Twitter as a Social Marketing Tool: Modifying Tweeting Behavior in order to Encourage Donations.

Author: Claudia Gasso Climent
University of Twente
P.O. Box 217, 7500AE Enschede
The Netherlands

ABSTRACT:

In the era of Social Media, organizations are attempting to use this type of communication for marketing purposes. This poses the problem of how best to make use of Social Media to impact your target audience. For Cause Marketing, there is a lot of debate on whether Social Media can actually impact the donations raised for a certain cause. I focus on the impact of Twitter behavior by campaign organizations on the donations it receives for their particular cause. By analyzing Twitter data from 'The Movember Foundation' over their campaign in 2013. The variables for those analysis were based on Yang and Counts's (2010) model on the diffusion of information on Twitter; The Tweeting behavior of the organization, the number of retweets the organization obtains and the donations Movember received per day. Results indicated that Retweets are a moderating variable between Tweeting Behavior and Donations. The Tweeting Behaviors impacted the amount of Retweets, and the amount of Retweets had a positive correlation with the Donations received that day. This raises the implications of how best to use this information in order to raise as many donations as is possible, though further research should be conducted on similar organizations in order to see if this model applies to all types of Campaign Organizations.

Supervisors:
M.L. Ehrenhard
T.A. Van den Broek

Keywords:
Twitter, Social Marketing, Slacktivism, Donations, Tweeting Behaviour, Social Media.

1. INTRODUCTION

It is an undeniable fact that the internet has changed many aspects of our lives, and with it, the way we conduct business. Shopping can be done from the comfort of your own home, as can many other services, ranging from payment of bills to hiring freelancers. We use the internet to find information, watch movies and TV shows, and even seek relationships (Correa, Hinsley and Gil de Zúñiga, 2010) Some people have managed to build an entire career off of social media sites like YouTube and Instagram, and online communication has become one of the main purposes for going online (Jones & Fox, 2009). With millions of users online, it is not surprising that social media sites would hence be an ideal place to carry out online promotion and marketing. Over the recent years, Twitter has grown in popularity as a microblogging service, not only for individuals, but also for organisations. (Thoring, 2011) As with everything, however, the way in which the promotion is done is likely to affect its effectiveness. When done effectively, social media marketing can cause increased traffic to company websites, increase brand awareness, improve rankings on search engines, and even increase sales (Weinberg, 2009).

So the question here is simple, how can an organization market themselves effectively on social media? And what even constitutes an effective social media campaign? Although a lot of research has been done on the field of social media marketing, it surprised me to find that the articles and literature I came across all made reference to the idea of using social media "effectively" but none of them managed to define what exactly that means. Similarly, there are entire books for taking advantage of the benefits that Twitter can provide, such as *Twitter Marketing: An Hour a Day* (Hollis, 2010) or *Twitter Marketing for Dummies* (Lacy, 2010), both of which provide step by step detail on how to make use of Twitter as a Marketing business tool. And yet, through all of this research, I have been unable to find literature on what exactly makes a Tweet effective. A lot of the literature suggests using the tools provided by Twitter for statistical analysis in order to see which of your Tweets do best in terms of engagement, but I believe there must be some variables that affect all Tweets in terms of engaging your audience. Right now it seems that there's been a trial and error system in place in order to get to the idea that Twitter can be a great marketing tool, but there's a gap in the research looking into what exactly makes a Tweet effective when marketing. Movember has granted us a complete dataset of all the Tweets both from their Official Movember accounts for different countries as well as all the interactions those Tweets caused (such as Retweets and Mentions) which will be easily linkable with their donation data.

This is the question that I will attempt to solve with this thesis; "How does Tweeting behaviour affect the donations raised for an online campaign?" Simply put, the aim of this research is to try figure out what aspects of the way information was Tweeted triggered a reaction offline, namely said a donation.

Although there has been quite a bit of research carried out in relation to viral marketing, its causes and the motivation for information to be passed from user to user, a lot of it is still thought of as random and unpredictable, and even less research has been carried out on the knowledge relating it to cause marketing. The research is especially lacking the link between on predicting an outcome (donation) based on the way social media is used in the context of non-for-profit organisations. This thesis will attempt to assess the effect of online health campaigning over time, and give insight to our partner Movember by looking at what factors make a campaign effective to get donations.

2. CONTEXT

2.1 Social Media as a Tool for Activism

With the rising use of social media platforms, the idea of it being used as a tool for political change has polarized responses from seeing it as an integral part of modern political activism (e.g. Howard et al., 2011), to being dismissive and skeptical of its utility (e.g. Gladwell, 2011) and everything in between (Valenzuela, 2013).

What is evident is that, due to its abundant usage, people who engage in activism are very likely to be social media users. In fact, regardless of opinion on its effectiveness, the people who are involved in civic and political activities are frequent users of social media (Valenzuela, 2013). So the audience and the market for influencing collective action is readily accessible in these communication platforms.

In many ways, social media has already become a platform for the marketing of products, from video advertisements on Youtube to images and posts for products and companies on Facebook and Twitter. In the case of this investigation, the same principles of marketing apply. The American Marketing Association (2006) defines marketing as *the activity, set f institutions and processes for creating, communicating, delivering and exchanging offerings that have value for customers, clients, partners and society at large.* The issue in this paper is still an issue of communicating information to a target market or audience, the only difference is that in this case the marketing is social rather than commercial.

And that is exactly how Kotler and Lee (2008) define social marketing; "the process that applies marketing principles and techniques to create, communicate, and deliver value in order to influence target audience behavior that benefit society (public health, safety, the environment and communities) as well as the target audience."

The core of objective social marketing is therefore to enable social change by either increasing the adoption of positive behavior (such as regular doctor check-ups) or decreasing the use of a negative behavior (such as smoking) (Dann, 2010).

This development therefore renders the debate between whether social media is the most important tool for influencing collective action or not is irrelevant. It becomes a matter of how best to utilize this tool to make a lasting impact and reach the target audience.

2.2 Activism vs. Slacktivism

A 'slacktivist' (a mash-up of the words 'slacker' and 'activist') is someone who may be voicing their opinion on an issue due to a motivation by social status rather than interest in the underlying cause (Kristofferson, White & Peloza, 2014).

Research has previously shown that slactivists like to give support that is publicly visible to their friends in order to make a good impression (Kristofferson et al., 2014). They may wear badges, or post slogans and pictures on Facebook or Twitter, but not research into the cause or provide any conscientious support such as rallying in the street or contributing financial donations (Kristofferson et al. 2014).

The token support provided by slacktivists is considered almost worthless compared to that of activists (Shulman, 2009; Warren, Sulamain & Jaafar 2014), but that is not necessarily true. When looking at, for instance, raising awareness for an

illness and diffusing information, this type of support can be very helpful. Van Den Broek (2015) agrees that irrespective of motivation, higher numbers of participants attract more attention from mass media. King & Soule (2007) were of the same opinion, and added that this attention could also attract investors and 'real' activists. This would make sense since the larger diffusion of information would make activists and investors who may be interested in the underlying cause aware of the organization.

2.3 The Movember Foundation

According to their website (2015), The Movember Foundation is a global charity dedicated to raising awareness and funds for several men's health issues by challenging men to grow a moustache for the month of November. All participants start on the 1st of November with a clean-shaven face and don't shave for the rest of the month.

This essentially makes them raise awareness by being the literal "face" of the campaign, and wherever these men go, the idea is that the moustache will spark a conversation about Movember and hence the health issues they represent, therefore raising awareness. The moustaches can also be sponsored by friends, family or of course people on the internet, hence helping to raise funds. This makes diffusion a very important factor in the successfulness of their campaign.

Going back to our previous idea of using social media to 'market' activism, the objective of social marketing is very clear and aparent in this situation, for example in the case of prostrate cancer, Movember wants to enable social change by increasing the adoption of regular medical check-ups in order to be able to treat any possible cancer as early as possible. Once again, this demonstrates the issue at hand is how best to transfer this information to the target audience.

The use of the moustache as a symbol of support for the cause is also of great importance since it links back to the idea of slacktivism. It is an easy way to show token support, simply by not shaving for the month of November and announcing it on Twitter with a picture for friends to see. This helps diffuse the information and reach a bigger audience.

2.4 Predicting the Speed, Scale and Range of Information Diffusion on Twitter

Yang and Counts (2010) conducted a study attempting to predict the speed, scale and range of information diffusion on Twitter. Their study looked at information diffusion in the following way: if person 'A' made a tweet about Movember and person 'B' mentions person 'A' in a Tweet about Movember the information about Movember they made a link between the two users (Figure 1) which they considered the optimal way to approximate how A diffused information on a topic.

Figure 1.

Using that method, Yang and Counts (2010) tracked the diffusion of a topic at different timestamps by tracking who started the diffusion of that topic and then following up on the mentions and retweets of person A on that topic. They also tracked other individuals who may have started their independent diffusion on the same topic and hence built a diffusion network (Figure 2) only taking note of the Tweets that initiated or were part of a chain reaction (shown in blue).
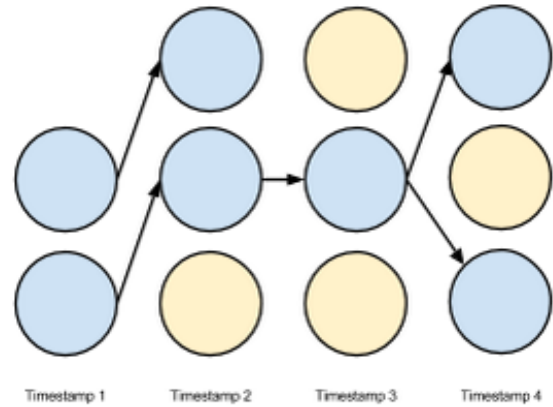

Figure 2 (Yellow nodes not counted into the network)

In their research, Yang and Counts (2010) wanted to see the relationship between Tweet characteristic and three different factors: the **speed** at which the information was diffused, the **scale** of the diffusion and finally the **range** of the diffusion, hence how far the diffusion chain continued on in length.

2.5 Hypothesis

The main issue as observed from the literature I have reviewed and from research, is how best to use Twitter in order to not only raise awareness for a campaign online, but also to engage the audience into supporting the cause in a monetary manner. This in itself described the issue of Slacktivism almost identically. Can we turn the token support of slacktivists (for example the growing of the moustache and posting it on Twitter) into the financial support of an activist? I hypothesize that the use of Twitter in certain ways will make individuals feel more connected to the cause and engage them in order to support the underlying cause.

Twitter has a very clear way in which information is diffused since the retweet function passes on the exact information that the campaign posts out to the followers of the user who retweets the information. It would therefore seem logical that the higher the diffusion, the more donations.

Hypothesis 1: The higher the number of Retweets, the higher the number of donations generated.

The diffusion itself however is affected by several different factors, as Yang and Counts (2010) found. It would be conductive to try to see in which ways the campaign organization can affect the diffusion, or retweets, of information.
By conducting a regression analysis, Yang and Counts (2010) found that the more a user posted about a topic the more quickly the topic was likely to be diffused. In general, Tweets that talked about the topic less than 10 days after it happened were more likely to spread more quickly, although in other cases the opposite was true. Therefore it would seem that keeping the conversation going about Movember would be important in the diffusion of information, as well as posting

frequently. So, in order to account for the speed of the diffusion, we will look at how frequently the campaign organization posts in a day.

Hypothesis 2a: The higher the number of campaign Tweets per day, the higher the number of Retweets

When thinking about the scale of information diffusion, since it is essentially about the information diffusing to the largest amount of people possible, the most logical way of measuring this in a way that is somewhat in control of the campaign organization would be their number of followers. The higher the number of followers, the higher the number of users that will see the post by the campaign organization, and therefore the higher the likelyness that more people will retweet it.

Hypothesis 2b: The higher the number of followers for the campaign organization, the higher the number of Retweets.

Finally for range, Yang and Counts (2010) found here too that greater posting activity and rate of being mentioned, as well as the use of links, were a higher predictor of longer chains. Since the length of the chain is not easily measured on Twitter, the most likely indication of the range of the retweets will be the amount of replies from the campaign organization, divided by the amount of Tweets about Movember on that day. The logic behind this is that since the rate of being mentioned is important for this variable, the way this can be checked is through the @Reply function on Twitter. In theory, if the proportion of Tweets about Movember is considerably higher than the amount of replies the campaign organization posted that day, we can asume that the information spread way further than can even be seen by the campaign organization, which is likely due to retweeting. This means that the less amount of replies the organization conducts over the total amount of Tweets about Movember that were posted that day, the more range the information had that day, which should indicate a high number of retweets.

Hypothesis 2c: The lower the proportion of replies over total Tweets about Movember, the higher the number of Retweets.

Finally, it would be important to investigate whether diffusion is even important as a mediator for the amount of donations generated. There's a possibility that the amount of Retweets themselves aren't a mediator to increasing the amount of donations, but that simply the campaign's Tweeting behavior is responsible for an increased amount of donations.

Hypothosis 3a: The higher the number of campaign Tweets per day, the higher the amount of donations

Hypothesis 3b: The higher the number of followers for the campaign organization, the higher the amount of donations.

Hypothesis 3c: The lower the proportion of replies over total tweets about Movember, the higher the amount of donations.

2.6 Causal Model

The model presented in figure 3 illustrates the expected relationship between the multiple variables described above as well as the diffusion as a mediator for the amount of donations.
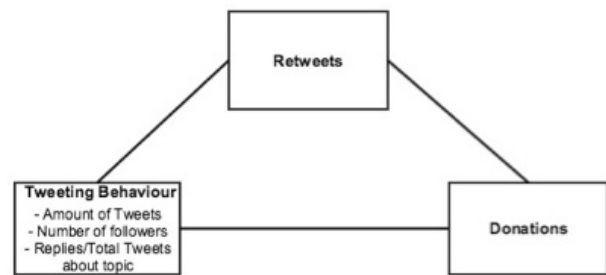
3. METHODOLOGY
3.1 Data sampling: countries
The dataset for this study contains the data of twenty countries between the period of 15-10-2013 and 15-12-2013, which is the duration of the Movember campaign with 15 days extra on either side. Firstly, the countries selected are not only European since we intend to capture a variety of different environments. Secondly, we wanted a sample that captured a variety of differences in GDP per capita in order to account for that difference. We also wanted to account for the possibility of different languages, since the official Movember Twitter (@Movember) would not be understood everywhere in the world, and therefore the importance of the campaign of that country posting frequently could be higher. The data was provided by the Movember organization to the University of Twente, and using a software called TCAT we were able to have reliable access to the data, rather than having to go on Twitter itself and categorize the tweets individually.

Unfortunately, not all the countries for which we had access to donation data had an official Movember account and a lot of countries had to be rejected, leaving us with nine countries. This is why the dataset is smaller than we would have liked

3.1.1 Dependent Variable: Donations
The dependent variable for my study is the donations. The data used for this variable has been provided by The Movember Foundation itself, and it is a collection of the financial data of donations across different countries. In order to account for the difference in what would be considered a large amount of donations or a small amount of donations, the donations will be divided by the GDP of the country. This should make our results more reliable since 10 dollars could be considered a large amount of money to donate for a country with low GDP, whilst it could be a relatively minor donation for a country with high GDP. The GDP values were obtained from the International Monetary Fund (2014)

3.1.2 Independent Variables
3.1.2.1 Diffusion
Since information diffusion plays such a big role in raising awareness for an organization like Movember, it would be interesting to study how these factors influence the likelihood of a donation being made. My hypothesis is that a higher rate of diffusion will lead to a higher rate of donations since the scale of those aware of the campaign is made larger. The way that I will be assessing this is by the number of Retweets about Movember. The data of the Retweets has been provided by The Movember Foundation and Twitter.

3.1.2.2 Tweeting Behaviour
The second independent variable will be the Tweeting behavior of the Movember organization. I will be making use of the factors observed by Yang and Counts (2010) to increase diffusion of information on Twitter as well as the hashtag

feature that I believe to be impactful on diffusion particularly for slacktivists:

- Speed (Amounts of Tweets posted)
- Scale (Number of followers)
- Range (Replies by campaign organization/Total Tweets about campaign)

This data too has been provided by The Movember Foundation and Twitter for us to carry out our research.

3.2 The Construction of the Study

This data has been categorized by day, allowing us to easily see how different Tweeting behavior affects daily donations. The reason as to why I am looking not only at the diffusion in itself but also at specific Tweeting Behaviour is because the Tweeting behavior is the only part that the organization has any control over, and the thing that they can alter in order to potentially have an impact on the donations raised.

First off, the data provided by The Movember Foundation will be sorted through and classified in order to separate the information needed from that which is not of relevance to this study. That way a datafile can be created that allows us to make comparisons and observe trends between Tweeting behavior, diffusion and donations. In order to observe these trends, I will be carrying out linear regression analysis since it is the clearest way to see whether the data tends towards any relationship or whether there seems to be no correlation between the data whatsoever. I will first compare the Donations as affected by the tweets, then compare the Retweets against the Speed, Scale and Range variables we previously defined, and then compare the Speed, Scale and Range directly against the Donations to see if there actually is mediation through Retweets or not.

4. ANALYSIS
4.1 Descriptive Statistics

Table 1 provides an overview of the descriptive statistics of both dependent and independent variables. The N value is (N = 558), which is the number of observations we have. The average donation, adjusted for GDP is 0.19. There were an average of 105.34 Retweets per day for the duration of the period we observed, with an average of (M = 6.04) tweets posted per day by the campaign organization. The mean value for the amount of followers all official Movember Twitters was (M = 3063.31), which is quite a high number of followers since one of the countries only had 112, but another country had a maximum of 16216 which explains why the mean is so high. The mean number for the range was (M = 0,0329), which means that in general the range is quite high since the percentage of replies is quite low when comparing it with the amount of tweets relating to the topic. The highest the number could be would be 1, and our mean is very far from that value. The standard deviation for the number of Retweets is quite high (SD = 289.29) , which suggests a large spread in the data, although not as large as the number of followers per day, (SD = 4867.715). This suggests a very wide spread in the data, which makes sense when looking at the large difference between the minimum and maximum values.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Adjusted Donations	558	,000000000	5,34710983	,191094037	,539845345
Retweets	558	0	4470	105,34	289,290
Number of tweets per day	558	0	108	6,04	12,766
Number of followers per day	558	112	16216	3063,31	4867,715
Replies / Total Tweets	558	,00	1,00	,0329	,08883
Valid N (listwise)	558				

Table 1: Descriptive statistics; cases, minimum, maximum, mean and standard deviations for the dependent and independent variables.

4.2 Hypothesis Testing

4.2.1 Linear Regression Analysis

4.2.1.1 Hypothesis 1

A standard linear regression analysis was performed to assess the ability of Retweets to predict the donations expected. The regression analysis is presented in Table 2.1, with the ANOVA in Table 2.2 and the coefficients presented in Table 2.3.

The regression analysis explored the relationship between the Retweets and the Adjusted Donations in order to test Hypothesis 1; that the higher the number of Retweets the higher the amount of donations.

The relationship is proved to be significant ($F_{(1, 41.003)} = 187.903$, $p < 0.001$) with an $R^2 = 0.253$ with a Std. Error of 0.467. The predicted adjusted donation is equal to 0.092 + 0.001 (Retweets). Therefore, adjusted donations are increased 0.001 per Retweet.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,503a	,253	,251	,467131148

a. Predictors: (Constant), Retweets

Table 2.1: Regression Analysis Summary

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41,003	1	41,003	187,903	,000[b]
	Residual	121,326	556	,218		
	Total	162,328	557			

a. Dependent Variable: Adjusted Donations

b. Predictors: (Constant), Retweets

Table 2.2: ANOVA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,092	,021		4,385	,000
	Retweets	,001	,000	,503	13,708	,000

a. Dependent Variable: Adjusted Donations

Table 2.3: Coefficients

4.2.1.2 Hypothesis 2a, 2b and 2c

A standard multiple regression analysis was performed to assess the ability of the number of Tweets posted per day, the number of followers, and the percentage of total tweets about Movember that were replies posted by the campaign organization to predict the Retweets expected. The regression analysis is presented in Table 3.1, with the ANOVA in Table 3.2 and the coefficients presented in Table 3.3.

The regression analysis explored the relationship between the variables we defined for Speed, Scale and Range and the Diffusion in order to test hypotheses 2a, 2b and 2c.

The relationship is proved to be significant (F (3, 5106897.18) = 90.408, p <0.001) with R^2 = 0.329 and a Std Error of 237.670. The predicted number of Retweets is equal to -5.172 + 4.856 (Tweets per day) + 0.034 (Number of Followers) -658.666 (Replies/Total Tweets).

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,573[a]	,329	,325	237,670

a. Predictors: (Constant), Replies / Total Tweets, Number of followers per day, Number of tweets per day

Table 3.1: Regression Analysis Summary

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15320691,5	3	5106897,18	90,408	,000[b]
	Residual	31293788,8	554	56486,983		
	Total	46614480,3	557			

a. Dependent Variable: Retweets

b. Predictors: (Constant), Replies / Total Tweets, Number of followers per day, Number of tweets per day

Table 3.2: ANOVA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	−5,172	12,608		−,410	,682
	Number of tweets per day	4,856	,940	,214	5,165	,000
	Number of followers per day	,034	,002	,565	15,778	,000
	Replies / Total Tweets	−658,666	138,317	−,202	−4,762	,000

a. Dependent Variable: Retweets

Table 3.3: Coefficients

4.2.1.3 Hypothesis 3

A standard multiple regression analysis was performed to assess the ability of the number of Tweets posted per day, the number of followers, and the percentage of total tweets about Movember that were replies posted by the campaign organization to predict the Adjusted Donations expected. The regression analysis is presented in Table 4.1, with the ANOVA in Table 4.2 and the coefficients presented in Table 4.3.

The regression analysis explored the relationship between the variables we defined for Speed, Scale and Range and the Diffusion in order to test Hypothesis 3

The relationship is proved to be significant ($F_{(3, 16.616)} = 81.843$, $p < 0.001$) with $R^2 = 0.303$ and a Std Error of 0.45. The predicted number of Adjusted Donations is equal to $-0.014 + 0.007$ (Tweets per day) $+ 6.074^{E-005}$ (Number of Followers) -0.659 (Replies/Total Tweets).

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,554[a]	,307	,303	,450589090

a. Predictors: (Constant), Replies / Total Tweets, Number of followers per day, Number of tweets per day

Table 4.1: Regression Analysis Summary

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49,849	3	16,616	81,842	,000[b]
	Residual	112,479	554	,203		
	Total	162,328	557			

a. Dependent Variable: Adjusted Donations

b. Predictors: (Constant), Replies / Total Tweets, Number of followers per day, Number of tweets per day

Table 4.2: ANOVA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,014	,024		-,584	,559
	Number of tweets per day	,007	,002	,159	3,781	,000
	Number of followers per day	6,074E-005	,000	,548	15,051	,000
	Replies / Total Tweets	-,659	,262	-,108	-2,513	,012

a. Dependent Variable: Adjusted Donations

Table 4.3: Coefficients

4.2.2 Testing for Mediation

Using our results for the regression analyses above, we can use the value of the unstandardized coefficient between the variable and the mediators as well as their standard errors in order to test whether Retweets (Diffusion) carry the influence of our independent variables of Speed, Scale and Range (Tweeting Behaviour) to our dependent variable of Adjusted Donations. There was a non-significant initial relationship between the independent variables (Speed, Scale and Range) and dependent variable (Adjusted Donations) (B = -0.014, p = 0,559) which was further proved to be non-significant after controlling for the mediator (B = -5172, p = 0.682) as the significant value (p = -0.021) indicates to us that Diffusion (Number of retweets) is a significant mediator between Tweeting Behaviour and Adjusted Donations.

5. RESULTS

The first of my hypotheses (hypothesis 1) was proved right according to my results, since they are significant. The predicted donation, adjusted for GDP, would be 0.092 + 0.0001 x Number of Retweets, which means that the number of retweets seems to affect the expected donation in an important manner.

The second of my hypotheses (Hypotheses 2a, 2b and 2c) correlating how strong the relationship between the number of retweets and our created variables to measure Speed, Scale and Range are all also proved significant. The predicted number of Retweets is equal to -5.172 + 4.856 x (Tweets per day) + 0.034 x (Number of Followers) -658.666 x (Replies/Total Tweets).

This means that both the more the organization tweets per day and the higher the number of followers it has, the more likely their tweets are to get retweeted and hence diffused, in agreement with

hypothesis 2a and 2b. Here it is important to note that it seems the more the organization replies to Tweets, the less the expected retweets will be. This is in line with my hypothesis 2c (The lower the proportion of replies over total tweets, the higher the number of retweets) which is probably due to the fact that since replies tend to be quite specifically directed at a certain user, it is not a Tweet that is particularly likely to be retweeted often.

The final hypothesis (hypothesis 3) checked the relationship between our defined variables for Speed, Scale and Range and the Adjusted Donations directly all proved to be significant. The predicted number of Adjusted Donations is equal to -0.014 + 0.007 x (Tweets per day) + 6.074^{E-005} x (Number of Followers) -0.659 x (Replies/Total Tweets).

Here too we can see that the relationship between the variables is in the direction that we expected; both the number of Tweets per day the organization posts and the amount of followers it has have a positive effect on the expected donation, whilst the lower the lower the proportion of replies over total tweets the higher the expected donation.

These numbers however are much smaller than for our second hypothesis, in part due to the nature of the small number expected for the donation being adjusted to GDP, but if my model is correct, also due to the relationship being mediated by the amount of retweets that day.

In order to test that mediation I performed a test which yielded the results that there is a non-significant relationship between the independent variables of Speed, Scale and Range and dependent variable of Adjusted Donations (B = -0.014, p = 0,559) which was further proved to be non-significant after controlling for the mediator; Number of retweets (B = -5172, p = 0.682) as the significant value (p = -0.021) was under our alpha value of 0.05 and hence proved what I have defined as diffusion for this experiment (Number of Retweets) to be a significant mediator for Speed, Scale and Range on Adjusted Donations.

6. DISCUSSION

In order to increase the expected amount of donations, an organization should try to increase the amount of tweets they post everyday as well as increase their follower count, and not put much emphasis on trying to reply to people. These behaviors are most likely to lead to a higher number of retweets, which in turn lead to a higher expected donation for that day.

My results are in line with the previous knowledge on the topic of diffusion by Yang and Counts (2010), since we have also found that the factors of Speed, Scale and Range play an important part in the Diffusion of information on Twitter, and established a relationship between said Diffusion and the effect it has on the expected amount of donations for an organization.

The results are well supported by the large amount of data Movember has provided to work with, but using a larger number of countries would yield even more conclusive results since ideally I think a minimum of 20 countries would be ideal to provide the most conclusive reports. This was unfortunately not a possibility for this particular paper since only 9 of the countries had all the data we needed in order to test all of our hypotheses. This could affect the validity of the findings, but due to the amount of data being so large for each of the countries chosen and them having a pretty diverse range of donations and GDP, it should make up for this weakness and yield fairly valid results, even if they could further be improved.

Similarly, these results are reliant on the data provided my Movember. Although unlikely, it is always possible that other organizations will yield differing results depending on the audience they target for example, so it would be interesting to check whether these factors are important to other organizations making use of cause marketing as future research.

As future research it would also be interesting to look at the practical implications of my hypothesis. For example, whether there is a negative relationship between these factors past a certain point. Would posting 3000 tweets a day annoy followers and lead to a lower expected amount of donations or are our hypotheses infinite?

Finally, these results are fairly important as to the debate at hand between whether social media being used as a marketing tool for activism (e.g. Gladwell, 2011) is effective or not. There seems to be a very clear relationship, at least for Movember, that indicates that an effective use of Twitter as a marketing tool leads to an increase in the financing of the organization, and hence is something important for any non-profit organization seeking to increase the amount of donations it receives to look into.

7. REFERENCES

1. Correa, T., Hinsley, A., & Zúñiga, H. (n.d.). Who interacts on the Web?: The intersection of users' personality and social media use. *Computers in Human Behavior*, 26(2), 247-253.

2. Dann, S. (2010). Twitter content classification. *First Monday*,15(12).

3. Gladwell, M. (2011). *Outliers: The Story of Success*. Back Bay Books.

4. Howard, P., Agarwal, S., & Hussain, M. (2011). When Do States Disconnect Their Digital Networks? Regime Responses to the Political Uses of Social Media. *SSRN Electronic Journal SSRN Journal*, 14(3).

5. Jones, S., & Fox, S. (2009). Generations Online in 2009.

6. Kotler, P., & Lee, N. (2008). *Social marketing: Influencing behaviors for good* (3rd ed.). Los Angeles, Los Angeles: Sage Publications.

7. Kristofferson, K., White, K., & Peloza, J. (2014). The Nature of Slacktivism: How the Social Observability of an Initial Act of Token Support Impacts Subsequent Prosocial Action. *PsycEXTRA Dataset, 40(6).*

8. Lacy, K. (2010). *Twitter marketing for dummies.* Hoboken, New Jersey: Wiley.

9. Movember United States. (2015)

10. Shulman, S. (2009). The Case Against Mass E-mails: Perverse Incentives and Low Quality Public Participation in U.S. Federal Rulemaking. *Policy & Internet*, 1(1), 22-52.

11. Soule, S., & B. G., K. (2007). Social Movements as Extra-institutional Entrepreneurs: The Effect of Protests on Stock Price Returns. *Administrative Science Quarterly*, 52, 413-442.

12. Thomases, H. (2010). *Twitter marketing an hour a day*. Indianapolis, Indiana: Wiley Pub.

13. Thoring, A. (2011). Corporate Tweeting: Analysing the Use of Twitter as a Marketing Tool by UK Trade Publishers. *Publishing Research Quarterly*, 141-158.

14. Valenzuela, S. (2013). Unpacking the Use of Social Media for Protest Behavior: The Roles of Information, Opinion Expression, and Activism. *American Behavioral Scientist*, 920-942.

15. Van Den Broek, T. (2015). Activist versus Slacktivist: A Dual Path Model of Online Protest Mobilization.

16. Warren, A., Sulaiman, A., & Jaafar, N. (2014). Social media effects on fostering online civic engagement and building citizen trust and trust in institutions. *Government Information Quarterly*, 31(2), 291-301.

17. Weinberg, T. (2009). *The new community rules: Marketing on the social web*. Sebastopol, California: O'Reilly.

18. Yang, Z., & Counts, S. (2010). Predicting the Speed, Scale, and Range of Information Diffusion in Twitter. *ICWSM*, 10.