LEIDEN UNIVERSITY | FACULTY OF SOCIAL SCIENCES

BACHELOR THESIS
DIGITAL DIPLOMACY

“DIGITAL DIPLOMACY & CRISIS MANAGEMENT: COPING WITH DIGITAL COMMUNICATION IN THE AFTERMATH OF CRISES”

INTERNATIONAL RELATIONS AND ORGANIZATIONS
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1. Abstract

Digital diplomacy is the new Public Relations, a way for governments and government officials to communicate with foreign publics. Especially in times of crises, Twitter can be of great use for public diplomacy. However, it is not clear what types of tweets illicit different types of reactions from the public. It is important to do research on this topic because of the rising use of Twitter as well as the vulnerability of the world for terrorist attacks. Three hypotheses are identified, concerning informational tweets, condolence-tweets and tweets that show strength. The hypotheses are tested using independent-samples T tests and negative binomial regression analyses. Tweets that contain information are not more likely to get retweeted, compared to tweets that do not contain information. Tweets that contain condolences are more likely to get replies, compared to tweets that do not contain condolences. Tweets that show strength are significantly liked more than tweets that do not have this intention. Suggestions for future research are made concerning the reasons for retweeting informational tweets, the type of replies on condolence-tweets and the ‘rally around the flag-concept in digital diplomacy.”
2. Introduction

Digital diplomacy, the use of digital communication in order to carry out diplomatic objectives, is used in numerous different cases, manners and ways. This can be on a local, national and international level. The benefits of digital diplomacy can be far-reaching. It could be that through digital diplomacy, a greater interest and participation in policy-making can be accomplished, there can be promotion of democratic practices and in times of crisis, information can be spread, received and shared easily and condolences can be expressed (Sotiriou, 2015, pp. 44, 50). Coping with digital diplomacy in times of crises is particularly interesting, since these critical moments can put a mark on people or a society. Especially in light of recent terrorist attacks, the urge of dealing with public diplomacy on Twitter for example, becomes apparent. Governments are expected to give a quick reaction or statement, and to spread this not only via traditional media but also on new media.

However, it is not clear how government officials’ can use digital diplomacy optimally for their purposes, because of a lack of research that is done on digital diplomacy and reactions on digital diplomacy. Particularly, not much research has been done on digital diplomacy in relation with crisis management. However, due to the rising use of Twitter as well as the, as some say, vulnerability to terrorism and the increased threat of an attack, this gap has become exceedingly important to fill with knowledge. An attempt is made to fill this existing gap in the literature with an understanding of Twitter as a way of communication in times when insecurity prevails as well as an understanding of public reactions, to consider how digital diplomacy can help a government to connect with foreign publics. We can try to understand how a government can use Twitter to the best of its abilities for its purposes. Therefore, the research question that is going to be answered with this research will be: ‘What factors lead to different reactions to government officials’ tweets concerning terrorist attacks?’ While examining the aftermath of the Paris Attacks and the Brussels Attacks on Twitter, an attempt will be made to analyze how different types of tweets illicit different types of reactions.

This research will firstly analyze existing literature on the subjects of soft power, public diplomacy, digital diplomacy and crisis management, which leads to three hypotheses. Thereafter, the research design will be explained, including the case selection, the data collection, the variables and the used methodology. Subsequently, the findings will be presented and thereafter a discussion will follow on the results. Limitations of the study will be explored and necessary future research will be identified.
3. Literature review

3.1 Changing world, changing communication

When the cold war was over, Nye stated that from then on, soft power takes an important part in world politics (1990, p. 154). The traditional concern for the military balance of power was not necessary anymore, since there was no defining Soviet threat (Nye, 1990, p. 155). Instead, the rising interdependence created the need for a more sophisticated version of power, namely soft power (Nye, 1990, pp. 160, 166). Nye defined soft power as “the ability to set the agenda in world politics through persuasion, enticing and attracting others through the force of one’s beliefs, values and ideas, and not through military or economic coercion” (1990, pp. 166-167). Now, in the multipolar world of the 21st century, soft power became increasingly important, especially concerning international law, international human rights and diplomacy. One way to exercise soft power is by the use of public diplomacy. As Tuch defines it, public diplomacy is a government’s process of communicating with foreign publics in an attempt to bring about understanding for its nation’s ideas and ideals, its institutions and culture, as well as its national goals and current policies (1990, p. 3). Roberts defines public diplomacy as “foreign policy activities that are aimed at creating a positive climate among foreign publics in order to facilitate the explanation and hopefully acceptance of another country’s foreign policy” (2007, p. 45). Central to the concept of public diplomacy are the international and positive aspects; activities are aimed at foreign audiences and serve as a mean to let these audiences think more positively about the sending actor.

Public diplomacy can be used in various ways. One of the more important times in which public diplomacy can be used is in times of crisis (Bakker & De Graaf, 2014, pp. 6-10). Governments can make a contribution to the spread of information and the well-being of peoples. A government can offer help and express their sympathies. This can be an ideal way to create positive sentiments from a foreign public with a government, which can contribute to the creation of a positive climate among foreign publics in another time period as well. Public diplomacy can be especially relevant in the case of a terrorist attack since there can be a lack of information, insecurity is high and fear is present (Bakker & De Graaf, 2014, pp. 6-8; Reynolds & Seeger, 2012, p. 303). Also, the public will likely have a stronger reaction and risk perception following terrorist incidents than other types of crisis events (Reynolds & Seeger, 2012, p. 303). When 9/11 occurred, governments from all over the world expressed sympathy with the victims and their families. Recently, the ideal way to engage with foreign publics has become via digital media, because of the rising activity on Social Networking Sites (Statista, 2016b) and the importance of this digital networking in our daily lives.
3.2 Digital diplomacy as the new Public Relations

Online public diplomacy can be termed as digital diplomacy, a different kind of the fulfillment of soft power. Digital diplomacy can be defined as the use of the internet and information communications technology in order to carry out diplomatic objectives (Hanson, 2010, p. 3). The advantage of digital diplomacy is that dialogue is made possible (Kampf, Manor & Segev, 2015, p. 333), so two-way communication instead of the more traditional one-way communication in public diplomacy. The two-way communication strategy can help a government to engage with a foreign public, which is useful for the creation of a positive climate between both. Digital diplomacy is mostly carried out by the usage of Social Networking Sites (SNS’s); networked communication platforms in which participants have profiles which they use to find, post and share information (Ellison & Boyd, 2013, p. 157). Examples of these include Facebook, Twitter, Xing, Tumblr, Pinterest and a dozen more (Milanovic, 2015).

The usage of SNS’s like Twitter has become a must-do for politicians (Lee, 2010), and the promises of digital diplomacy are far-reaching (Sotiriou, 2015, p. 41). For example, because of the two-way characteristic, it could be that through digital diplomacy a greater interest and participation in policy-making can be accomplished (Sotiriou, 2015, p. 41). Digital diplomacy can also make a contribution to the promotion of democratic practices, because there is, for example, increased transparency, citizens can ask questions to members of parliament and human rights abuses can be flagged easily by everyone (Sotiriou, 2015, p. 41). Another opportunity for countries concerning the use of digital diplomacy is nation-branding; “a process by which a nation’s image can be created, monitored, evaluated and proactively managed in order to improve or enhance the country’s reputation among a target international audience” (Fan, 2010, p. 6). It is the building and managing of the ‘brand’ of a country. Nation-branding is a way of carrying out public diplomacy; countries can let imagined identities be branded to create a positive atmosphere among foreign publics to the nation (Kerrigan, Shivanandan & Hede, 2012, p. 319; Risen, 2005; Kaneva, 2011, pp. 117-118). For example, India set up the Incredible India Campaign (ICC) to promote India as a political and economic entity as well as a major tourist destination (Kerrigan, Shivanandan & Hede, 2012, pp. 324-325). Nation-branding can also play a role in crisis management as the case of the Danish Cartoon Crisis shows, where the threat of international terrorism served as a catalyst for new public diplomacy initiatives (Rasmussen & Merkelsen, 2012, p. 816). Because of the controversy, which played partly online, the Danish government became aware of the need of reacting not only on traditional media but as well on new media to reach the public. The crisis thus ensured that the Danish government became an active player on social media and used SNS’s for marketing of the government’s policies (Rasmussen & Merkelsen, 2012, p. 814).
Digital diplomacy can be of great use for the branding of nations, but also for the managing of crises in a more general way. Information can be spread and shared easily and condolences can be expressed (Sotiriu, 2015, pp. 44, 50). However, as stated before, we don’t have a good sense of what types of digital communication are effective during times of crisis. What leads the public to pay attention and react in different ways to digital diplomacy efforts after for example a terrorist attack occurred? How can a government or government officials use digital diplomacy to the best of its abilities for their purposes? That is why the research question of this project will be: What factors lead to different reactions to government officials’ tweets concerning terrorist attacks?

As a first step to analyzing this question we can look at different kind of tweets that are posted on Twitter in the days after a terrorist attack. Twitter is used instead of other SNS’s for multiple reasons. First and most importantly, with 305 million monthly active users in the fourth quarter of 2015 (Statista, 2016a), Twitter is the largest platform in the world for posting and receiving microblogs. This SNS therefore gives the most comprehensive image of digital diplomacy. Also, Ministries of Foreign Affairs (MFAs) and government officials, key players in the working-out of public diplomacy, are significantly more active on Twitter compared to Facebook and other SNS’s (Kampf, Manor, & Segev, 2015, p. 351), which thus gives a better representation of the outgoing digital diplomacy fulfilled by them.

Twitter is a SNS which gives the user the opportunity to share thoughts or opinions about their work, the news, hobbies or other features of life with people that ‘follow’ them (Twitter, 2016b). A lot of people follow not only the microblogs of the people they personally know, but also famous sportsmen, politicians, news institutions, movie stars, scientists or else. Twitter users have a number of features to choose from to interact with another. People can press the ‘like’ button, to show they like a message, people can post a reaction (‘reply’) and people can ‘retweet’ a message, which is basically sharing the message with the people who follow you (Twitter, 2016b).

3.3 Hypotheses

Directly after a terrorist attack, it can be expected that different kind of tweets are posted by governments from all over the world, directed to the country where an attack has happened. For example, foreign governments can inform a people directly after an attack, when the own government is not in the capability to do so. Foreign governments can also post tweets that are meant to express condolences to the victims and the survivors of an attack. Or foreign governments can tweet that they will help finding the perpetrators or help prosecuting them and restoring order. Crisis management literature states that a crisis immediately creates a demand for information because of an overall state of uncertainty (Augustine, 1995; Darling, 1994; Fearn-Banks, 1996, pp. 6-13; Comfort & Kapucu, 2006, pp. 319-320). Uncertainty is created on different levels; there can be
uncertainty about what happened exactly, about whether or not the target spots or other crowded spots are safe now, about the target of the attack, about the perpetrators and whether they have been caught or not, about who are the victims and survivors, about upcoming attacks, and more questions can come to mind. A government of the country where an attack happened is expected to react quickly, and the objective must be to fill the information vacuum with accurate intelligence (Coombs, 2006). But any government can help decreasing this uncertainty in the directly following hours after an attack. Involvement and engagement of other governments is only logical, because of the degree of harmony and unity directly after a terrorist attack is higher (Coombs & Holladay, 2012). But it can also be quite useful, to create a positive atmosphere for the fulfillment of public diplomacy when crises are not present. If a positive atmosphere is created in times of crises, this attitude towards a government official or government institutions can benefit the country in terms of shaping approval of foreign policies with foreign publics, also in times when crises are not present. In view of the uncertainty, it can be anticipated that people are more engaged with tweets that contain information. Also, since Twitter is an information-sharing platform (Twitter, 2016b), it can be expected that people will engage with tweets that contain information by sharing it with their own followers. Therefore can be expected that:

**H1: Tweets about a given terrorist attack that are meant to spread information are more likely to be retweeted, compared to tweets that are not meant to spread information.**

It should come as no surprise that tweets from government officials working at places that are hit by a terrorist attack or having a relationship of any kind with victims or survivors of an attack can be emotionally loaded. Tweets from other governments can be emotionally loaded as well, because of a state of shock, a relationship to the attacked country or for diplomatic purposes. Stieglitz & Dang-Xuan argue that emotionally charged tweets seem to get more attention, are retweeted more often and even faster than neutral messages (2013, pp. 18-23). They concluded that: “companies should pay more attention to the analysis of sentiment related to their brands and products in social media communications” (Stieglitz & Dang-Xuan, 2013, pp. 25-27). Glynn Mangold and Faulds also describe the use of emotion as a “promotional tool to engage with the public and let them share messages” (2009, p. 8). Apparently the relationship between emotion on social media and the managing of brands is evident. In light of crisis management, tweets that are emotionally loaded can be tweets that express concerns for the victims of a terrorist attack or for the survivors, or tweets that express condolences to a people, or tweets that express sympathies for one of these actors. Important is a certain amount of compassion or empathy. According to different scholars, the relationship between the use of emotion and engagement can also be applicable to the public sphere, and thus possibly to digital diplomacy in times of crises. StrauB et al. argue that the use of sentiment can have a positive
effect on public engagement (2015, p. 371). They argue that this is an effective communication strategy for social media-based diplomacy on Twitter (Strauß, Kruikemeier, van der Meulen & van Noort, 2015). Neuberger et al. argue that the use of emotion and expression of sentiment in a tweet from politicians correlate with a higher amount of retweets (Stieglitz, Neuberger, Dang-Xuan & Wladarsch, 2013). Stieglitz and Xuan find a similar positive correlation in light of politicians’ tweets; the higher the quantity of words indicating affective dimensions, the higher the number of retweets (2012). This could be applicable to other forms of responsiveness as well. Since a reply is the most direct form of reacting or engaging with the message, we might expect that:

H2: A tweet that contains condolences is more likely to get replies compared to tweets that do not contain condolences.

Furthermore, after a crisis, a lot of tweets from government officials or from government institutions have content that express strength. For example a tweet from the Swedish Ministry of Foreign Affairs; @SweMFA, 22-03-16, 'Prime Minister Stefan Löfven: "We will never accept terrorists attacking our open societies"'. Different scholars argue that directly after a crisis, the best option for leaders is to show strength, because this increases their popularity for a short time period (Mueller, 1970, p. 34; James & Rioux, 1998, p. 781). In relation to different US presidents, this can be termed as the ‘rally around the flag’-effect (Goldstein & Pevehouse, 2008; Hetherington & Nelson, 2003, p. 37). This concept is not new, in contrary: Waltz already observed that in the face of certain intense international events, people rally behind their chief executive (1967). Wicker argued in the same time period that when a great crisis occurs, people draw together in their support towards the president (1967). More recent studies confirm this: Baker and Oneal observe that a rally-effect is present after crises and they suggest that the size of a rally depends on, among others, how the crisis is presented in terms of media coverage (2001, p. 661). Multiple scholars state that a similar ‘rally around the flag’-effect occurred after the hijacking and crushing of planes in New York; the 9/11 attacks (Schubert, Stewart & Ann Curran, 2002, pp. 578-579; Hetherington & Nelson, 2003, pp. 41-42).

Research in psychology also suggests that people do actually want a leader to take charge in times of crises and people want leaders to provide clear direction to crisis management-operations (Boin & ’t Hart, 2003, pp. 546-547). People are insecure and therefore, a call is made for strong public leadership (Boin & ’t Hart, 2003, pp. 546-547). Also, people do not feel comfortable with breaking national unity after a crisis, by attacking or criticizing the President or a head of state (Rahman, 1996, p. 203; Giesen, 2015). Since individuals cling towards leadership and show their support after an international crisis occurred, it is possible that not only a public within a given country will search for strength and support leadership but international publics as well.
It is more likely that likes will be given instead of retweets or replies, since likes is the most direct form of ‘showing support’. Retweets are a way of sharing a message, and replies are a way of expressing opinions or making statements by directly reacting on a message. We therefore might expect that:

H3: Tweets that show strength are more likely to get likes compared to tweets that are not intended to show strength.
4. Research Design

4.1 Case selection

Crisis management in combination with digital diplomacy is a relatively understudied domain. However, the gap has become exceedingly important, due to the rising use of Twitter as well as the, as some say, vulnerability to terrorism and the increased threat of an attack. We can try to understand how Twitter can be best used by the government as a way of communication and how it can help people after a terrorist attack. To answer the question what factors lead to different responses to government officials’ tweets concerning terrorist attacks, two cases are selected; the Paris Attacks and the Brussels Attacks. On the evening of Friday the 13th of November 2015, six coordinated attacks occurred in Paris and its northern suburb Saint-Denis. Of these were three suicide bombers and three mass shootings, one including a hostage taking (BBC, 2015). A few months later, a in some ways similar attack was carried out in Brussels, Belgium, on the morning of 22 March 2016. There were three coordinated bombings, two at Brussels airport Zaventem and one at the metro station of Maalbeek (NOS, 2016). Together they were two devastating terrorist attacks, for France, Belgium, and the international community.

These two events can be identified as crises because they meet up to three parameters that identify a crisis (Fearn-Banks, 1996 pp. 6-8; Perry, Taylor, & Doerfel, 2003, p. 213). Both events were a significant disruption to an organization or a public environment, which is reflected in that public life stopped for a moment, shops were closing, people stayed in their houses and a state of emergency was called or the level of terror was raised. Furthermore, both attacks attracted extensive news media coverage, in Belgium and France but also in other countries all over the world. Finally, both occurrences were situations where public concern necessitated a ‘need to know’ circumstance. Thus, the Paris Attacks and the Brussels Attacks can both be identified as crises. Both attacks can also be identified as terrorist attacks. A comprehensive definition of terrorist attacks is made by Schmid & Jongman, which state that ‘terrorism is an anxiety-inspired method of repeated violent action […], for idiosyncratic, criminal, or political reasons (1988, pp. 5-6). The Paris Attacks and the Brussels Attacks were meant to spread fear, for political reasons.

It is important to do research on the aftermath of these crises concerning digital diplomacy, for multiple reasons. First, little research has been done about the aftermath of these crises in terms of digital diplomacy since both of these crises happened very recently. Second, the impact of both terrorist attacks on the Western world is huge. These crisis initiated not only an emotional impact, but adding to that, fear for future terrorist attacks has emerged and anti-Islamic feelings increased (Reardon, 2016). Reardon also stated that the Schengen zone is under fire, which was already the case because of the migrant crisis, but extra pressure has been put on this because of strict border
controls after the attacks (2016). This brings us to a third reason; reciprocity and engagement on
digital media after a terrorist attack is interesting to analyze in light of coping with future terrorist
attacks. With extra knowledge of different reactions on foreign government officials’ and
government institutions’ tweets, the digital management of these kind of crises can be brought to a
higher level.

4.2 Data collection

Data were collected using Twitter accounts. The digital diplomacy that is analyzed here is also called
twiplomacy: “an online form of public diplomacy through the use of Twitter by public figures and
stakeholders” (Bjola & Holmes, 2015, p. 215). Twiplomacy is seen “as increasing the audience of a
country’s messaging and bridging the gap between diplomats and citizens” (Bjola & Holmes, 2015, p.
215). There are three types of twiplomacy according to Strauß et al.: official micro-blogging hosted
by a diplomatic organization of the government of a state, micro-blogging hosted by international
governmental organizations and micro-blogs which are hosted by government individuals (2015).
This study focuses on micro-blogging that is done by the first and the third type, the diplomatic
organization of the government of a state and government officials. It will have no use analyzing
international governmental organizations such as the European Union or the United Nations, since
we are interested in digital diplomacy conducted by states.

Twitter authenticates key individuals and agencies, and verifies these accounts1. This means
that the account of for example David Cameron is checked and does in fact belong to David Cameron
and not to other people who pretend to be David Cameron, to prevent that people post messages in
the name of someone else. An attempt is made to use as much verified accounts as possible. The
accounts that are included in the data file are the Ministries of Foreign Affairs (MFAs) and the heads
of state of a number of countries, namely Afghanistan, Australia, Austria, Belgium, France, Georgia,
Ghana, the Netherlands, Poland, Russia, Rwanda, the Seychelles, Spain, Sweden, Turkey, Ukraine,
and the United Kingdom. These countries are chosen to get a diverse file, which includes nations that
differ in economic prosperity, the contiguity with terrorism, geographical spread and religion; see
table 4.1. The tweets of the heads of state of these governments are included as well, to get to a
better representation and to have the value of a more personal view. The head of state is chosen
instead of, for example, the Minister of Foreign Affairs, because a head of state is more likely to be
followed by foreign publics, considering he or she is the ‘public face’ of a country. The heads of state
that are chosen are government representatives, which can vary in name by prime ministers,

1 Twitter, 2016. FAQs about verified accounts. Retrieved April 20, 2016, from Twitter:
https://support.twitter.com/articles/119135
presidents, chancellors or high representatives. In any case, the individual which has the most powers in the government is chosen. This means that if, for example, a country is a constitutional monarchy in which a King is the head of state but has no worthwhile power, the chairman of the executive government or the one in the government with the most essential powers is chosen instead.

<table>
<thead>
<tr>
<th>List of countries</th>
<th>Geographic region</th>
<th>HDI (scale 0-1)²</th>
<th>GNP rank (per capita)³</th>
<th>Global Terrorism Index (scale 0-10)⁴</th>
<th>Religion⁵</th>
</tr>
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<td>9.233</td>
<td>Muslim</td>
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<td>23</td>
<td>5.613</td>
<td>Christian, None</td>
</tr>
</tbody>
</table>

Table 4.1 List of countries from which tweets are derived.

Countries that are at the bottom of the world’s list of economic prosperity and the HDI are left out in the analysis, because of a probable lack of internet access. Thereby, countries are chosen that are nearby the location of the chosen cases and some countries that do not have a geographical relationship are also added. HDI means Human Development Index, which is a composite statistic of three indicators, namely life expectancy, income per capita and education. A country scores a higher level of HDI when the life expectancy at birth is longer, the income per capita is higher and the average period the population follows education is longer. The scale of this measurement is from 0 to 1. The Gross National Product (GNP) per capita is a measure of national income and output and is used in economics to make an estimation on the total economic activity in a country. It can be used as an indicator for the economic prosperity for a country. The rank on the world list is used instead of the actual numbers, because the rank shows us easily a relative importance, while that is more difficult for a sole number. The Global Terrorism Index is an index from the Institute of Economics and Peace, and gives a display of the impact of terrorism countries experience. Impact is operationalized as the effect terrorism has in the number of lives that is lost, the damage that is done to property and the psychological effects after (a) terrorist attack(s). The scale is built up from 0 to 10, in which below 0.01 means that there is no impact of terrorism and 10 stands for the maximum impact of terrorism. Lastly, religion is included, whereby the religions are mentioned as to set up for at least 80 % of the population. A number of other religions can be present in a country, but it would be for altogether a maximum of 19.9 %. Christianity includes all forms of Christianity, this can be Catholicism, Protestantism, Lutheranism, Russian-Orthodox and other.

The tweets from the mentioned accounts from the countries are collected using Web Scraper, a computer software technique which is designed to extract information from websites. Using Web Scraper, all tweets that are posted from these accounts in the time period of 24 hours after the attack are derived. This time period is chosen because in general, every analyzed account has posted a tweet or multiple tweets in this time period about the attack. In total, 112 tweets have been analyzed.

4.3 Variables
For H1, the units of analysis are the tweets of government officials and MFAs of the government. The relationship between information-sharing and the number of retweets is analyzed, and in this case the independent variable is the sharing of information and the dependent variable is the number of retweets. The sharing of information is operationalized into two distinct categories, namely a tweet is either meant to spread information or a tweet is not meant to spread information. An example of a

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6 Webscraper is downloaded from: http://webscraper.io/ and is used to extract the tweets that are posted from the mentioned accounts.
tweet that is meant to spread information is: @BelgiumMFA, 22-03-16, ‘Belgium will observe 3 days of national mourning from today till 24 March. All flags will be flown half-mast on all official buildings’. The dependent variable, the number of retweets, is a count variable. Twitter provides a count of the number of times each tweet has been retweeted and this data is collected for each tweet.

For H2, the same unit of analysis is applicable. The relationship between the expression of condolences and the number of replies is analyzed. The independent variable is the expressing of condolences and this is operationalized into two distinct categories, namely tweets that contain condolences, express sympathies or express compassion and tweets that do not contain (one of) these features. An example of a tweet that is coded as category one, containing condolences, is: @SpainMFA, 14-11-15, ‘#Spain extends its deepest condolences to the families of the victims in Paris #ParisAttacks’. For further coding, please see the codebook on page 23. The dependent variable is again a count variable. The number of replies is counted by hand for each tweet, and this amount is used for the analysis.

For H3, the same unit of analysis is applicable. The use of power is the independent variable and is operationalized in two categories; tweets that are intended to show strength and tweets in which the content does not have the intention to show strength. An example of a tweet that is intended to show strength is a tweet from the Spanish Prime Minister: @marianorajoy, 14-11-15, ‘La violencia y sinrazón no podrán vencer a nuestras convicciones democráticas. Nunca lograrán que renuncien a la libertad #TodosSomosParís’. A translation of this tweet: Violence and unreason can never beat our democratic beliefs. They can never succeed in giving up freedom #weareParis’. For detailed information about this coding, please see the codebook. The dependent variable is the number of likes, Twitter also provides a count of this number and this number is derived for the use of this analysis. For more information about the coding of the dependent or independent variables or the units of analysis of the different hypotheses, please see the codebook.

4.4 Methodology

SPSS is used to get to the different relationships between information-sharing and the number of retweets, between expressing condolences and the number of replies and between the use of strength and the number of likes that is given for a tweet. SPSS is a software-package designed for statistical analysis. A T test is used, which is an inferential statistics method that gives clarification on the probability that samples are from the same population or that samples are probably not from the same population (Argyrous, 2011, pp. 359-361). The independent variables are treated as samples, to find out if there is a difference in the amount of retweets, replies or likes. When a statistically significant difference is found, this means that the probability that the difference in amount of
Retweets, replies or likes can be attributed to a sampling error, is below 0.05 percent. So a significance level of 0.05 indicates a 5% risk of concluding that a difference exists when there is actually no difference (Argyrous, 2011, pp. 311-312). This percentage is chosen because it is the most common percentage in social sciences, as well as other sciences because of the reasoning of Fisher (1925). Fisher stated that: “The value for which p = 0.05, or 1 in 20, is 1.96 or nearly 2; it is convenient to take this point as a limit in judging whether a deviation ought to be considered significant or not. Deviations exceeding twice the standard deviation are thus formally regarded as significant” (Fisher, 1925, ch. 3). With a significance level of 0.05, a false indication would only happen once in 22 trials.

To get to a clearer image of the three hypotheses, another statistical analysis was used. This method is negative binomial regression, a regression modeling for a binary independent variable and a count dependent variable. Through negative binomial regression, one can find out what is the goodness of fit of a model and get an idea of whether the relationship between the independent and the dependent variable is a negative or a positive relationship. Also, the level of significance for this relationship can be extracted, to get an idea of the statistical relevance. The control variables that are used for this analysis are the independent variables from all the hypotheses, namely whether or not the tweet is meant to spread information, the classification as a ‘condolence-tweet’ and the use of strength in a tweet. More information on these variables can be found in the codebook.
5. Findings

To examine if support can be found for H1 (tweets about a given terrorist attack that are meant to spread information are more likely to be retweeted, compared to tweets that are not meant to spread information), an independent-samples T test is conducted on a sample of 112 tweets from governments’ individuals and accounts from government institutions. The mean of the number of retweets for tweets that are meant to spread information is 175.34; compared to 1705.66 retweets for tweets that are not meant to spread information. This suggests that there is no evidence for the hypothesized relation at all, it actually suggests a relationship the other way around; tweets that are not meant to spread information are more likely to be retweeted.

However, there is one tweet in the data that can blur the analysis, because of the enormous amount of retweets the tweet has. This outlier is a tweet from François Hollande; @fhollande, 13-11-15, ‘Face à l’effroi, il y a une Nation qui sait se défendre, sait mobiliser ses forces et, une fois encore, saura vaincre les terroristes’. A free translation: ‘Facing terror, there is one nation that knows how to defend itself, knows how to mobilize its forces and, once again, will defeat the terrorists’. This tweet is not meant to spread information. If we exclude this tweet from the analysis, the mean of the number of retweets for tweets that are not meant to spread information is 568.78 instead of 1705.66. With exclusion of this outlier a more fair analysis can be done. A statistically significant difference is found when the level of significance is below 0.05. The level of significance for the independent-samples T test is 0.012, which means that the relationship is statistically significant. However, this relationship is not the relationship which was hypothesized, the difference is actually the other way around.

<table>
<thead>
<tr>
<th>Is the tweet meant to spread information</th>
<th>N</th>
<th>Mean</th>
<th>T</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>49</td>
<td>568.78</td>
<td>2.552</td>
<td>0.012</td>
</tr>
<tr>
<td>Yes</td>
<td>62</td>
<td>175.34</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of retweets</th>
<th>N</th>
<th>Mean</th>
<th>T</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>49</td>
<td>568.78</td>
<td>2.552</td>
<td>0.012</td>
</tr>
<tr>
<td>Yes</td>
<td>62</td>
<td>175.34</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5.1 Independent-samples T test outcomes for H1, excluding one outlier.

The results of the negative binomial regression analysis with exclusion of the outlier also indicate that tweets that do not contain information receive more retweets compared to tweets that do contain information. However, this relationship is not statistically significant. Therefore, no support can be found for the first hypothesis, but there can also be found no evidence for a relationship that is the other way around.
The second hypothesis was that a condolence-message is more likely to get replies compared to tweets that do not contain condolences. To find out if support can be found for H2 another T test is conducted. The results from the same sample of 112 tweets suggest that the condolence-tweets got more replies compared to tweets that do not contain condolences. On average the tweets that do not contain condolences have a mean of 22,41 replies while the condolence-tweets have a mean of 57,21 replies. The difference between the mean for condolence- and non-condolence-tweets is statistically significant at the 0.05 level, as well as the 0.01 level. This implies that support is found for the hypothesis that condolence-messages are more likely to get replies compared to tweets that do not contain condolences.

<table>
<thead>
<tr>
<th>Is the tweet a condolence-tweet</th>
<th>N</th>
<th>Mean</th>
<th>T</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of replies No</td>
<td>73</td>
<td>22,41</td>
<td>-3,148</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>39</td>
<td>57,21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5.3 Independent-samples T test outcomes for H2.

If we exclude the outlier in this analysis, the relationship is even stronger; the level of significance is 0.000 in that case. The results of the negative binomial regression analysis confirm the relationship between condolences in tweets and replies for tweets; tweets that do contain condolences receive more replies compared to tweets that do not contain condolences. Therefore, support can be found for the second hypothesis.

Parameter estimates

<table>
<thead>
<tr>
<th>Parameter estimates</th>
<th>B</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>Omnibus test</th>
<th>Likelihood Ratio</th>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>0,199</td>
<td>0,2857</td>
<td>0,690</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condomences</td>
<td>-1,031</td>
<td>0,2880</td>
<td>0,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>-1,132</td>
<td>0,3389</td>
<td>0,001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5.4 Negative binomial regression results for H2.
The third hypothesis was: tweets that show strength are more likely to get likes compared to tweets that do not show strength. Another T test is conducted, the results from the same sample of tweets suggest that support is found for the hypothesis. The mean of the number of likes for tweets that show strength is 2605.88; compared to 254.14 likes for tweets that do not show strength. This difference is statistically significant at the 0.05 and at the 0.01 level. This implies that tweets that show strength are more likely to get likes compared to tweets that are not intended to show strength.

Table 5.5 Independent-samples T test outcomes for H3.

<table>
<thead>
<tr>
<th>Does the tweet show strength</th>
<th>N</th>
<th>Mean</th>
<th>T</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of likes</td>
<td>No</td>
<td>96</td>
<td>254,14</td>
<td>-2,782</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>16</td>
<td>2605,88</td>
<td></td>
</tr>
</tbody>
</table>

However, if we exclude the outlier again, the results are different. The outlier falls into the category ‘yes’ when examining if the tweet is intended to show strength, considering the feeling of nationalism, the ‘we’-appeal and the threat to the terrorists. If we exclude this outlier from the independent-samples T test, we find that the mean for the number of likes for tweets that show strength is 566.73; compared to 254.14 likes for tweets that do not show strength. This seems like it is still quite a large difference in the ‘likeness’. However, this difference is not statistically significant at the 0.05 level anymore. So with exclusion of the outlier, the result indicates that the use of strength in a tweet does not relate to the number of likes for a tweet.

Table 5.6 Independent-samples T test outcomes for H3, excluding one outlier.

<table>
<thead>
<tr>
<th>Does the tweet show strength</th>
<th>N</th>
<th>Mean</th>
<th>T</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of likes</td>
<td>No</td>
<td>96</td>
<td>254,14</td>
<td>-1,314</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>15</td>
<td>566,73</td>
<td></td>
</tr>
</tbody>
</table>

To get more clarity about this finding, control variables are inserted in the analysis by using negative binomial regression. The outlier is excluded again. The result shows that there is a statistically significant relationship between the use of strength in a tweet and the number of likes that is given for a tweet, see table 5.7. Since the negative binomial regression analysis included control variables, more weight is given to this outcome in comparison with the independent-samples T test. Since the regression analysis shows that tweets that do contain strength receive more likes, support is found for the third hypothesis.
It’s interesting to see that according to the negative binomial regression analyses, the condolence-variable and the power-variable seem to have a relation with the number of retweets, the power-variable seems to have a relation with the amount of replies as well as the condolence-variable seems to have a relation with the number of likes. This implies that the hypothesized dependent variables (amount of retweets, replies and likes) could be partially explained by other independent variables (as well). The implications of this finding and the other results will be discussed in the next section.

Table 5.7 Negative binomial regression results for H3, excluding one outlier.

<table>
<thead>
<tr>
<th>Parameter estimates</th>
<th>B</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>Omnibus test</th>
<th>Likelihood Ratio Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>0.288</td>
<td>0.2795</td>
<td>0.303</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condolences</td>
<td>-1.631</td>
<td>0.2706</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>-0.782</td>
<td>0.3179</td>
<td>0.014</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Omnibus test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>98.522</td>
<td>3</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. Discussion

Twitter is a medium that is capable of reaching the mass audience in no time. SNS’s can serve as a means to spread information directly after a terrorist attack, a necessary tool for any government considering the lack of information and the feeling of insecurity the public has in the first hours after a terrorist attack. Twitter can be used for the expression of condolences, to victims and survivors or to the public as a whole. And Twitter is also used to show strength, to give people a feeling of courage. These examples of digital diplomacy can serve as a mean to reach certain public diplomacy-goals, with the aim of creating a positive climate among foreign publics in order to facilitate the acceptance of a country’s foreign policies. In a world in which soft power is becoming increasingly important due to the rising interdependence, the implementation of the digital version of public diplomacy is very interesting.

A gap in the knowledge of digital diplomacy is tried to fill with this research. Taken together, the obtained data and analyses give an idea of what factors lead to different reactions to government officials’ tweets concerning terrorist attacks. No support could be found for H1, which indicates that tweets that are meant to spread information did not get significantly more retweets compared to tweets that are not meant to spread information. So it is not plausible that the state of insecurity that is created by a terrorist attack is solved by people by sharing informational tweets on Twitter. It is also questionable if people actually use SNS’s like Twitter for the gathering of information after a terrorist attack. Perhaps the number of retweets on tweets that are meant to spread information are an indication of liking the message or a way of showing appreciation of the engagement of a government official, instead of actually sharing it with the purpose to inform others. Future research can try to break down why the number of retweets is not explained by whether a tweet contains information or not. Another outcome of the analysis of the first hypotheses is that the other two independent variables (condolences and power) do tend to have a significant effect on the amount of retweets. It could be that the effects of these independent variables transcends the hypothesized dependent variables (likes and replies) and also have an effect on the amount of retweets. Future research can try to explain this.

Condolences seem to have quite a clear effect to illicit reactions from the public. Tweets that contain condolences are significantly more likely to get replies from the public compared to tweets that do not contain condolences. The theory that people feel more engaged with tweets that show emotion is thus backed with these empirics. However, the type of replies that these tweets illicit have not been examined. It could be that these replies differ in tone, emotion or other direct or indirect components. This would be interesting to analyze in order to get a more complete image of the reactions the public gives on government officials’ tweets after terrorist attacks. Condolences
also have a significant effect on the amount of likes and the amount of retweets. It seems that emotion indeed has a clear impact, as stated in the literature review.

The results in the regression analysis of the third hypotheses also indicate that support can be found for the positive relationship between the use of strength in a tweet and the amount of likes a tweet gets. This indicates that the ‘rally around the flag’-concept as described by different scholars is as well applicable in the context of digital diplomacy. The theoretical concept of ‘rally around the flag’ is quite robust and the outcomes of this research suggest that support for leaders is showed on Twitter after a terrorist attack has occurred. Even with exclusion of the outlier, the result of the regression analysis is still statistically significant. However, it is not clear if the high number of likes is a consequence of the ‘rally around the flag’-concept or a cause. Can posting a tweet that contains strength as a leader contribute to an increase in his or her popularity? Or is the amount of likes a consequence of the increased popularity?

An important limitation of this study could also have quite an effect on this outcome, namely the relatively low number of cases that is analyzed. There were only 19 cases classified as tweets that have the intention to show strength, of which one was classified as an extreme case too. Therefore, it could be that the hypothesis was supported because of sampling errors. It is possible to redo this research with a larger N, to see if the results change.

Another limitation of the study is the limited number of Twitter accounts that is analyzed. If the accounts of the MFAs and heads of state of more countries were included, a more comprehensive image could be made. Also, it is interesting to do this research in combination with other terrorist attacks. Especially since Twitter becomes more and more a part of everyday life for a lot of people, we can expect that the use of Twitter after crises will increase as well. Therefore, this research can only be a small beginning in analyzing how digital diplomacy can help people and governments after crises and what governments can do to illicit specific reactions from foreign publics. A step is made, but to achieve a comprehensive answer on what kind of engagement is elicited with informational tweets, what kind of replies are posted, how come condolences have a bigger impact than was hypothesized and how the use of strength in a tweet works the best for leaders, more concepts and empirics need to be analyzed.
7. Appendix: Codebook

This codebook was used for the classifying of each tweet to the categorization of each of the dependent and independent variables. For each hypothesis, the dependent and independent variable will be discussed.

H1: Tweets about a given terrorist attack that are meant to spread information are more likely to be retweeted, compared to tweets that are not meant to spread information.

The independent variable is information sharing. Either a tweet is meant to spread information or a tweet is not meant to spread information.

- Tweet is meant to spread information. A tweet is meant to spread information when it contains information on a just-happened terrorist attack. The information in the tweet can be a summary of what happened during the attack. The information in the tweet can also contain new facts about the terrorist attack. The information in the tweet can also contain a message from the government addressed to the public, with clarifications about the state of affairs. The information in the tweet must have the goal to inform the reader. An example is: @BelgiumMFA, 22-03-16, ‘Belgium will observe 3 days of national mourning from today till 24 March. All flags will be flown half-mast on all official buildings’. Another example, from the Australian Department of Foreign Affairs, is: @dfat, 13-11-15, ‘#France: Australians concerned for loved ones should try direct contact. If remain concerned, call Consular Emergency Centre: 1300555135’.

- Tweet is not meant to spread information. Tweets that are not meant to spread information fall into this category. This includes all the tweets that do not fit into the category ‘tweet is meant to spread information’.

The dependent variable is the amount of retweets. The amount of retweets is a continuous (count) variable. Twitter provides a count of the number of times each tweet has been retweeted and this data is collected for each tweet.

H2: A tweet that contains condolences is more likely to get replies compared to tweets that do not contain condolences.

The independent variable in the second hypothesis is the expressing of condolences. This variable is operationalized into two distinct categories, namely tweets that contain condolences and tweets that do not contain condolences.

- Tweets that contain condolences. A condolence-tweet is a tweet after a terrorist attack that expresses sympathy to the victims, the survivors, a people or other actors involved in the attack. A condolence tweet can literally state ‘my condolences’, for example: @SpainMFA, 14-11-15, ‘#Spain
extends its deepest condolences to the families of the victims in Paris #ParisAttacks’. But it can also
be the expressing of sympathies: @DutchMFA, 22-03-16, ‘FM #Koenders on #Brussels:
‘Attacks #Belgium closer than ever before. Conveyed sympathy for victims and relatives to
colleague @dreynders’. A condolence-tweet can also express compassion or empathy, without
literally stating that condolences are made or sympathies are expressed, for example: @SpainMFA,
14-11-15, ‘#GarcíaMargallo signs the Condolences Book in the Embassy of #France in #Spain. Our
thoughts with the French people *picture*’. In this case ‘our thoughts (are) with the French people’
expresses empathy, so it is also classified as a condolence-tweet.

• Tweets that do not contain condolences. Tweets that do not contain the features of the
condolence-tweets as stated above are classified as tweets that do not contain condolences.
The dependent variable is the number of replies on a tweet. This is a count variable. The number of
replies is counted by hand for each tweet, and this amount is used for the analysis.

H3: Tweets that show strength are more likely to get likes compared to tweets that are not intended
to show strength.
The independent variable is a nominal variable, namely the use of strength or power in a tweet. This
is coded as follows:

• Tweet has the intention to show strength. A tweet that has the intention to show strength
is a tweet that shows a willingness to catch or harm the perpetrators of the terrorist attack, for
example a tweet from the British Prime Minister: @Number10Gov, 13-11-15, ‘PM: This is a strike at
the heart of ISIL: we have unwavering determination and we will defeat them *link*’. Or a tweet that
has the intention to unify a people against the perpetrators or the group of people the perpetrators
belong to, for example, another tweet from the British Prime Minister: @Number10Gov, 14-11-15,
‘PM: The British and French people stand together when confronted by evil *link* #ParisAttacks’. A
tweet is also classified as a tweet that has the intention to show strength if language is used in an
‘active we’-form, like ‘we will never bow for terrorism’ or for example a tweet from the Prime
Minister of Belgium: @CharlesMichel, 14-11-15, ‘Dès hier soir #begov a pris des mesures
opérationnelles. Nous devons défendre et protéger nos valeurs @RTBFinfo’. A translation of this
tweet: From last night on #begov took operational measures. We must defend and protect our
values @RTBFinfo’. It can also be a tweet that states text with the intent to do the opposite of what
the perpetrators allegedly want to accomplish, for example a tweet from the President of Ghana:
@JDMahama, 22-03-16, ‘Suicide bombing in Brussels. Another cowardly attack on innocent civilians.
We stand in solidarity with Belgium. We would not be intimidated’. In this case ‘we would (will) not
be intimidated’ indicates that the perpetrators want to intimidate, and the President of Ghana
advocates the opposite of this. It can also be a tweet that contains text that is directed at the perpetrators in another negative way.

- Tweet has no intention to show strength. This category contains tweets that do not have the intention to show strength or power. All tweets that do not fit in the category that is described as ‘tweet that has the intention to show strength’, are classified in this category.

The dependent variable is the number of likes on a tweet. This is a count variable. Twitter provides a count of this number. This number is also derived for the use of this analysis.
8. References


