do not know who is interviewing them, and they do not trust them. Again we see how to observer effect can have a negative impact on gathering the most accurate qualitative data. A moderator must use different techniques in order to gain the trust and navigate the minds of his participants in order to have them reveal answers to the questions he is trying to answer. This can be tricky since the data can only be collected at that specific moment. In other methods of data collection, researchers can have multiple attempts in order to find the answer to the questions, but focus groups are isolated occasions usually. While multiple groups can be arranged, they will not be the same people each time, so a moderator should keep in mind the mantra of Templeton:

> "I am about to meet 12 people I have never met before, in whose minds lie the answer to the puzzle I am trying to solve. Also this is the only chance I will have to crack their particular code," (Templeton 82).

The information form that focus group can be unique, and if it is not properly gathered a firm could lose a valuable insight into a specific consumer.

Templeton also outlined two truths about conducting focus groups that one must accept as part of the research methods: 1. "All people draw their responses from the same collection of possibilities," and 2. "People are truthful," (Templeton 109). The first truth asserts that what the participant thinks is not unique to them alone, someone else shares the same opinion, and they are never just random responses. The second asserts that people want to share their feelings and their responses are not falsifications.

After the data has been successfully collected, it is not enough for a research team just to leave a transcript of what happened. While there is raw data in this transcript, it may not be

readily usable for the firm. A researcher must provide an analysis of the group, a report with findings on what conclusions can be arrived at, and recommendations for either further research or actionable business plans. There are four main ways that analysis can be done: transcript-based analysis, tape-based analysis, note-based analysis, and memory-based analysis (Krueger 143-144). Each method has different strengths and weaknesses; transcript based is usually the most time intensive and most rigorous, while memory-based is the least. Memory-based analysis relies solely on the memory of the moderator and the report is delivered instantaneously which can be gratifying for firms who sit in on the focus group and need fast results. Note-based relies on field notes and summaries of the group which can later be supplemented with a recording of the group. This method can take about 8-12 hours to prepare a first draft of the report. In tape-based analysis, an abbreviated transcript is prepared from listening to a recording of the group and contains comments related only to major topics discussed. This method usually takes around 12-18 hours to prepare the first draft. Transcript-based analysis is when the full transcript of the group is written and supplemented with field notes and debriefing discussions, to later prepare a report form. Anywhere between 60-96 hours can be spent preparing the full transcript and the report (Kruger 143-145).

Limitations of Traditional Methods:

Each of these methods has been in use for many years, and has yielded great results for different firms. However, each comes with a set of limitations that can lessen the amount or quality of the information received. The first limitation is finding the participants for each method. As mentioned with participant observation "the two most important steps in fielding and ethnographic study are *gaining access* to the context you want to study and building trust with your participant," (Morrison 48). It can be simple to find the situation a researcher is looking to

study, e.g. going to a mall in order to observe the shopping habits of mothers, but gaining access can be a different issue. In participant observation, the participant must be told and agree to being followed. While in focus groups, the group is entitled to know that their group is either being watched, recorded or in some cases both. Despite the potential to increase the observer effect, it is necessary that participants in studies be aware that the information is being collected and opt-in to the study. It becomes an issue of ethics to collect a person's information or record their actions if they are not aware of the situation. Finding willing participants who fit the demographic and psychographic for the study is one of the most difficult aspects of organizing qualitative research. If correct participants cannot be found, the whole study can be terminated, missing out on an opportunity to gain insight.

Another limitation when conducting traditional qualitative research is time. Methods such as focus groups and participant observation lend themselves to being constrained by time and it can be tricky especially in focus groups to obtain the information a company needs in such a short period. Each person in the group has a unique opinion and "for sessions that last less than 2 hours, it is vital to maximize the output from the group while they are in the room," (Greenbaum 32). While a good moderator can extract the necessary information from participants, it is never guaranteed that everything on the participant's mind was disclosed. As soon as the group is over, the opportunity is over and a feeling or opinion that could potentially be extremely useful may be lost forever. Hosting a series of focus groups on a single subject decreases the chances of losing an opinion, but is still not a guarantee that all possible feelings are accounted for. Even when conducting multiple groups, each one is only a single instant. There is no possibility for continuously collecting information and updating results based on new findings. Setting up a focus group takes times, careful planning and usually money, so continuously conducting them is

often not a possibility. Also, the option to spontaneously conduct a group for a new project is often difficult and may not yield the best results since the proper planning and time did not go into it.

Qualitative research methods can also be very costly. Each participant usually needs some form of compensation, as does a moderator and researcher to prepare a report. The compensation can vary depending on who the participants are, e.g. it is on average cheaper to conduct a focus group of every day people than one of CEO's, and the moderator. Bill Weylock, a leader in collection of qualitative research, president of Brand3Sixty and senior partner of Gen2Advisors (The Team), has stated for his most recent consumer focus group, the initial cost would be between $7,200 to $8,600 for each group. In addition, it will cost about $18,000-$20,000 to prepare the report of the findings. In total Weylock estimates that the total cost for the study will be around $100,000. One of the reasons why most companies might ignore qualitative research now could be how costly it is, especially when compared to the falling costs of quantitative research. It has become a large barrier to entry, and not every company can afford it.

Qualitative Research's Transition to the Digital World:

Similar to most methods of research, qualitative research has begun to make the leap to the digital world. These methods can take on a few different forms such as chat rooms, discussion boards, videoconference systems, and social networks. Each of these methods could potentially have a moderator, the way a traditional focus group would, to guide the conversation and lead the participants into giving the information that the researcher is looking for. While chat rooms and videoconferences have the same limitation of time as traditional methods do, social networks and discussion boards allow for continuous conversations (Morrison 117-140).

There is still an issue of finding participants though. All research methods, regardless of whether they are traditional or digital, must be opt-in. Participants should willingly give their opinions to researchers and have some knowledge that what they say could be seen or heard by many more people. When videoconferencing, it is obvious that the people on the other end must be asked or invited to the discussion and accept that invitation. Chat rooms, discussion boards and social media sites can have slightly more flexibility since it may not necessarily require an invitation. Either researchers can send out invitations to consumers to participate (or in the case of Facebook, they can make a post, in the form of a question, prompting the users to respond) or users can find the board/chat room/social media site on their own. When the consumers respond or answer they become research participants.

This method of qualitative research through social media though seems to produce an obvious bias. In order to see most company posts on Facebook, a user would first need to "like" the page. The assumption that can be made from this, is that if a user "likes" a page they must need to actually like the brand, or at least have some positive feeling, or at least interest in further research of it. Whatever the reason is that a user decides to "like" a page, it does mean one thing: the user willingly chose to have more interaction and communication with this brand. This could lead to a bias in how they interact with the brand. Possibly it could mean that they favor it more and would share more positive experiences, and adoration for the brand, but it could also be the exact opposite. Some customers may "like" a page simply to complain, in this case comments generate would be customers who are already dissatisfied and are not truly looking for help. While the Facebook prompt may find participants easily, and can yield data, it seems that it may not be the most reliable source that can be made into general ideas or actionable recommendations.

The Twittersphere's Landscape:

While the use of Facebook for research may not seem like the most reliable source, it is one of the methods of conducting qualitative research by using social media. With social media sites growing though, new opportunities to conduct research should be explored. Twitter is a micro blogging social network, meaning that users can share short posts of 140 characters or less with people that "follow" them. Currently the site is growing faster than both Facebook and Google +, and is estimated to have roughly 288 million users accessing the site at least once a month (Holt, Half a Billion). These users are generating enormous amounts of new content with about 5,787 new tweets shared every second (Holt, Twitter in Numbers). Users also have the option to add a hashtag to their tweets, which can be used to search the "twittersphere" for tweets with the same tag. Hashtags or words that are most frequently mentioned on Twitter are called "trending topics," which are featured in a bar on the left hand side of the Twitter webpage. They can be separated by geographic location or can be "tailored trends" which make recommendations based on information collected by cookies saved with a user's account.

The Case for Qualitative Studies on Twitter:

The content on Twitter can be diverse, from companies promoting deals, news sites giving updates on current events to users just tweeting mundane facts about their individual lives. With users sharing their opinions, thoughts and feelings on Twitter, it would seem that the Twittersphere would be the perfect place to conduct a qualitative study. Traditional researchers may be skeptical of using Twitter for qualitative research since the participants would be generating content without prompts or guidance. But when applying principles of traditional qualitative research methods, Twitter actually becomes one of the best sources under the correct conditions.

Templeton gave two axioms to be accepted without question, which were that people are honest and their responses come from a pool of possible responses that all people pull from. These assertions help make a strong case for using Twitter for research. When applying his first axiom, it is assumed that users' tweets are always truthful and reflect their real opinions, beliefs, and ideas. The second axiom insures that anything one user might say, similar to one participant's response in a focus group, is not just a random fact that can be discarded. It is an opinion that is likely to be shared by many other people and needs to be examined and accounted for in analysis of the research.

While the axioms help to support the legitimacy of Twitter as a research method, another important factor that Templeton mentions in his book shows why Twitter may be a better source of research than the traditional methods. He states that "if the sender understands me to be both respectful and interested, they will keep transmitting until they are satisfied that the message has been received," (Templeton 109). People naturally want to share their experiences with people they trust, and believe will listen. As previously discussed, one of the biggest hindrances when conducting either focus groups or participant observation studies is the observer effect, when participants do not give natural or regular responses due to the feeling of being observed. The only way to overcome it is to build trust with the participants, which can be difficult at times. Twitter naturally solves this problem. Users on Twitter, whether consciously or not, trust the site. While accounts can be "protected," meaning that a user's tweets cannot be seen or search unless the account is followed, less than 12% of users enable this feature (Beevolve). Twitter's privacy policy makes it known that tweets are public; it even highlights a section stating, "what you say on Twitter may be viewed all around the world instantly," (Twitter Privacy Policy). With this knowledge, users are still posting everyday. For the 88% of accounts that are not protected, the

observer effect is not a factor. The platform has built the trust that moderators and observers in traditional qualitative studies work so hard to build. By conducting studies on Twitter, researches have a large, global group of participants who are opting in to share their opinions. This pool of participants is difficult if not almost impossible to attain in traditional methods.

The research that can be conducted on Twitter also has the advantage of not having a time constraint. Since users constantly update their Twitter by sharing new tweets, the research can be continuous. The problem of the single instant to discover answers that is present in traditional qualitative methods would not be a dilemma when using Twitter. As Templeton stated people communicate and share until they believe they are understood. Since they are tweeting to a general community, and there is not always a response, users may not always feel there is a resolution or people understand them. Also once a tweet is shared it is permanently available within the Twittersphere. By using Twitter, qualitative research can become comprehensive of time, and since each tweet has a timestamp, trends can be sorted into timeframes when analyzing the information.

It is important to note though that when using Twitter for research there is a limitation with the "participants." While Twitter is a large social media site with over 500 million accounts, and 288 million of them being active, not every person in the world, who may be available to traditional studies, is on Twitter (Holt, Half a Billion). Certain companies or industries would not benefit from conducting this research. In order to determine which companies or industries could benefit from Twitter studies, it is important to look at the average demographics of Twitter users. A distribution of Twitter users' ages is shown in Figure 1. Almost three-quarters of the total users are under the age of 25, meaning that the primary users are millenials. Since they are using a social media site, they are probably more tech-savvy then their counterparts who are not using

the site. They may not be interacting or tweeting about certain industries or companies simply because they are younger and do not have ties or interactions with them. The distribution of gender on Twitter, as seen in figure 2, is roughly even. So the issue of skewing results by gender can be negligible.

When considering the participants for a qualitative study on Twitter, it must also be noted that the researcher will have less control over the participants. In traditional methods, there is usually a painstaking process in order to find the exact target to participate in the study. Researchers try to ensure that they have the right participants in order to obtain relevant information, which can be extremely difficult. However, when using Twitter, the researcher does not get to pick their participants, rather, the participant (potentially unknowingly) chooses to be a part of the study. When conducting a Twitter study, it must be noted that the only indication on who the users are may be the general statistics on the site. This does not negate any research but the study must be conducted with this frame of reference. More responses will be given from a more diverse group of participants, which could lead to a broader view of opinions. This could lead to a lack of focus, but will also help to formulate more targeted and accurate recommendations for further research.

Geographic location should also be considered when conducting a qualitative study Twitter. Almost 51% of all Twitter users are from the U.S.; the U.K., and Australia are the next two countries with the highest percentages but trail behind the U.S. with 17.09% and 4.09% respectively (Beevolve). With the volume of tweets that are generated by users in these countries it could be difficult to try and research a company or industry that does not do business in any of them. It can also become a problem if searching a brand name that is the same across languages, because the tweets may be in a foreign language. Depending on the person aggregating the

tweets, it may not be possible to use certain tweets, simply because they do not understand the language that they are written in. The ideal company to conduct qualitative research on Twitter is one that has a presence in the tech world (a presence on social media is even more preferred), is geared toward millenials, and has a presence in the United States.

Twitter's Current Role in Research, Bluefin Explained:

The use of Twitter in marketing research is beginning to grow as a methodology. Bluefin Labs, a spin-off of the MIT Media Lab, launched "machine learning technology that makes a direct, real-time correlation between the shows and ads audiences are watching on TV and what those audiences are saying about the content via social media streams," (Van Grove). They are able to measure engagement by searching the site with an algorithm that allow it to link certain ads or T.V. shows to the source. Bluefin also released Bluefin Signals which is able to quantify it user data to show factors such as the highest response levels, number of comments an episode receives, or response share, percentage of a programs share of social response within a time of day (Warren). The tool also allows users to see a gender distribution for the show being watched and the affinity of viewers who watch one show for another.

Bluefin has been able to conduct research on social media for television shows and commercials using a quantitative method. The viewer response and engagement tools are extremely useful for brands and companies looking to gain an accurate gauge on how socially viral the shows or ads are. This is important for brands to understand since the second-screen experience, when viewers use tablets, mobile devices or laptops to surface the web or perform other activities while watching TV (Belam). With the growth of mobile devices, more consumers are engaging in social media and other Internet activities while watching television, meaning that their attention is split. Traditional commercials may not be viewed as closely as

they have in the past, so it is important to be able to gauge the engagement of viewers for the commercials. Bluefin allows the engagement to be measured in real time since users are taking part in the second screen experience. This information may become vital for brands because it can help them to determine if an advertisement is effective or if it would be better suited on another show or channel.

While Bluefin is pioneering quantitative social media studies being one of the first companies to really explore research methods in the social media, one question still has yet to be answered: what about qualitative research? While there are many justifiable reasons why Twitter is the perfect medium to conduct research in, especially qualitative research, there seem to be few companies that have yet to explore and take advantage of the array of information on Twitter. I believe that there is a way to easily adapt traditional qualitative research methods so that qualitative studies can be conducted on Twitter.

Conducting Qualitative Studies on Twitter:

As I have mentioned previously, the demographics of Twitter users put a restriction on the companies that can use this method of research. The ideal company is one that is involved in the tech industry in some respect (preferably with a presences and social media), is geared toward millennials, and conducts business in the U.S. If a researcher is unsure as to whether or not a company fits these general criteria, they can check if the research is possible by going to Twitter, and typing the name of the company or industry into Twitter's search bar. After a list of tweets, people, videos, etc. will be displayed, but the way to actually search for the content needed is by selecting the "All" button next to the Tweet stream. The tweets that will be displayed will be in real time, and all will either have the searched word in them or it may be in the "handle," the name of the Twitter user. From this stream, the researcher should begin to read

some of the tweets that are featured. If there appears to be enough content about users' feelings, emotions, or just general comments about the searched word, it would be an appropriate subject for this method of research.

Collection: Getting the Insight of the User:

After a company or industry is found to be appropriate for this research method, the collection of content must begin. Unfortunately, depending on the search that is conducted, there may be a lot of irrelevant, promotional, or news article tweets. For the purposes of a research method, all of these should be ignore. While they may be an important factor in quantitative studies that track reach, engagement, or number of mentions, they offer little to no insight into how the consumer views the subject of the study. These tweets are simply "clutter," which needs to be sorted through and eliminated in order to conduct a meaningful qualitative study. All tweets from accounts of major news sites, other brands, or any form of paid promotion, should also be considered clutter. The amount of clutter can vary depending on the subject, subjects who have some sort of link or option to post on Twitter embedded in the site, will have a higher level of clutter, than those without a connection to the twittersphere.

After sorting through the clutter and finding a relevant tweet, it should either be screen-shotted or transcribed into a document. A relevant tweet can take on many different forms and expressions. Since Twitter only allows for 140 characters and the language tends to be more colloquial, at first glance, some may not appear to be legitimate sources of research. However, the language style of the tweet should be overlooked, and the general content should be considered. Sometimes it can be difficult to determine if a tweet is usable or if it is simply clutter, however if the tweet expresses some form of opinion, emotion, sentiment or feeling, about the subject be researched, then it should be captured/collected for review and analysis

later. While scrolling through the search, it is possible that the search will update and show a certain number of new tweets available. For more diverse results, this update should be ignored, and the researcher should continue to go further into the past tweets. By updating the feed, it is possible that a researcher may scroll to the same point he started at. When this happens, it creates a redundancy in the process that can be eliminated.

One of the advantages of this methodology is the option for continuous collection. Time is no longer factor as long as the subject is having some form of interaction with the consumer. Tweets can be collected for an hour, three hours, one hour a day for three weeks, bi-weekly, etc. Time no longer is an issue since content is going to be constantly generated by the users. While it may seem that something could be missed while not monitoring and collecting info, similar to finishing a focus group and closing a door, it must be kept in mind, that the amount of opinions that can be collected is far greater than can be done in focus groups. Monitoring a search for only an hour, has the potential to yield opinions from hundreds of different people. With the larger diversity and quantity of participants, it is less likely that any crucial fact will be missed. As mentioned by Templeton, the opinions come from a pool or possible opinions, meaning that some users will have the same opinion. By capturing more participants, it is unlikely that something will be missed. The sheer volume and number of opinions gives it the advantage and separation from traditional methods.

The frequency of collection depends on the subject being done. A good general practice is to allot time daily for at least a few days in order to capture a variety of responses. While tweets can be collected at any time of day, it is better to try and conduct collection during the day between 11:00 am and 3:00 pm since that is when the highest volume of tweets are sent out (Cheng). Since this is the time of day that Twitter users are most active, it is more likely, but not

definite, that it is when there is a greater likelihood of a tweet relevant to the subject of the study would be sent. However, if the subject has a specific timeframe, such as a television show, which airs Monday at 8:00pm, it would be best to begin conduct the search around that time, and should continue after. It may also be a smart practice to continue the search sporadically throughout the week, in order to see if there are any comments being made. However, there is no set rule or guideline for the amount of time spent collecting tweets. It is dependent on the subject and should be determined on a case-by-case basis.

The number of tweets to be collected can also vary greatly. Most quantitative studies assert that more data collection must be done to find legitimate claims. However, in a qualitative study, since the data analysis relies more on the content than the frequency, it is not necessary to always collect massive amounts of tweets. Having too few tweets though can result in poor analysis and a limited view on the subject. It is prudent to try and collect more tweets than less for this reason. Having too many tweets can make the analysis cumbersome and result in poor analysis and recommendations. Similar to the time frame, number of tweets collected must be determined on a case-by-case basis. During the process of collection though, if certain opinions are continuously repeating themselves and no new ideas are being added, it may be a good indicator that the collection process has taken everything it can and should be finished.

Collection, Special Cases:

During collection, certain instances may occur that must be accounted for and collected differently than a normal tweet. Twitter has the option to tweet at someone by using the "@" symbol. After the symbol, twitter users can type a handle of another user and they will receive a notification that someone has tweeted at them. It is a way to interact with other users and can be an important factor in qualitative research. When conducting focus groups it is noted that they

are “an exercise in information gathering. In practice, however, they are all about relationships,” (Morgan 83). One of the most important parts of gathering information in qualitative studies is observing the interactions and relationships between individuals. Even in participant observation it is possible to make notes and analyze the way the participant interacts with any others in the situation. From the nature of the site as a microblogging platform, it may seem as if interaction and relationships are non-existent. Upon further observation of the site’s features, it shows that there are relationships in place. By picking who to follow, users create a community for themselves, and their timeline can be made up of a close group of friends, news sites or any other combination. Combining this community with the feature of tweeting at someone, it is quite evident that interaction is possible on Twitter, and conversations can be held on the platform.

When there is a conversation, it is noted on the tweet in the timeline, by clicking on the tweet itself, the conversation can be expanded and it is possible to see the complete interaction between followers. It is important to be aware of this feature and view conversations to see if the information in them is relevant and not more clutter. Conversations, like those in traditional qualitative research methods, can yield more data than singular answers because the people who are interacting view each other as peers. It is not a moderator or professional who could potentially intimidate the participant, but someone in their situation, with feelings that may or may not be similar. Regardless, the conversation in a focus group is important because the interaction can help to further develop a participant’s thoughts or feelings more so than they originally were. When there is a conversation on Twitter, it should be observed and collected as a whole, singular unit, rather than individual tweets, since the interaction may yield different results than a singular tweet would.

Another special incident that may arise is if Twitter users attach any content or include a link in their tweet. When an image or video is included in a tweet, the tweet should be expanded so either media can be previewed. The researcher should then determine the relevance to the subject. If it is relevant, the researcher should collect the tweet with the media. Links can create more complicated situations since they involve more and new content. Generally, they should not be followed or included. While it may seem like discarded information that has potential to be valuable, it must be kept in mind that the point of the study is to gain insight of the consumer's opinions, not a general study of the subject.

Analysis Part 1: Sorting:

After the collection process, an initial analysis must take place in order to begin shaping the raw data into some form of trend or actionable information. While the collection process continues, some trends will become immediately apparent, and all the tweets should be grouped together by the topic. This process of sorting the tweets is the first step to discovering any trends or patterns. If a tweet cannot be sorted upon first read, but does not qualify as clutter, it should be collected and reviewed later. Initial sorting will help to reveal some early trends that can be elaborated on or explored more deeply in either another Twitter search or a different study. But tweets that cannot be sorted upon collection should be aggregated in a separate area, and review after.

Upon a second review of the aggregated unsorted tweets, new trends may arise, or some can fall into sorted categories that already exist. It is important to constantly review both sorted and unsorted categories, especially if a collection process is taking place over a long period of time. Periodically checking the categories also helps to see if there are tweets that can fit into another category or if the category had developed and needs either further sorting. While original

categories for example “comparison to competitors” may arise, during collection it may become evident that only one other company that users really compare it with. Findings like this should be noted and if a study is done later, a researcher could compare and see if a new competitor has entered the market or is gaining ground. It may also lead the researcher to conduct a study on the competitor and see if it faces similar issues, or if users find it completely different than the original subject.

Analysis Part 2: Creating a Report:

When categories are finally complete and the number of unsorted tweets are either eliminated or minimized as much as possible, further analysis must be conducted. While this is a qualitative study, a little use of quantitative methods can be helpful to see trends. One way to do this is to simply create a spreadsheet, on the first line list the total number of tweets collected (for simplicity purposes, include interactions as one tweet, unless there is more than one distinct discussion, then count it as multiple tweets). After that list each category and the number of tweets in each, again include interactions as one tweet. Find the percentages of each category, and if there are sub-categories find both the percentage within the larger category and percentage of the total tweets. While this does add a quantitative form of analysis, it can be good to have a number-based support system to present to non-qualitative minded people. Since the current trend is for companies and individuals to rely more on quantitative research, having some form of number base in a report could help to justify and give credibility in the eyes of quantitative-minded people.

After every tweet is properly sorted, and some form of quantitative spreadsheet is made, it is necessary to make a report on the findings. Simple aggregation of the information is not enough; similar to how a transcript of a focus group cannot be considered the report of the focus

group. A report must include an interpretation of what is being said, and draw conclusions from it. The conclusions could take the form of recommendations, if the company doing the study is open to it, ranging from structures for further research, e.g. how to design a survey, to actionable changes in the company. Sometimes the best use of findings in a qualitative study is actually the suggestion of what should be researched in a quantitative study. Most of the time, it is difficult to apply what is learned in qualitative research to general populations, since the nature of quantitative studies deals with a sample supposedly representing a larger popular, findings from quantitative studies are more likely to be applied to generalized populations.

One of the easiest ways to begin the report is simply list the categories that tweets were sorted into with a brief description of them. While it is not necessary to have the reader of the report see every individual tweet, a more general insight into what is being said can be useful to the reader. Organizing the report by category can be a helpful tool, but it is not necessary to do so. Some findings may be general, given the 140 character limit, such as "I don't like [some feature.]" While this seems like a trivial detail, it should be included in the report since it can lead to a recommendation for a further, more in-depth study about the feature attempting to find what the issue could be. The report should also include a section about the users' general sentiment toward the subject: mostly positive, mixed, or mostly negative. This helps to gauge how users are feeling and is important for a company to understand. Any further insight that can be given to the feelings should be given.

Reports can vary in length, since there is no exact way to create them. While a researcher may collection over 500 tweets and sort them into thirty categories, only a few may be valuable for the report. Some categories may not be as actionable, or it may not be possible to engage with them as deeply as others. So the researcher must also determine what needs to be included

and excluded from the report. It may be a safe practice however, when leaving out analysis of categories, to still mention them and their summary, in case the person reading the report finds them to be significant. The reader may want to request additional information about the category, or for the researcher to continue collecting tweets on that specific category.

Other Factors to Consider:

It may also be a good practice to work with the company before collection begins to see if there is a specific objective of the research. With this method, it is not always necessary to outline specific or precise goals. This form of qualitative research is strictly about listening to the conversations that are already taking place. Without the interference of a brand, there is no observer effect, and each user feels free to say exactly how he feels. If a company decided to use their corporate account to begin interacting with each user, it could yield results, but it also may instill the observer effect into the users. This practice takes on more of a social CRM aspect, and its uses in qualitative research should be considered. It may mean reaching out to the user and asking them to elaborate on an experience or feeling, possible by sending an email if it is too long for a tweet. However, adding in this feature can change the nature of the study and mimic participant observation or surveys if explored too much. Just by listening to the Twittersphere enough information can be collected to draw conclusions.

The Working Report:

The methodology can be conducted multiple times and for anytime period, as previously stated. This can lead to "working reports," where a company wants to see how user response changes as a result of something the company is doing. Working reports should not only include categories but the date that each category was first created and a timeline of the opinions. When the time period the working report was being conducted has finished, a summary of the changes

should be included for each category before the timeline is given. This serves as an executive summary so a person glancing through the report can have a general idea and if they wish to learn more can read through the timeline. If any new categories arise during the time of the working report, it should be noted when they first were discovered, if it was a response to any event, if it was an isolated instance or if it was continuous, and what changes occurred if it was continuous. Working reports can collect a broader range of information since they deal with longer time periods and will being dealing with more aggregated tweets. It is important to stay organized using this method since the sheer amount of information can become cumbersome. A good practice would be to transcribe the tweets into a word processor where a search function can be used. This way the categories can be searched and double-checked quickly and easily over the long time period.

While a working report may seem like a large project, requiring time and resources, it really is not a huge burden. Unlike traditional forms of qualitative research the method using Twitter is relatively inexpensive. Other than the cost of a good researcher and a computer to access the Internet, there are almost no costs. Signing up and using Twitter is free of charge, and since there are no algorithms or additional technology requirements, there again is almost no cost in running this study. This is why it could be desirable for companies to run this type of qualitative research; it is a way to still listen to users but does not require the heavy investment that would be involved with traditional methods of qualitative research. However, similar to moderating a focus group, that does not mean that they can just be conducted by anyone. Someone who is generally familiar with social media and the language and shorthand that used on Twitter is desirable. They must also have a level of understanding and insight into the users in order to interpret what users say and turn it into conclusions and recommendations.

The Method in Action: The Spotify Case:

This method can seem simplistic and vague when explained, but the uses of it can be quite interesting. To test the method I have prepared an example of the research that can be done with it. The subject of this study is the company Spotify, a desktop software that allows users to stream music. There is a free version of the software that is supported by ads, an "unlimited" version, which is $5.00 per month, and a "premium" version, which is $10.00 per month. Both unlimited and premium do not have ads but premium also gives the user access to the mobile app and an offline mode (Sisario). The company is growing quickly; they recently launched in 8 new countries and have about 24 million users, 6 million of whom are paying subscribers. Spotify is an excellent choice for this method of research because they are a tech company, who has some presence on social media, and more importantly their demographic is primarily millenials. When the website statistics are reviewed on Alexa.com, it is seen that the primary user is between 18-24 years old, and is accessing the site from a school. This information shows that the most people visiting the Spotify site, and most likely using the application are millenials. Spotify also has a unique name, that is not easily confused with any other company, saying or product.

Collection:

After determining my subject, I began the collection process. I decided to not spend time formulating any research goals or objectives since I was only doing the research as a test. I wanted to get a general idea of what was being said about the product, or if there were any features that were more notable than other. I also knew that after an initial collection, I may focus my search based on findings. Collection for Spotify was slightly difficult; Spotify has a feature where users can automatically tweet what they are listening to, see figure 3. This

generates quite a bit of clutter for the collection and it required me to pay close attention to what was being said.

The collection I did took place over the course of six days from March 22 to March 28, and I would spend anywhere between half an hour to two hours collecting tweets. I originally just took screen shots of each and put them into files labeled with the day they were collected. While I was collecting the tweets, I noticed a few patterns begin to emerge. The most evident was that most people were simply tweeting about whether they liked Spotify or not. The two sentiments came in many different forms, with a variety of vocabulary being used, but overall it was always apparent when someone had a positive or negative feeling toward the product. Other patterns I began to notice was discussions of the advertisements on the product and comparisons to other services.

Sorting:

But for the first three days, I did not sort any of the tweets, I was still unsure of what categories to choose and how they could be subdivided to gain further insight. But on the third day, after my collection I began to sort the tweets. I would simply create a new folder, title it with the category and begin sorting. I produced about six different categories on the first day and a rather large “other” folder. Collection and sorting on the remaining days was much quicker than the first few since I could instantly collect a tweet and drop it into a folder immediately. During these days of collection, I was rarely adding tweets to the “other” folder since my objectives and findings became clearer.

In total I collected 434 tweets, much more than I originally intended too. I created 13 categories while sorting and 15 sub-categories while sorting, which may also seem to be higher than it should, but each category does represent a unique topic that was being discussed by the

users. I then created a table to show the dispersion of tweets per category and sub-category, and the percentages of the total number of tweets, as seen in figure 4. When reviewing the char there were a few notable points. The first was the "most discussed" categories: *Ads* with 76 tweets, 18% of the entire collection, *General Positive* with 69 tweets, 16% of the entire collection, and *Comparison* with 60 tweets, 14% of the collection.

Ads also contained three sub-categories, *Misc, Trojan,* and *Attraction Formula*, which made up 72%, 22% and 5% of the *Ads* category, respectively. The *Trojan* sub-category pertained to a specific ad about Trojan brand condoms, which runs periodically on Spotify. Overall there is a strong opposition to this commercial being played. Despite a younger demographic, supposedly desensitized to topics about sexual interactions, there was only one comment that appeared neutral toward the advertisement, the other 16 all expressed some form of disapproval for the commercial being aired on the platform. This does seem somewhat surprising since commercials similar to these air on cable television, but it could offer a greater insight into Spotify's audience. It was only one of two commercials mentioned by name, the other being the "Attraction Formula" commercial, which received all negative comments. In the *Misc.* section, most of the comments were also negative about the commercials, however, they dealt more so with the music being interrupted rather than the ads themselves, as opposed to the Trojan ads. This became an important insight into how users feel about the ads, and how they feel about specific ads.

The next surprising find was the overwhelming number of positive comments, especially when compared to the number of negative comments. The *General Positive* category had 69 tweets total while the *General Negative* category only received 14 tweets, less than a quarter of positive's. At first I believe this to mean that generally, people are happy with the product and

there are not too many issues. However, when reviewing the other categories, it seems that when a user was going to tweet about their dislike for the service, it was really about their dislike for a specific feature, not the platform as a whole. For example, most complaints were placed in *Ads* rather than *General Negative*, this seems to skew the percentages when reading the table, but instead provides a unique insight into how users choose to interact with the product. Most are still willing to use it despite a few features they do not like, as opposed to discarding it as a whole.

The *Comparison* category showed that Spotify's true competitor is really Pandora, while other services such as Rdio, I Heart Radio, and Songza have not been able to build the following or the brand that these two companies have. Also despite Pandora's larger subscriber base, the company has 200 million registered users with about 70 million of them being active (Fiegerman), Spotify has generated far more favorable comparisons than negative ones.

Analysis:

When reading and analyzing the categories, a new idea had crossed my mind, since there was overlap between some of the categories, what could be gained by looking at the tweets of some categories together. It occurred to me when reading the category *Update* and *Knowledge of Product*, Spotify had recently released an updated version of the product, changing the user interface to a lighter color and releasing the "follow" feature. Despite the new features and layout, I was still collecting tweets stating that users didn't know how to use to the product. While the user interface was updated, some users still could not figure out how to properly use the product. This then lead me to the *Comparison* and *Interactions/Recommendations* categories, because users were tweeting at one another, recommending competitors with more friendly user interfaces. I then read through the *Premium* and *General Positive* categories, and after

considering all these categories and so many various tweets I was able to come to a conclusion: Those users who understand Spotify and how to use almost ALL of its features, are loyal and ardent supports of the product, while those who do not understand it, find flaws and are less likely to convert over to premium and more likely to try another service. This would lead me to suggest in my report (see figure 5:abbreviated sample report) that a study, possibly a focus group about user interface and methods of introducing the product to users would highly benefit the user acquisition and retention along with the conversion of free users to premium users.

The abbreviated sample report I have prepared as shown in figure 5, demonstrates how to present findings from the research method to the company. The report begins with a brief overview of the goals of the study, which in this case were rather loose and undefined, then it gives quick facts on the amount of time spent collecting tweets along with the total number that was collected. After the table in figure 4 would normally appear for the reference of the reader. Then a list of the categories and subcategories with a brief description of each, (only a few are listed in the sample, but in a full report all would be written out and described.) Next comes a brief overview of the findings with some general recommendations and conclusions. The report then is separated into categories to show the findings in each (again only a few are shown), followed by general conclusions derived from the interaction and relationships between each category. The report concludes with recommendations, and it is noted that a full transcript of all tweets is available upon the request of the company.

Conclusion:

Twitter has become an incredible resource for businesses; it allows them to connect with followers and consumers in a way that has never been possible. It allows for instantaneous spread of information, but not just factual information, opinions, facts and sentiment are all

shared on Twitter. Since it is a social networking site, most users feel safe posting somewhat private and personal information on their Twitter, because they do not have the fear that they are being monitored. The nature of Twitter and its users make it a perfect medium to conduct qualitative research in. There is no observer effect, so people are always comfortable and honest, and since it is instantaneous, there is the possibility for the constant collection of information, which has never been so easy to do. Since Twitter makes conducting qualitative studies so easy, hopefully the transition of qualitative studies from the traditional methods to more digital methods will begin to grow, similar to the way that quantitative research made the adaptation years ago. If more qualitative research is conducted, this can lead to a better understanding of how to use the available quantitative research tools and overall improve operations for businesses.

Figure 1: Self-Disclosed Age Distribution on Twitter

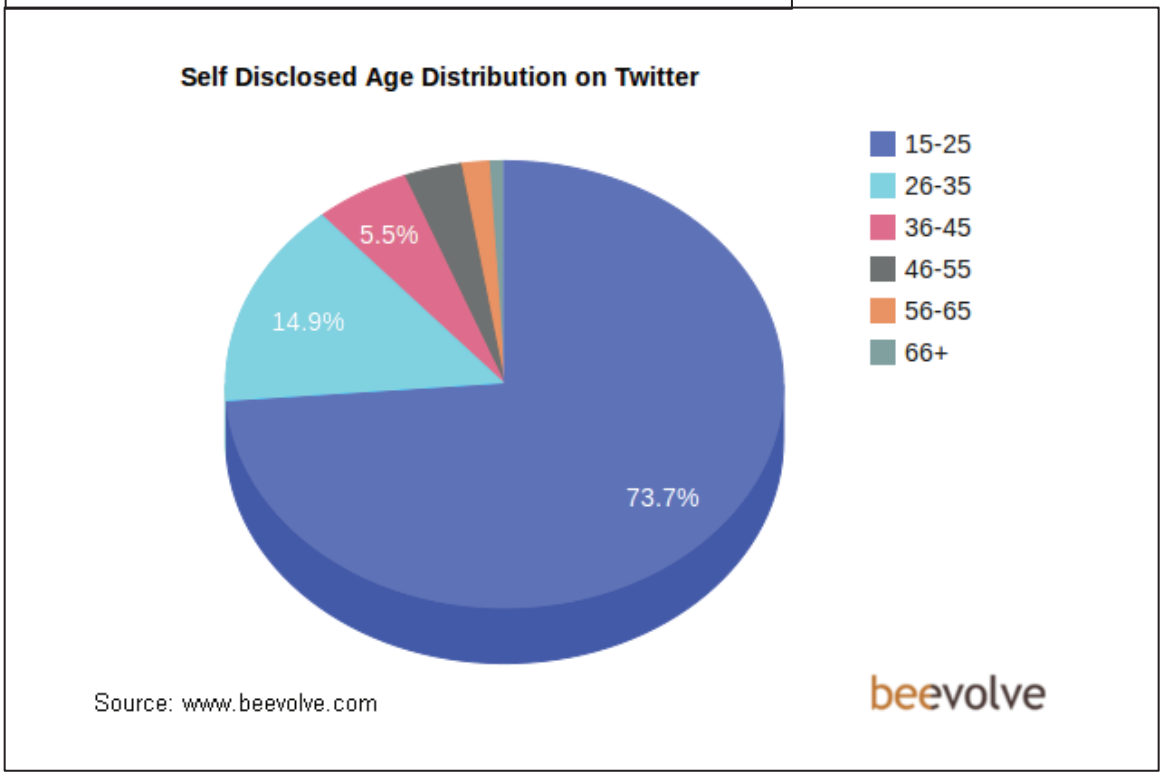

Figure 2: Gender Distribution on Twitter

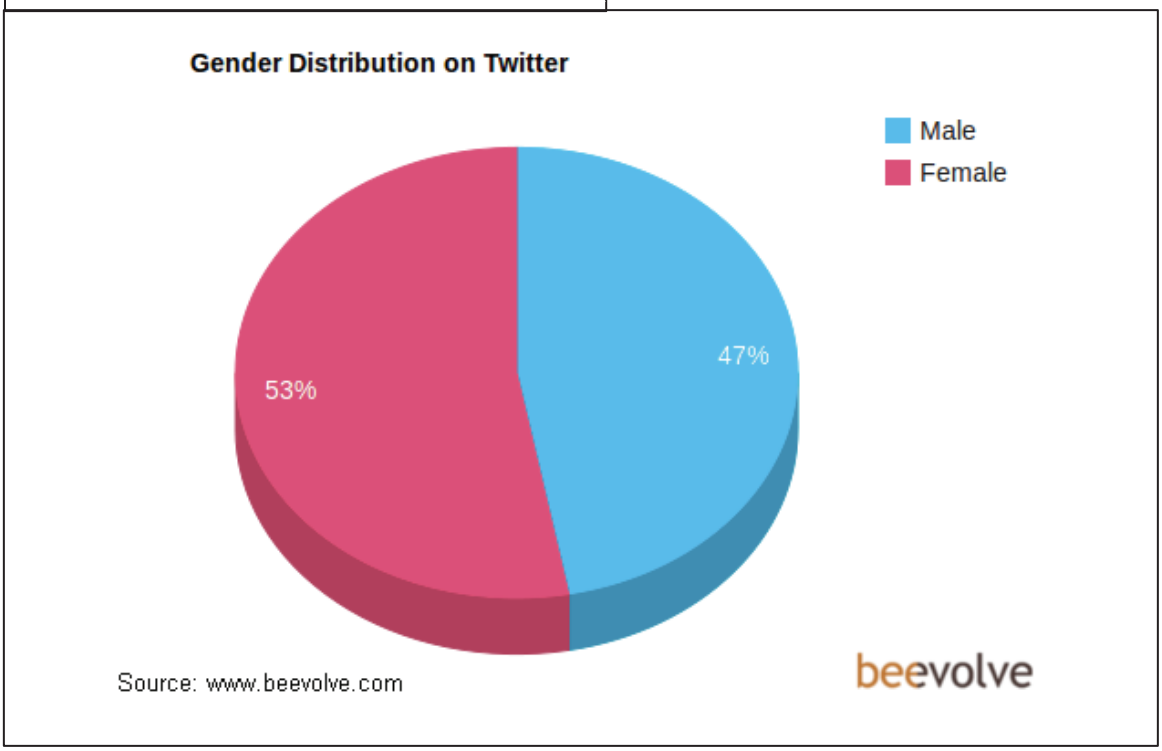

Figure 3: Spotify Clutter

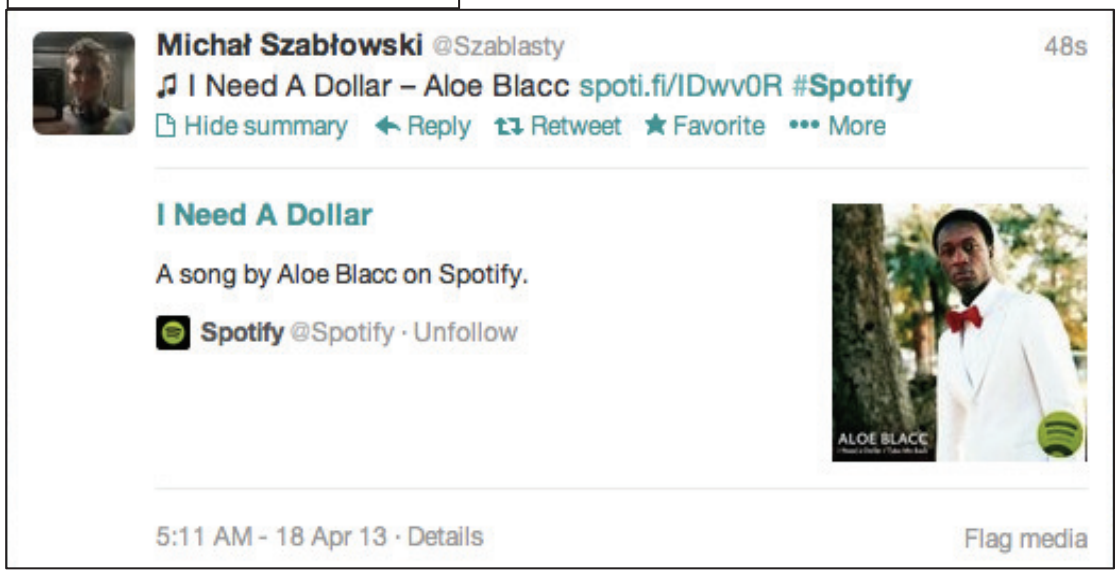

Figure 4: Table of Collected Tweets, Categories, and Percentages of Total

Total Number of Tweets Collected					434	100%
	Ads				76	18%
		Misc		55	72%	13%
		Trojan		17	22%	4%
		Attraction Formula		4	5%	1%
	Comparison				60	14%
		Misc		10	17%	2%
		Rdio		4	7%	1%
		Pandora		46	77%	11%
			Misc 12	26%	20%	3%
			Spotify Positive 28	61%	47%	6%
			Spotify Negative 6	13%	10%	1%
	Features				17	4%
		Misc		3	18%	1%
		Playlists		6	35%	1%
		Radio		8	47%	2%
	Functionality				25	6%
	General Negative				14	3%
	General Positive				69	16%
	Interactions/Recommendations				30	7%
	Knowledge of Product				26	6%
	Music Selection				29	7%
		Misc		21	72%	5%
		Discovery		4	14%	1%
		Recommendations		4	14%	1%
	Other				15	3%
	Premium/Free Trial				40	9%
	Restrictions/Caps				13	3%
	Update				20	5%

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