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CRISIS COMMUNICATION STRATEGIES AND REPUTATION RISK IN AN ERA OF SOCIAL MEDIA: A STUDY OF ONLINE USERS' PERCEPTION AND ENGAGEMENT

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CRISIS COMMUNICATION STRATEGIES AND REPUTATION RISK IN AN ERA OF
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DEDICATION

To my beloved parents, sisters, and Mohammed

for their ultimate love and support.

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RÉSUMÉ

Depuis quelques années, les médias sociaux sont devenus extrêmement populaires. Facebook, Twitter, et YouTube prennent une place de plus en plus importante comme moyens de communication pour les individus et les organisations. D'une part, grâce à ces nouveaux sites Internet, les organisations peuvent atteindre leurs partenaires et interagir avec eux directement, mais aussi elles peuvent le faire par le biais de communautés en ligne de façon indirecte. Les individus, d'autre part, peuvent se joindre à ces communautés en ligne, s'exprimer, et avoir un accès illimité à une quantité massive d'informations. Toutefois, l'information qui circule sur les médias sociaux n'est pas contrôlée, ce qui soulève des préoccupations telles que le degré de crédibilité de l'information. Les rumeurs, des informations fausses ou biaisées parfois, peuvent rapidement circuler sur les médias sociaux et de plus en plus d'organisations se retrouvent face à des situations inattendues. La réputation des entreprises peut être mise en cause.

Cette thèse vise à explorer les changements potentiels qui sont apparus dans l'environnement des entreprises avec l'émergence des médias sociaux. De plus, cette recherche tente de mettre en perspective les risques et les opportunités des médias sociaux pour les entreprises, et comment elles doivent adapter leurs activités et les stratégies d'ajustement aux exigences de l'environnement des médias sociaux. Pour cette raison, la présente thèse étudie trois questions de recherche : (i) comment les organisations communiquent et réagissent à une crise qui débuterait sur les médias sociaux afin d'éviter et de prévenir les effets indésirables, (ii) comment les utilisateurs des médias sociaux perçoivent la crédibilité des informations qui circulent sur internet et les médias sociaux, et (iii) quels sont les facteurs qui expliquent l'engagement des utilisateurs des médias sociaux dans les communautés de marque en ligne?

Pour répondre à la première question de recherche, une analyse approfondie de huit études de cas de médias sociaux a été effectuée afin d'explorer les stratégies de communication de crise des organisations dans un contexte de médias sociaux. Afin de répondre à la deuxième et la troisième questions de recherche, une enquête par questionnaire en ligne a été menée auprès d'un échantillon d'utilisateurs de médias sociaux pour analyser leur perception de la crédibilité de l'information des médias sociaux, et d'évaluer les facteurs qui pourraient expliquer leur engagement dans les communautés de marque en ligne.

Sur la base de l'analyse des études de cas de crises, un modèle conceptuel de stratégie de communication de crise des médias sociaux est proposé intégrant les canaux de diffusion de l'information, les origines de la crise, les raisons de la crise, l'intervention et les résultats.

L'analyse statistique des résultats des données de l'enquête révèle que les utilisateurs des médias sociaux vont allouer différents niveaux de crédibilité à chaque source d'information. Les résultats de l'enquête confirment également que des facteurs comme « activités avec médias sociaux », « confiance perçue », « sujet d'intérêt » et « pays d'origine » pourraient expliquer certains comportements dans l'engagement des utilisateurs dans les communautés de marque en ligne.

Cette thèse est organisée en huit chapitres. Le premier chapitre de la thèse présente le contexte et l'importance des médias sociaux qui ont révolutionné le domaine de la communication entre les individus et les organisations en raison de sa popularité et l'utilisation. Le deuxième chapitre fait un examen précis de la littérature portant sur six domaines: le Web 2.0 et les médias sociaux, les crises dans l'environnement des médias sociaux, la crédibilité de l'information qui circule sur les médias sociaux, le risque de réputation, les stratégies de communication de crise, et l'engagement des utilisateurs dans les communautés de marque en ligne.. Le troisième chapitre présente la méthodologie de recherche et les trois questions de recherche. Tout d'abord, des études de cas sont utilisées pour répondre à la première question de recherche qui est: «comment les organisations vont communiquer et faire face aux crises de médias sociaux pour éviter les conséquences indésirables?». La méthodologie inclut également la conduite d'un sondage en ligne pour aborder les deuxième et troisième questions de recherche: «comment les utilisateurs perçoivent la crédibilité des informations des médias sociaux en temps normal et en temps de crise», et «comment l'adoption des médias sociaux concerne leur engagement des utilisateurs dans les communautés de marque en ligne». Le quatrième chapitre intitulé «la communication de crise et le risque de réputation dans l'environnement des médias sociaux» contribue à une meilleure compréhension des stratégies de communication de crise des organisations. Les conclusions de ce chapitre résultent dans la proposition d'un modèle de communication de crise, incluant les nouvelles exigences de l'environnement des médias sociaux. Le cinquième chapitre intitulé «la perception de la crédibilité de l'information lors d'une crise de médias sociaux» adresse la deuxième question de recherche de la thèse et contribue à comprendre la perception de la crédibilité de l'information des médias sociaux par les utilisateurs en temps normal et en temps de crise. Les résultats de ce chapitre confirment que la presse nationale est la source

d'information la plus crédible en temps normal, alors que les moteurs de recherche en ligne (par exemple Google) sont perçus comme la source d'information la plus crédible au cours d'une crise. Le chapitre six intitulé «L'engagement des utilisateurs dans les communautés de marque en ligne: une étude des commentaires dans l'environnement des médias sociaux» aborde la troisième question de recherche et explique les liens entre l'adoption des médias sociaux et leur engagement dans les communautés de marque en ligne. Ce chapitre contribue à une meilleure connaissance sur les comportements d'engagement des utilisateurs de médias sociaux. Les résultats montrent que « les activités avec médias sociaux», « le niveau de confiance perçue», « le sujet d'intérêt » et « le pays d'origine » expliquent certains comportements dans l'engagement des utilisateurs dans les communautés de marque en ligne. Le chapitre sept résume les conclusions générales des chapitres précédents. Le chapitre huit explique les contributions théoriques et pratiques de la thèse. Ce chapitre comprend également des recommandations pratiques pour les gestionnaires de crise et des relations publiques concernant les stratégies de communication de crise dans l'environnement des médias sociaux. Ce chapitre comprend des recommandations pour les gestionnaires de marque du département de marketing afin de mieux comprendre les activités des utilisateurs de médias sociaux comme une explication de leurs comportements d'engagement dans les communautés de marque en ligne. Ce chapitre expose aussi les limites de la recherche et des recommandations pour des recherches futures.

ABSTRACT

Over the past few years, social media have become surprisingly popular. Social media platforms such as Facebook, Twitter, and YouTube are growing as important pathways for communication means among individuals and organizations. Throughout these tremendous platforms, organizations can reach to their stakeholders and interact with them through building online communities. Individuals, on the other hand, can join to these online communities, express themselves, and have unlimited access to massive amount of information like never before. However, the uncontrolled information of social media environment raises concerns such as the information credibility. Rumors, false, and biased information can quickly circulate among social media platforms and consequently organizations confront with unexpected incidents, which could expose their reputation at risk.

This dissertation aims to explore the prospective changes that have appeared along with the emergence of social media. Furthermore, this dissertation attempts to put in to perspective what organizations need to know about social media risks and opportunities, and how they should customize their activities and strategies fitting to the requirements of social media environment. For this reason, the present dissertation investigates three particular research questions: (i) how do organizations communicate and respond to social media crisis to avoid and prevent undesirable outcomes?, (ii) how online users perceive the credibility of social media information?, and (iii) how users' social media adoption relates to their engagement in online brand communities?

To address the first research question, an in-depth analysis of eight social media case studies was conducted in order to explore organizations' crisis communication strategies in the online social media environment. In order to address the second and third research questions, an online survey was conducted among a sample of social media users to investigate their perceived credibility of social media information, and to assess the factors that could explain their engagement in online brand communities.

Based on the results of case study analysis, a model of social media crisis communication strategy is proposed which is built upon the channels of crisis information diffusion, crisis origins, reasons, response, and outcomes. The findings of the online survey reveal that online users allocate different levels of credibility to information sources based on their actual situation.

The survey results also confirm that factors like "social media activities", "perceived trust", "subject of interest", and "country of origin" could explain some of the users' engagement behavior in online brand communities.

This dissertation is organized as follows: he first chapter of the dissertation explains the context and significance of social media, which have revolutionized the communication sphere among individuals and organizations due to its popularity and growing use. The second chapter includes a careful review of the related literature mainly focusing on six areas, including: Web 2.0 and social media, organizational crisis in social media environment, the credibility of social media information, reputation risk, crisis communication strategies, and users' engagement in online brand communities. Each chapter begins with a brief introduction and ends with a conclusion on the examined subjects. The third chapter unfolds the research methodology and the three research questions. The research methodology includes a case study research to address the first research question that is: "how do organizations communicate and respond to social media crises to avoid undesirable outcomes?". The methodology also includes an online survey addressing second and third research questions as: "how online users perceive the credibility of social media information in normal time and during a crisis", and "how users' social media adoption relates to their engagement in online brand communities?". The fourth chapter entitled "crisis communications strategies and reputation risk in the online social media environment" carefully addresses the first research question and contributes to a better understanding of organizations crisis communication strategies in form of a published scientific article. The findings of this chapter result in proposition of a crisis communication model including the requirements of responding to a crisis in social media environment. The fifth chapter entitled "perceptions of information credibility during a social media crisis" addressed the second research question of the dissertation and contributes to understand the users' perceived credibility of social media information in normal time compared to crisis time in form of an article. The results of this chapter confirms that national press is the most credible information source in normal time, whereas online search engines (e.g. Google) perceived to be the most credible information source during a crisis. Chapter six titled "users' engagement in online brand communities: a study of commenting behaviors in social media environment" addresses the third research question and explains the links between users social media adoption and their engagement in online brand communities. This chapter contributes to a better learning on driving factors of social media users' comments

on brand posts in form an article. The results represent that users' "online presence", "social media activities", "perception" and "topic of interest" can explains some of their commenting behaviors. Chapter seven summarized the general findings of the previous chapters. Chapter eight explains the theoretical and practical contributions of the dissertation. This chapter also includes practical recommendations for crisis managers and public relation to revisit their crisis communication strategies to properly respond to the risks associated with social media environment. This chapter includes recommendations for marketing strategists and brand practitioners to consider social media users' activities as an explanation for their commenting practices in online brand communities. This chapter includes the limitations of current research and recommendations for further researches.

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LIST OF SYMBOLS AND ABBREVIATIONS

BMCC   Blog-mediated crisis communication model

CE   Customer engagement

CEB   Customer engagement behavior

NCC   Networked crisis communication

NWOM   Negative word-of-mouth

OBC   Online brand community

SCCT   Situational crisis communication theory

SMCC   Social mediated crisis communication model

SNS   Social networking sites

UGC   User-generated content

WOM   Word-of-mouth

LIST OF APPENDICES

CHAPTER 1   INTRODUCTION

In recent years, the emergence and rapid expansion of Web 2.0 and social media is outstanding. The number of the world Internet users has reached to more than 3 billion (Internet World Stats, 2014) among which 74% are adult users of social networking sites (Pew Research Center, 2014) and 52% employ more than one social media platform (Duggan, Ellison, Lampe, Lenhart, & Madden, 2015). An eMarketer report predicts that the global social network audience will reach to 2.55 billion by 2017 (eMarketer, 2013). Social media are "activities, practices and behaviors among communities of people who gather online to share information, knowledge, and opinions using conversational media" (Safko & Brake, 2009, p.6). The adoption of social media is not limited to individuals. The 2014 Fortune 500 has totally embraced new communications tools in a way that 80% of the F500 are on Facebook, 83% using Twitter, and the use of LinkedIn is almost universal among them (97%) (Barnes & Lescault, 2014).

The growing use of social media has revolutionized the communication sphere among individuals and organizations. However, the use of the Internet and computer-mediated technologies such as social media are "double-edged" sword. On one hand, there are no limits of space, time, and content in online environment and whoever has the technical capacities to receive messages with a computer would be able to send them (Bucher, 2002). Online media have promoted the consumers of traditional media to the producers of online new media (Haas & Wearden, 2003; Metzgar, Flanagin, Eyal, Lemus, & McCann, 2003). There is no better way than through social media to spread messages, opinions, and thoughts to thousands of audiences through countless number of channels (O'Keefe, 2013). Nevertheless, the Internet has increased the risk of getting false information, rumors, and hoaxes (Bucher, 2002) due to the lack of professional gatekeepers who were monitoring the traditional media contents (Westerman, Spence, & Van Der Heide, 2012).

The diverse capabilities of social media have changed the paradigm of communication. The paradigm shift of communication could create new risks and opportunities for individuals and organizations. For example, social media might pose reputation risk to organizations (Aula,

2010). The battle between Nestlé[1] and Greenpeace[2] is an example of social media potentials that resulted in victory for one organization and defeat for the other. The story began on March 17, 2010, when Greenpeace launched an online campaign accusing Nestlé to buy palm oil for its popular chocolate bar -Kit Kat- from an Indonesian supplier –Sinar Mas – that clears vast areas of Indonesian forest for its plantations and destroys the natural habitat of the endangered orangutans. The campaign included a 60-second video of an office employee having a Kit Kat, which appeared to be a chocolate-covered ape finger. The video was uploaded on YouTube, and Nestlé asked YouTube to remove the video-clip, mentioning copyright concerns (Armstrong, 2010). Greenpeace re-posted the video-clip to Vimeo.com and used Twitter to spread the word about the Nestlé attempted censorship. Many Web users also re-posted the video on YouTube and other destinations on the Internet (Armstrong, 2010). Greenpeace encouraged its supporters to change their Facebook profile photos to anti-Nestlé slogans and to attack Nestlé`s Facebook page (Morgan, 2011). Nestlé's Facebook team started threatening their Facebook fans to delete comments made by those using modified versions of their logo (Ridings, 2010). Twitter users joined the conversation, encouraging people to visit Nestlé's Facebook comments. Negative Twitter comments appeared every 15 minutes (Ridings, 2010). The backlash continued to grow until Nestlé backed down and apologized on Facebook for deleting posts and being rude (CNN Money, 2011). Eventually, Nestlé declared its commitment to using only "Certified Sustainable Palm Oil" by 2015 when sufficient quantities should be available (Houpt, 2012).

This dissertation aims to explore some of the potential risks and opportunities emerged with the evolution of social media through answering three inclusive research questions that concern individuals and organizations interactions in the online social media environment. First research question aims to explore the strategies through which organizations respond to social media crises to prevent undesirable consequences. This question is addressed through conducting an in-depth multiple case study analysis aimed at evaluating organizations crisis communication strategies in response to social media crisis. Second research question evaluates the perceived credibility of information that online users consume in the social media environment. Third question seeks for the determinant factors of individuals' engagement in organizations online

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[1] Multinational food and beverage company headquartered in Switzerland

[2] Non-governmental environmental organization

communities. These questions are addressed through conducting an online survey intended to evaluate users' perceived information credibility and engagement behaviors in online social media environment. The results contribute to the growing literature of social media studies in communication research field in form of three original articles. One of the articles is published in "International Journal of Business and Social Science" and the other two are submitted to scientific journals. The findings of this dissertation are applicable for public relations to accurately incorporate social media in organization communication agenda. To avoid the undesirable outcomes of social media crisis by applying appropriate crisis communication strategies, and to engage social media users in their online discussions to benefit from the potential opportunities.

The rest of the dissertation is organized as follows: Chapter 2 reviews the prior literature on social media, social media use among individuals and organizations, potential risks associated with social media, crisis communication strategies and related theories, and social media potential benefits; Chapter 3 addresses the research methodology including problem statement and research questions, research method (case study and online survey), research contributions and research framework; Chapters 4 presents organizations' crisis communication strategies in the online social media environment (article 1); Chapter 5 reviews the online users perception of information credibility during a social media crisis (article 2); Chapter 6 reports the determinants of users' engagement in online brand communities (article 3); Chapter 7 discusses the general findings; the dissertation then concludes with chapter 8 that unfold the dissertation contributions, recommendations for practical implications, limitations of the present research and recommendations for future research.

CHAPTER 2   LITERATURE REVIEW

Social media are "the umbrella term that refers to social networking sites (like Facebook, LinkedIn, and Google Plus) as well as to information and media-sharing sites that users may not think of in terms of networking, such as Twitter, Instagram, and Tumblr" (Madden et al., 2013). To have a better grasp of social media risks and opportunities, this chapter begins with a review of the computer-mediate technologies and continues by discussing the new communication challenges and opportunities that organizations are confronted with, due to the online social media emergent.

2.1   The Internet, Web 2.0 and social media

Since March 1989, when Tim Berners-Lee invented the World Wide Web, there have been profound changes in the Internet application for communication means. The Internet, which has revolutionized the communications world, is "a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographic location" (Leiner et al., 2012). The World Wide Web, which is different from the Internet, is defined as "a way of accessing information over the medium of the Internet. It is an information-sharing model that is built on top of the Internet" (Beal, 2010). Perhaps the most fundamental change in the Internet application is its evolution in to an interactive platform for communication purposes, rather than a static information archive.   This stage that was first used in 2004 has been termed "Web 2.0". Constantinides and Fountain (2008, p. 232) define Web 2.0 as:

> "A collection of open-source, interactive and user controlled online applications expanding the experiences, knowledge and market power of the users as participants in business and social processes [...] Web 2.0 applications facilitates the flow of ideas and knowledge by allowing the efficient generation, dissemination, sharing and editing /refining of informational content".

Web 2.0 is a platform for social media where "content and applications are no longer created and published by individuals, but instead are continuously modified by all users in a participatory and collaborative fashion" (Kaplan & Haenlein, 2010, p.61). Web 2.0 is categorized to: "blogs",

"social networks", "content communities", "forums", and "content aggregators" (Constantinides & Fountain, 2008).

One of the most successful manifestations of the Web 2.0 is social media, which is ranked among the most popular features on the Internet (Philips, 2009). Social media are built upon a fundamental characteristic of Web 2.0 (O'Reilly & Battelle, 2009). Web 2.0 rotates around "conversations, social interactions, and the formation of groups" that act on collective knowledge, whereas social media is focused on understanding and managing specific aspects of the conversation (Evans, 2012). While there is a lack of formal definition for social media (Xiang & Gretzel, 2010), they are defined as "a group of Internet-based applications that built on the ideological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (Kaplan & Haenlein, 2010, p.61). Safko and Brake (2009, p. 6) indicate social media are "activities, practices and behaviors among communities of people who gather online to share information, knowledge, and opinions using conversational media". A number of authors have referred to the timely and interactive attributions of social media communications that foster conversational exchange among producers and consumers of messages (Taylor & Perry, 2005; Seltzer & Mitrook, 2007; Wight & Hinson, 2009). In what follows, the classification of social media and a brief explanation for each group are presented.

2.1.1 Social media classification

Kaplan and Haenlein (2010) classified social media based on the two elements of media- related component (social presence and media richness), and social dimension (self-presentation and self-disclosure) as follows:

1. Collaborative projects (e.g., Wikipedia) that enables the creation of user-generated content by end-users;

2. Blogs (short for web logs) that "tend to be written in the style of a journal, with posts arranged in reverse chronological orders. Some blogs are little more than online dairies, while others are almost collections of essays on weighty topics like politics, religion, or health" (Dhar & Chang, 2009, p.300);

3. Content communities (e.g., YouTube) that largely focus on media content sharing (e.g., texts, photos, videos, PowerPoint presentations) between users;

4. Social networking sites (e.g., Facebook) that connect users by creating personal information profiles that include photos, videos, audio files, and blogs;

5. Virtual games world (e.g., World of Warcraft) that are platforms in which users can appear and interact in the form of avatar;

6. Virtual social world (e.g., Second Life) that are part of Internet-based social media, which allow users to interact with others in customized form of avatars in three dimensions real time environment.

Fraustino, Liu, and Jin (2012) opted for a more detailed look on social media types. Table 2.1 outlines a variety of social media types and some popular example for each that are suggested by Fraustino et al. (2012)

Table 2.1: Social media types and examples (Fraustino, Liu & Jin, 2012)

Social media type	Examples
Blogs	Blogger, WordPress
Discussion Forums	LiveJournal, ProBoards
Micro-blogs	Tumblr, Twitter
Photo/Video Sharing & Podcasting	Flickr, iTunes Podcasts, YouTube, Pinterest
Social Bookmarking	Del.icio.us, Diigo
Social Discovery Engines & News Sources	Reddit, StumbleUpon, Slashdot
Social/Professional Networking	Facebook, Google+, LinkedIn, MySpace
Social Rating/Reviews	AngiesList, Yelp
Video/Text Chatting	Skype, AIM, mobile texting
Wikis	Wikipedia, Wikispaces

The different categories of social media determine the types of their usage among individuals and organization. Each of social media platforms is associated with particular risks and opportunities. Since this dissertation largely focuses on social networking sites, next section is assigned to a more detailed explanation on social networking sites as the most popular category of social media.

2.1.2 Social networking sites (SNS)

Boyd and Ellison (2008) define social networking sites as:

"Web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users

with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system".

The first identifiable social networking site –SixDegrees.com- was launched in 1997 and allowed users to create profiles, list their Friends, and surf the Friends lists (Boyd and Ellison, 2008). Social networking sites are the most popular group of social media and the term social media and social networking sites are usually used interchangeably. Among all social networking sites, Facebook is the world most popular followed by Twitter, LinkedIn, Pinterest, and GooglePlus (eBizMBA, May 2015). Figure 2-1 represents the timeline of the launch dates of many major SNSs, and dates when community sites re-launched with SNS features. Due to the mass of social networking sites and the scope of this dissertation, all SNS are not reviewed here.

2.2 Social media use

For better or for worse, social media are powerful communication platforms that cannot be ignored. Social media have become part of daily practice for individuals and organizations for a variety of reasons that are discussed in this section.

2.2.1 Individuals use of social media

Individuals of different age and background increasingly embrace social media for a variety of reasons. For instance, the results of a study by Hargiatti (2007) explain that individuals' gender, race, ethnicity, and parental educational backgrounds are all associated with their social media utilization. The results of a report by Pew Research Center (2014) reveals that 74% of online adults use social networking sites including 72% men, 76% women, 89% young adults (aged 18-29), 82% (aged 30-49), 65% (50-64), 49% (65+); and 73% have more than college education. Studies show that 52% of online adults use multiple social media sites and Facebook is the most popular site for those who only use one (Dugan et al., 2015). Findings of a study on American use of social media show that primary consideration of social media adoption for 66% of them is connections with family members and friends. 14% of users say that connecting around a shared hobby or interest is a major reason they use social media, and 9% say that making new friends is equally important to them (Smith, 2011).

Launch Dates of Major Social Network Sites

'97 — Six Degrees.com

'98

LiveJournal

AsianAvenue — '99

BlackPlanet

LunarStorm (SNS relaunch) —

'00

MiGente

(SixDegrees closes) —

'01 — Cyworld

Ryze —

Fotolog — '02 — Friendster

Skyblog —

LinkedIn — Couchsurfing

Tribe.net, Open BC/Xing — '03 — MySpace

Last.FM

Orkut, Dogster — Hi5

Multiply, aSmallWorld — Flickr, Piczo, Mixi, Facebook (Harvard-only)

Dodgeball, Care2 (SNS relaunch)

Catster — '04

Hyves

Yahoo! 360 — YouTube, Xanga (SNS relaunch)

Cyworld (China) — '05 — Bebo (SNS relaunch)

Facebook (high school networks)

Ning — AsianAvenue, BlackPlanet (relaunch)

QQ (relaunch) — Facebook (corporate networks)

Windows Live Spaces — '06 — Cyworld (U.S.)

Twitter — MyChurch, Facebook (everyone)

Figure 2-1: Timeline of the launch dates of many major SNS and dates when community sites relaunched with SNS feature (Boyd & Ellison, 2008)

Online social media have also become increasingly popular as information sources (Kim, Yoo-Lee, & Joanna Sin, 2011). Individuals have become active information-seekers who search for variety of new sources of information rather than to be passive recipients of traditional media information (Stephens & Malone, 2009). People use social media for variety of reasons such as gaining news and information (Westerman, Spence, & Van Der Heide, 2012), searching, communicating with each other, and expressing their ideas and opinions (Tsimonis & Dimitriadis, 2014). However there are differences in social media usage. For example, social networking sites like Facebook are used for "everyday life information seeking", Wikipedia is typically used in professional information seeking situations (Kim et al., 2011), and LinkedIn is used for job searching and professional networking activities (Kim, 2015).

Online users don't need to search for information and news; they can select their sources of interest to follow on social media platforms (e.g., Twitter, Facebook, or LinkedIn) and kept informed of what they want to see and read (O'Keefe, 2013). Individuals also use social media for the purpose of gaining news and information in disaster and crisis times (Sutton, Paelen, & Shklovski, 2008; Spence et al., 2006; Westerman et al., 2014). Perhaps the attack of September 11, 2001, was the first major crisis in which the Web played an important role as source of information about crisis and Web users' online communication in forums and chartrooms (Carey, 2002).

2.2.2 Organizations use of social media

Other than individuals, companies also increasingly employ social media for reasons like marketing and brand building activities (Gallaugher & Ransbotham, 2010), enhancing consumer relations from dialogue to trialogue (Magnold & Faulds, 2009), and customer engagement purposes (Tsimonis & Dimitriadis, 2014). Social media are communication tools through which messages could instantly disseminate to particular audiences (Avery et al., 2010). There is no better way than through social media to spread messages, opinions and thoughts to thousands of audiences through countless number of channels (O'Keefe, 2013). That is why organizations are changing their communication strategies and trying to include social media in their communication settings to involve customers in online discussions (Dijkmans, Kerhof, & Beukeboom, 2015). One reason for brands to adopt social media is to access new audiences and reach a wider range of people (Tsimonis & Dimitriadis, 2014).

Kietzmann, Hermkens, McCarthy, & Silvestre (2011, p. 243) suggest a framework of social media building blocks that explains how firms should engage with social media and develop strategies to monitor, understand and respond to social media activities, which vary in terms of their function and impact. The seven functional blocks of social media are:

1. 'Identity' represents the extent to which social media users make their identities public;

2. 'Conversations' signify the extent to which users communicate with one another in social media environment;

3. 'Sharing' stands for the extent to which users exchange, distribute, and receive content;

4. 'Presence' represents the extent to which users are aware of other users accessibility;

5. 'Relationships' stands for the extent to which users can be related to other social media users;

6. 'Reputation" is the extent to which users can identify the position of other users and themselves in social media setting;

7. 'Groups' represents the extent to which users can form communities and sub-communities (Kietzmann et al., 2011).

In a study of the Fortune 500 companies' use of Twitter, Facebook, blogs and client hosted forums to interact with customers, Culnan, McHugh, & Zubillaga (2010) found out that in order to gain full business value from social media, organizations need to acquire implementation strategies base on "mindful adoption, community building and absorptive capacity".

2.3   Social media potential risks

Social media are channels for a story to go viral in a short period of time (Veil, Sellnow, & Petrun, 2012). "Share" on "Facebook", "re-tweet" on Twitter, "email this video" on YouTube are options that offer online social media users the ability of information diffusion that could result in different types of risks such as common example of illegitimate use such as spam (Grier et al. 2010; Wang 2010; Ratkiewicz et al., 2011) or the risk of false information. The dissemination of false information via Twitter during Chilean earthquake is an example that explains the situation. The Chilean earthquake occurred off the coast of the Maule region of Chile on February 27, 2010 and it reached a magnitude of 8.8 on the Richter scale and lasted for 90 seconds (Mendoza,

Poblete, B., & Castillo, 2010). In the hours and days after the earthquake, Twitter was used to tweet time-critical information and emerging topic such as tsunami alerts, missing and deceased people, available and interrupted services (Mendoza et al., 2010). In few hours, the topic of Chilean earthquake reached the level of "trending-topic" on Twitter (Castilo, Mendoza, & Poblete, 2013). Castillo et al., (2013) investigated how Twitter was used during the earthquake by collecting public tweets during February 27 and March 2, 2010. They figured out 1,181 confirmed true tweets versus 1,682 false rumors, such as death of a well-known artist, tsunami warning, water tower broke, looting in some districts, and volcano activation. Their findings indicated that when information from official sources was insufficient, several rumors posted and re-posted on Twitter and increased the sense of "chaos and insecurity" among local public (Castilo, Mendoza, &Poblete, 2011). In what follows, three risks associated with social media are discussed.

2.3.1 The credibility of social media information

Social media technologies enable individuals to become the source of online information and to share ideas and thoughts with others (Marken, 2007). However, there are major concerns about the credibility of information shared through social media channels (Sutton et al., 2008). The credibility of online sources of information is under question because anyone with access to a server can share information with no control (Johnson & Kaye, 1998). The online information lacks the professional gatekeepers who monitored the traditional media contents (Westerman et al., 2012). Therefore, it is more complex to identify the credibility of online media compared to traditional media as there is no control on published information in the online environment and consequently, online information is potentially "distorted", "inaccurate", "biased", "misleading', or even "false" (Flangain & Metzger, 2000; Metzger & Flanagin, 2013). Consequently, online users are faced with the challenges of the information overload and the necessity for examining the information credibility (Sundar, 2008). Westerman et al. (2012) indicate that consumers of online information are responsible about the perceived credibility of information they consume in social media environment.

Fogg and Tseng (1999, p.80) define credibility as "believability. Credible people are believable people and credible information is believable information". In order to evaluate credibility, it is needed to assess the two components of credibility: "trustworthiness" and "expertise" (Fogg et

al., 2001). Credibility is a "perceived quality" (Fogg & Tseng, 1999) therefore, what is always meant by credibility is in fact the perception of credibility (Petty & Cacioppo, 1996). Few studies have examined people assessment of the credibility of online information. For example, the results of a study by Flangain and Metzger (2000) show that people perceive Internet information as credible as television, radio and magazines but not as credible as newspapers' information. Castillo et al. (2011) assessed the credibility of a set of tweets based on an automatic method and found that credible news are disseminated through authors who have written a large number of messages before and have many re-posts. Westerman et al. (2012) found out that having too many or too few followers and followings on Twitter decrease perceived credibility of the source. Nevertheless, what is relatively less studied is how online users evaluate social media information in normal times compared to crisis times regarding the credibility and trustworthiness. This research work is amongst the premier that aims to address this research gap by evaluating users' perceived information credibility in normal times compared to crisis times in online social media environment.

2.3.2 Social media crisis

Social media enable users to create and distribute information that could be true or false. If the viewership of these contents goes viral, spreading exponentially through social media, it could create a crisis (Veil et al., 2012). Fean-Banks (2007, p. 271) define crises as:

> "Unplanned events that directly or potentially threaten our company's reputations; the environment; the health, safety, or welfare of employees; and the health, safety, or welfare of citizens in communities surrounding our plants".

A crisis is an unexpected event that creates high levels of uncertainty and threatens corporate main goals (Seeger, Sellnow &, Ulmer,2003) and organization's reputation. Crisis impacts organization reputation and creates secondary reactions such as boycotting (Coombs, 2007; Dowling, 2000).

Due to the evolving of social media, individuals and communities could "create, share, and consume blogs, tweets, Facebook entries, movies, pictures" and conversations about companies and brands happen with or without their presence and permission (Kietzmann et al., 2011). The

open access given by social media enables individuals to create and distribute all types of contents. A crisis involving social media could originate from posting a video on YouTube, sharing a post on Facebook, tweeting on Twitter or writing a blog post. Owyang (2011) defines social media crisis as "an issue that arises in or is amplified by social media, and results in negative mainstream media coverage, a change in business process, or financial loss". In the online environment, the crisis information can be shared, re-shared and reaches millions of people in the absence of traditional media gatekeepers (Veil et al., 2011). In social media environment, the true or false information quickly circulates and the crisis could occur quicker than before (Hosseinali-Mirza, de Marcellis-Warin, &Warin, 2015).

To conclude, an example of social media crisis that resulted in organization reputation damage is explained. In June 2005, Jeff Jarvis –journalist and blogger- complained about his new Dell computer in his blog, The Buzz Machine. His blog post (Jarvis, 2005) was:

> "I just got a new Dell laptop and paid a fortune for the four-year, in-home service. The machine is a lemon and the service is a lie. I'm having all kinds of trouble with the hardware: overheats, network doesn't work, maxes out on CPU usage. It's a lemon".

He represented his dissatisfaction through targeting the product, the service, marketing, pricing, and most importantly the Dell brand. The blog post represented customer dissatisfaction and a company who does not consider customer delight and its reputation is under question. In response, the unhappy customers joined Jarvis on the blogosphere. Jarvis continued to circulate the criticism by triggering hundreds of bloggers to publicly complain about the service they have received from Dell's technical support (Slide Share, 2010). As a result, an explosion of negative sentiment from consumers about their experiences and the negative buzz around Dell were posted everywhere and went viral. What happened to Dell is an example of social media crisis, which shows the extent and length of crisis range in social media environment. The crisis happened in 2005 in which social media platforms such as Facebook and Twitter were not as popular as today and consequently they are not involved in crisis creation and information diffusion.

2.3.3 Reputation risk

With the rise and quick expansion of social media, organizational reputation is more exposed to threats due to the fast circulation of information among social media channels. Social media allow for an extraordinary dissemination of messages at minimum cost, but they remain mainly out of control, and might turn into negative exposure and threaten organizational reputation. Reputation is and continues to be one of the most important corporate assets, and also one of the most difficult to protect (Economist Intelligence Unit, 2005). Organizational reputation is a multidisciplinary subject of study. Fombrun (1996, p.72) defines reputation as "a perceptual representation of a company's past actions and future prospects that describe the firm's overall appeal to all its key constituents when compared to other leading rivals". Reputation is stakeholders' perceptions about an organization ability to create value relative to competitors (Fombrun & Shanley, 1990; Deephouse, 2000). The financial impact of a good or bad reputation is real but hard to measure (Warin, T., de Marcellis-Warin, N., Sanger, W., Nembot, B., & Hosseinali-Mirza, V., 2015). Chun (2005, p.105) regards reputation as:

> "The summary view of the perception held by all relevant stakeholders of an organization, that is, what customers, employees, suppliers, managers, creditors, media and communities believe the organization stands for, and the associations they make with it".

Coombs and Holladay (2012) argues positive collaboration and information about the organization build good reputation, while negative information is harmful to organizational reputation. In the social media context, reputation is defined as "the extent to which users can identify the standing of others, including themselves, in a social media setting" (Kietzmann et al., 2011, p.247)

Threats to reputation can destroy, literally in hours or days, an image or brand developed and invested in over decades (Larkin, 2003). According to Greyser (2009), reputational concerns come in different forms and from many publics. Some are unexpected, like the death of seven people in one day from Tylenol capsules; some are the result of long term problems, like the scandal of Arthur Andersen accounting firm; some other come from dissatisfied customers and the general public (Greyser, 2009). Reputation risk can also result from an organization's own communication activities, including their reaction to claims presented in the social media (Aula,

2009). Kietzmann et al. (2011) argue that consumers are increasingly using social media websites to 'create, modify, share, and discuss Internet contents' that can significantly 'impact a firm reputation, sales, and even survival'.

Social media might pose reputation risk to firms (Aula, 2010). Reputation risk is the chance of losing one's reputation. It threatens corporations and influences their competitiveness, local positioning, trust and loyalty of stakeholders, media relations, and even the permit to exist (Rayner, 2004). According to Economist Intelligence Unit (2005) reputational risk emerges as the main concern for the majority of risk managers—ahead of regulatory risk, human capital risk, IT network risk, market risk, and credit risk. Due to the rise of social media, reputation risk is now the biggest risk concern, which enables immediate global communications that make it harder for companies to control how they are perceived in the marketplace (Deloitte, 2013).

Reputation can be enhanced or damaged among social media platforms (Jones et al., 2009). In order to impact online reputation, companies' need to move toward engaging stakeholders in online conversations, since well managed online conversation help companies to build and maintain "presence", "reputation" and "brand image" (Jones et al., 2009). A favorable reputation might protect a company in times of crisis (Shamma, 2012). Dijkmans, et al. (2015) argue that "online reputation management involves interacting with people online, creating sharable content, monitoring what stakeholders[3] are saying, keeping track of their dialogue, addressing negative content found online, and following up on ideas that are shared through social media".

2.4 Crisis communication strategies

We live in the information age where the majority of all people around the world can communicate by messages from different sources, through different channels (Wahlberg & Sjöberg, 2000). One of these channels of communication is social media. When an incident hits an organization, the dissemination of online information among social media channels can create a crisis on one hand, and on the other hand it can help the organization to manage the crisis (Veil et al., 2012).

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[3] Those who 'benefit from or are harmed by, and whose rights are violated or respected by corporate actions' (Evan & Freeman, 1988, p.79).

Crisis communication strategies are of significant core to all crises (Valvi & Fragkos, 2013). In the process of crisis communication, organizations provide an explanation to public about what happened and offer a solution to the problem (Millar & Heath, 2003). During crisis, the Internet causes the loss of a certain amount of control organizations have over their communication channels and that is why organizations might have difficulties to be heard against other noises in online environment (Freberg, 2012). However, Internet-based technologies could be used in crisis time as the source of information and the channel of communication. September 11, 2001, is the first example of the Internet usage among public during the terrorist attack. During a crisis, organizations should decide how to communicate with their stakeholders to maintain their organizational image (Stephens & Malone, 2009). The speed of the information diffusion has additional importance during crisis, in which organizations are expected to provide credible information that stand against rumors and false noises to protect them and help stakeholders to have a valid picture of the situation (Osatuyi, 2013). During a crisis, social media can serve as a platform for online communication, acting as an informal communication channel through which personal or organizational information is conveyed, shared, and managed (Austin, Liu, & Jin, 2012). Some organizations employ the Internet in crisis communication strategies, but the majorities are hesitant to consider social media as an accurate and credible information source and prefer to use traditional public relations tactics (Perrry, Taylor, & Doerfel, 2003; Wright & Hinson, 2009).

Crisis response strategies are used to repair the reputation and to prevent more negative effects of the crisis (Dowling, 2000; Coombs, 2007). JetBlue' response to its Valentine's Day social media crisis is an example of an appropriate crisis response that addressed an issue that was almost as widely reported in the media as the airline's problems and resulted in issuing a Customer Bill of Rights (Hanna, 2008). Selecting the appropriate crisis response strategy is a function of crisis origin (external or internal), crisis information form (via which channel the message is conveyed, e.g., Tweet, press release, etc.) and crisis information source (who the information is sent by, e.g., journalists, bloggers, other organizations, etc.) (Jin & Liu, 2010; Liu et al., 2012). Inappropriate communication and response strategies accelerate social media crises (Ott & Theunissen, 2014).

Post-crisis communication strategies are used to repair reputational loss and prevent reputational damage (Coombs & Holladay, 2005). Social media provide emotional support after a crisis

through enabling people to virtually stay connected, share information, and demand resolution (Chio & Lin, 2009).

2.4.1 Crisis communication theories

This section turns to a review of existing crisis communication theories, which are relevant to the scope of this dissertation. The selected theories are: Image repair theory, Situational crisis communication theory (SCCT), The Blog-mediated crisis communication model (BCCM), The Social-mediate crisis communication model (SMCC), and Networked crisis communication theory (NCC). A quantitative study of crisis communication research shows that Image repair theory and Situational crisis communication theory dominate the field of crisis communication research (Avery, Lariscy, Kim, & Hocke, 2010). The aforementioned theories are described as follows.

2.4.1.1 Image repair theory

Benoit (1997) built image repair theory based on earlier theories of "apologia" and "accounts". The focus of the theory is on message options and what a corporation can say when facing a crisis. The theory offers five categories of image repair strategies including: "Denial", "Evasion of Responsibility", "Reducing offensive of Event", "Corrective Action", and "Mortification". Despite that image repair theory is practical and dominant, it needs adaptations and expansions when applying to social media (Liu & Fraustino, 2014), considering that the model is linear and static (Gilpin, 2010; Seeger & Griffin, 2010).

2.4.1.2 Situational Crisis Communication Theory (SCCT)

Situational Crisis Communication Theory (SCCT) provides a framework for understanding how to maximize the reputational protection by crisis communication and identifies how key features of crisis situations impact attributions about the crisis and organizational reputation (Coombs, 2007). The model includes steps in reputational threats evaluation in crisis situations and propositions for crisis managers to determine which crisis response strategy to apply to increase reputational protection. Coombs (2006) classifies crisis response strategies as "Deny", "Diminish", and "Deal" response options. Figure 2-2 represents crisis situation model of SCCT.
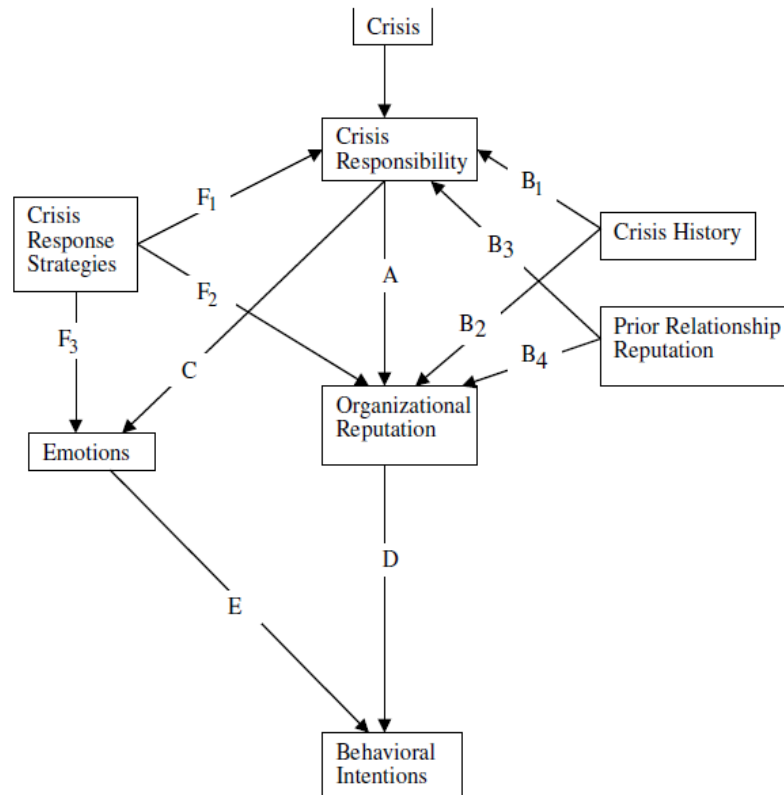
Figure 2-2: Crisis situation model of SCCT (Coombs, 2007)

The main focus of SCCT is on the organization concerns in crisis time (Liu & Fraustino, 2014) and research has yet to fully investigate the application of SCCT in social media environment (Coombs & Holladay, 2012; Schwarz, 2012).

2.4.1.3 Blog-Mediated Crisis Communication model (BMCC)

The Blog-mediated crisis communication model (BMCC) emerged as a response to the impact of blogosphere on public relations practices in order to help crisis managers monitor blogosphere and respond to influential bloggers (Jin & Liu, 2010). The model is meant to help public relations to navigate through the new emergent blogosphere and to respond when it is necessary. The model is represented in figure 2-3.
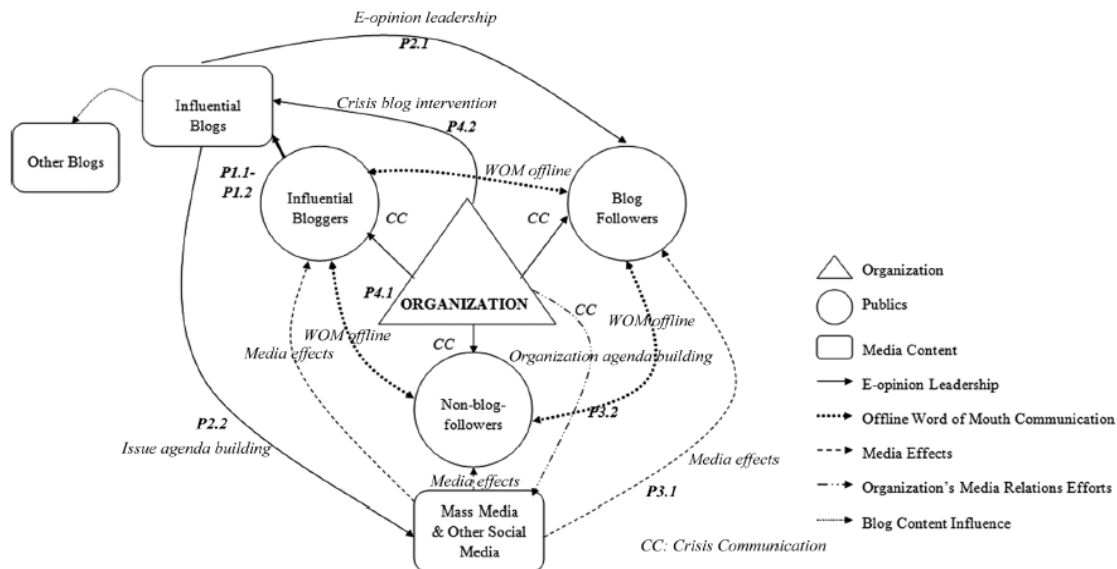
Figure 2-3: Blog-mediated crisis communication model (Jin & Liu, 2010)

Jin and Liu (2010) grounded their proposed model in opinion leadership, word-of-mouth communication, and rumor/crisis response research. The model later upgraded by changing blog-mediated crisis communication model to social-mediated crisis communication model to embrace more requirements of corporate crisis communication in social media environment.

2.4.1.4 Social-mediated Crisis Communication Model (SMCC)

Social-mediated Crisis Communication Model (SMCC) emerged from an evaluation of BMCC through interviewing 40 communication professionals with the aim of adopting social media tools in to crisis communication strategies (Liu, Jin, Briones, & Kuch, 2012). The findings supported public increasingly uses of social networking sites like Facebook and Twitter instead of blogs, therefore the authors adjusted BMCC model to SMCC model based on their empirical research. The model includes five considerations: "crisis origin", "crisis type", "infrastructure", "message strategy", and "message form" that affect how organizations respond to crises via traditional media, social media and offline word-of-mouth (Liu et al., 2012). The model is represented in figure 2-4.
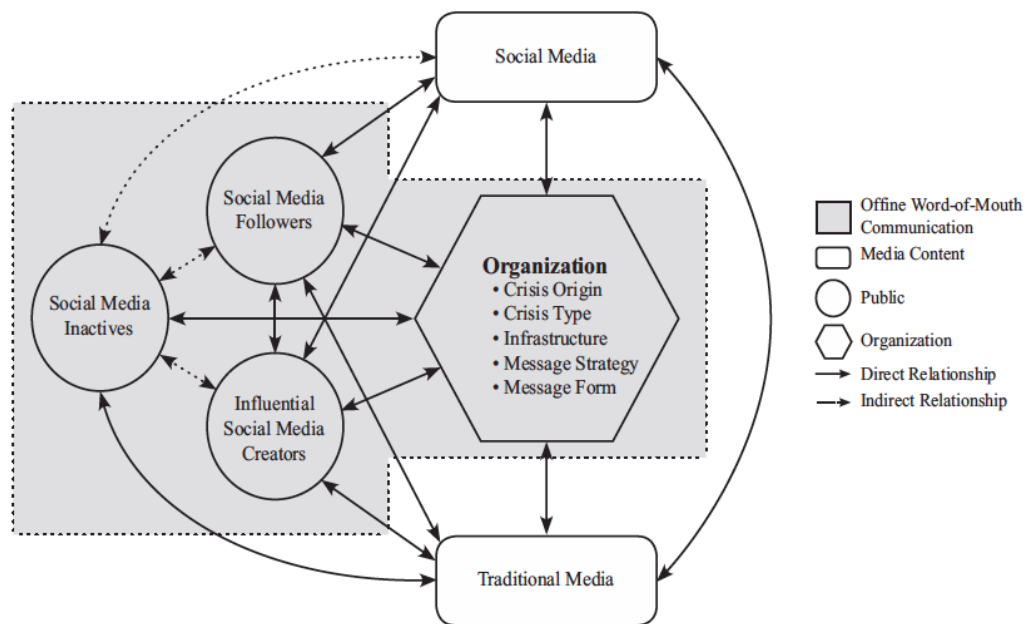
Figure 2-4: Social-Mediated Crisis Communication Model (Liu, Jin, Briones, & Kuch, 2012)

SMCC is criticized for not being a comprehensive model and that it only focuses on reputation-management (Freberg, 2012).

2.4.1.5 Networked Crisis Communication theory (NCC)

The Networked Crisis Communication theory (NCC) "challenges classical crisis communication theories by showing that the medium used affects the impact of crisis communication" (Utz, Schultz, & Glocka, 2013, p.41). The main focus of the model is the effect of media type on crisis message effectiveness by contrasting the effects of medium (Facebook vs. Twitter vs. online newspaper) and crisis type (intentional vs. victim) using a single crisis scenario (Utz et al., 2013). The model indicates that crisis messages disseminated via social media result in different public responses compared to the same message are being distributed through traditional media (Schultz, Utz, & Göritz, 2011; Utz et al., 2013). Yet, the model lacks the point of how organizations could use social media to mitigate the negative outcomes such as boycott (Liu & Fraustino, 2014) and there is still a need for more compound models of crisis communication in social media environment (Utz et al., 2013). Table 2.2 shows the crisis communication theories that are selected and explained with regards to the scope of this research.

Table 2.2: Crisis communication models theories and models

	Theories and models	References
1	Image repair theory	Benoit, W.L. (1997)
2	Situational Crisis Communication Theory (SCCT)	Coombs, W.T. (2007)
3	Blog-mediated Crisis Communication Model (BMCC)	Jin, Y. and Liu, B.F.(2010)
4	Social-mediated Crisis Communication Model (SCCM)	Liu, B.F., Jin, Y., Briones, R., and Kuch, B. (2012)
5	Networked Crisis Communication theory (NCC)	Utz, Schultz, and Glocka (2013)

Regarding the aforementioned shortfalls of the available models and due to the matter that studies conducted before the advent of social media cannot be expected to address concerns related to new media (Liu & Fraustino, 2014), this dissertation aims to suggests an inclusive crisis communication strategies with regards to different requirements of responding to crisis among social media websites from the point that crisis actually appears till the appearance of crisis outcomes.

2.5 Social media opportunities

Social media can create opportunities for "two-way dialogue" and interaction among individuals and organizations (Bortree & Seltzer, 2009). These new media have the potential to make profession more "global, strategic, two-way, and interactive, symmetrical or dialogical, and socially responsible" (Grunig, 2009). Social media are inexpensive or even free platforms for the expression of idea and exchange of information that potentially include opportunities for communication and new pathways in crisis communication (Wright & Hinson, 2009). At the time of natural disaster for instance, social media remain the only communication form when all other fail (Bird, Ling, & Haynes, 2012). For example, Twitter played a significant role in 2010 Haiti earthquake as communication platform to circulate the earthquake first-hand information and fundraising efforts (Pew Research Center, 2010) that helped raise eight million dollars (Gross, 2010). On January 13, 2010, a massive earthquake happened in Haiti and caused widespread damages to people and the key communications links such as the international airport (Yates & Paquette, 2011). Even though, online users primarily rely on traditional media for coverage of the quake, they turned to Twitter and blogs to share information and react to the disaster situation (Nielsen, 2010). Moreover, people participated in the campaign of using text messaging to raise funds for the Red Cross and spread the information about the campaign to others through Twitter

and Facebook (Wortham, 2010). Social media had a major role during Haiti earthquake to the level that some mainstream news organizations used social media as information source. For instance, CNN was monitoring and reporting the tweets and other messages from people in Haiti and those who had been in touch with friends and family (Simon, 2010). Even the week following the earthquake, thousands of Haiti-related tweets were uploaded every hour on Twitter and users were discussing relief efforts in Haiti, including the participating organizations and individuals (Smith, 2010). This case signifies the significant potentials of social media platforms that could be employed for advantageous purposes amongst the communication settings of modern world. In what follows, the two interrelated opportunities associated with social media are discussed. Social media enable organizations to engage customers and non-customers in their conversations. For this purpose, organizations need to establish online communities in which the conversations take place. The establishment of online brand communities and engaging social media users in brand discussions are social media opportunities that are discussed in this dissertation.

2.5.1 Social media: a stage to engage

Blackshaw and Nazzaro (2006) refer to social media as "consumer-generated media" that include variety of online information sources that created by consumers to share their information and experience about products, brands, and services. In social media world, Social media create interactive platforms through which individuals and communities can "share, co-create, discuss, and modify user-generated content" (Kietzmann et al.,2011,p.241).

2.5.1.1 User-generated content (UGC)

User-generated content (UGC) includes various forms of media content that are created by end-users and are publically available (Kaplan & Haenlein, 2010). Kaplan and Haenlein (2010, p.61) define user-generated content (UGC) as "published content outside of professional routines and practices that can be seen as the sum of all ways in which people make use of social media". UGC are forms of consumer engagement that can be found across social media platforms (Smith et al., 2012) and are considered important means through which social media users express themselves and communicate with one another (Boyd & Ellison, 2007).

2.5.1.2   Consumer engagement (CE)

Customer engagement (CE) includes all customer firm-related behaviours such as online discussions, commenting, information search, and opinion polls that could result in positive or negative consequences for firms (Gummerus, Liljander, Weman, & Pihlstrom et al., 2012). Van Doorn et al. (2010, p.254) indicate:

> "Customer engagement behaviors (CEB) can go beyond transactions, and may be specifically defined as a customer's behavioral manifestations that have a brand or firm focus, beyond purchase, resulting from motivational drivers that can be both positive (i.e. posting a positive brand message on a blog) and negative (i.e., organizing public action against a firm)".

In the online environment, Mollen and Wilson (2010, p.923) define online engagement as "a cognitive and affective commitment to an active relationship with the brand as personified by the website or other computer-mediated entities designed to communicate brand value". Engagement with a website cause a web user to visit it, be attentive to it, recommend it, or get disappointed if it is no longer available (Calder, 2009). In online social media, customer engagement includes all communication through brand communities including, word-of-mouth, recommendations, blogging, and writing reviews (Van Doorn et al., 2010).

2.5.1.3   Benefits of consumer engagement for organizations

Smith, Fischer, & Yongijan (2012) argue that brand-related user-generated content has the potential to shape brand perception. Consumers tend to rely on peer consumers opinions (Park, Lee, & Han, 2007) in form of online reviews. One objective of brand posts on brand fan pages is to encourage brand fans to get engaged in form of liking, commenting or sharing that post (de Vries, Gensler, & Leeflang, 2012). The exchange of positive experience in form of comment to a brand post has a positive effect on the likelihood to recommend the product (Gruen, Osmonbekov, & Czaplewski, 2006). Dhar and Chang (2009) investigated the impact of user-generated content in the forms of blogs and social networking sites on music sale and found out that the future sale is positively correlated with the volume of blog posts about an album. Positive comments can enhance the value of brand post and even generate empathy among brand fans (de Vries et al., 2012). In a study on Amazon.com and BN.com, Chevalier and Goolsbee (2003) found out that products with more positive word-of-mouth (WOM) had higher sales; however,

negative word-of-mouth (NWOM) had a greater impact on sales than positive reviews. In sum, prior researches are mainly based on the content analysis of social media discussions. Nevertheless, hardly any study focused on the factors that motivate social media users to engage in brands' online discussions. In order to address this research gap, this dissertation aims to investigate the determinant factors that could explain commenting behavior of social media users. Additionally and in contrast to previous researches, this research work opts to explore social media users commenting behavior that include customers and non-customers.

2.5.2 Online brand communities (OBC)

Organizations are increasingly using social media technologies to reach and interact with stakeholders (Wu & Pinsonneault, 2011). Social media are different from traditional web pages that run by companies with business-related purposes (Kaplan & Haenlein, 2010). In the social media environment, content combined with technology affect the ways marketers influence current and potential customers (Hanna, Rohm, & Crittenden, 2011). For the purpose of connecting to stakeholders, brands need to build a ground in which interactions and conversations take effect. This ground is called brand community. A brand community is "a specialized, non-geographically bound community, based on a structured set of social relationships among admirers of a brand. It is specialized because at its center is a branded good or service"(Muniz & O'Guinn, 2001, p. 412). Organizations build OBC to make relationship with customers and get feedback (Wiertz & de Ruyter, 2007). There is a trend on consumers becoming fans of brands on social media and using social media platforms as a source of information about their brands (Bruhn, Schoenmueller, & Schaferm, 2012). For example, big brands like Coke have flourished in social media world, ranking as the world's most valuable brand and attracting the biggest Facebook fans. It is world's number one brand with 56.8 million fans on Facebook and more than half a million fans talking about its content per day (Ernan Roman Direct Marketing Corp., 2013).

2.5.2.1 Benefits of online brand communities for organizations

Social media brand community provides benefits to users and brands. It facilitates information sharing and reinforces the customers' relationship with other customers and the brand that could result in brand trust and loyalty (Laroche, Habibi, & Richard, 2013). Being able to keep social media users close to the brand fan page is a great opportunity for companies to turn a simple user

into a brand fan and possibly a loyal customer (Tsimonis & Dimitriadis, 2014). Dijkmans, et al. (2015) found that engagement in company social media activities is positively related to corporate reputation, especially among non-customers, which have different reasons for engaging in online brand communities. This could be a good reason for companies desire to engage non-customers in their communities and get them involved in brand' online conversations.

2.6 Conclusion

Based on the in-depth literature review, the purposes of the research are identified in threefold. First, to propose an inclusive model of social media crisis communication with regards to three steps: the characteristics of an organizational crisis; the specifications of crisis communication response; and the probable crisis outcomes in the social media environment. The social media crisis communication model builds upon the review of prior researches, aiming to address the shortfalls of previous models, which are not entirely responsive for organizational crisis communication purposes in online social media environment.

The second purpose is to assess the online users' perceived credibility of social media information in normal time compared to crisis time. In social media environment, false and biased information are available due to the lack of control over what is being produced and disseminated among the online channels. The existence of false information among social media platforms is a potential risk to organizations assets (e.g., reputation), particularly in crisis time in which the provision of accurate and truthful information is critical for organizations and individuals. Most of the previous studies have not addressed the concern of perceived information credibility during a crisis. Due to the significance of this concern in today's communication sphere, and to address the current research gap, this research investigates how online users perceive the credibility of social media information in normal time compared to crisis time.

The last purpose is to study the impact of online users' engagement on their commenting behaviors in online brand communities. Online brand communities are platforms through which organizations are able to initiate conversations with their audiences. Social media users engage in communities' discussions and interact with the brand and other users through generating contents such as comments on brand posts. Previous studies have exhaustively examined user-generated contents from different viewpoints and in different disciplines. However, what are less

investigated are the driving factors that explain the reasons for which social media users engage in online brand communities and participate in online discussions. For this reason, the current dissertation intends to explore how users' social media adoption relates to their engagement practices in online brand communities.

In the next section research methodology is presented that explains the process through which the research questions are built, addressed, and contributed to the social media studies in field of communication research.

CHAPTER 3   RESEARCH METHODOLOGY

This chapter explains the research methodology of the dissertation including: problem statement and research questions; research method; research contribution; and research framework. First, research question are explained that are built upon research significance, existing problems of the research field, and the literature gap. After positioning the research questions, the applied method for data collection and analysis are explained and justified. Next, the research contributions are situated followed by the research framework that indicates the phases upon which the dissertation is guided and completed.

3.1   Problem statement and research questions

The popularity and rapid expansion of social media has shifted the paradigm of today's communication. Organizations need to modify their communication strategies to compete with the requirements of social media environment, particularly when the information about an unwanted incident circulates among social media and creates a crisis that might put the organizational reputation at risk. Social media are emerging as "hot topic" for crisis communication (Coombs, 2011a). Despite the popularity of social media and their significance in organizations' persistence, little is known about how companies approach crisis communication in the social media environment (Ki & Nekmat, 2014). In order to address this research gap and due to the social media significance in today's organizational survival, this dissertation defines its first research question as:

> RQ1- How do organizations communicate and respond to social media crises to avoid undesirable outcomes?

This research question includes three categories that are precisely addressed in chapter four. The research question first aims to address why and though which channels of communication the crisis begins in social media environment. It then focuses on the response strategies, response timing and that through which channels the actual organizational communications take place. Lastly, the research question targets the probable crisis outcomes for organizations in social media environment.

The pandemic growth of social media has caused organizations to increasingly adopt social media technologies to reach to and interact with their stakeholders (Wu & Pinsonneault, 2011).

Likewise, people use of online social media is on the rise for different purposes such as gaining information (Westerman et al., 2012) particularly in disaster and crisis times (Sutton et al., 2008). Although online social media platforms are reliable tools to share information to target audiences in a timely manner (Osatuyi, 2013), there are major concerns about the credibility of information shared through social media channels (Sutton et al., 2008). Few studies have examined people assessment of the credibility of online information (Flangain & Metzger, 2000; Castillo et al., 2011; Westerman et al., 2012). However, what is relatively less studied is how online users evaluate social media information in normal times compared to crisis times with regards to the credibility of information. To address this research gap, this dissertation aims to define its second question as:

RQ2- How online users perceive the credibility of social media information in normal time and during a crisis?

This research question includes four categories that are carefully addressed in chapter five. Research question two, first addresses the users' perceptions of social media information credibility in normal time. Then the question targets the users' perceptions of social media information credibility in crisis time. The research question then assesses the users' evaluation of organization crisis communication strategy during a crisis. Finally it addresses users' opinions on social media crisis impact on organization.

Social media are tremendous platforms through which organizations can efficiently communicate and interact with their stakeholders. In fact, there is no better way than through social media to spread messages to thousands of audiences through countless number of channels (O'Keefe, 2013). That could be a good reason for companies to include social media in their communication settings and to engage customers in online discussions (Dijkmans et al., 2015). Engaging audiences in organization social media activities is positively related to corporate reputation (Dijkmans et al., 2015). There is also a trend on consumers using social media platforms as a source of information about their favourite brands (Bruhn et al., 2012). Prior researches mainly looked at the social media contents and online discussions (Chevalier & Goolsbee, 2003; Gruen et al., 2006; Dhar & Chang, 2009; de Vries et al., 2012). Nevertheless, hardly any study explained the determinant factors of users' engagement in online discussions. This research aims at investigating theses elements through its third research question as:

RQ3- How users' social media adoption relates to their engagement in online
brand communities?

Research question three is categorized in four sub-questions that are carefully addressed in chapter six. This question addresses the link between "users' online presence", "users' social media activities", "users' perceptions", and "users' topic of interests" to their commenting behaviors.

Next section carefully explains the selected research methods to address the research questions.

3.2 Research method

For the purpose of data collection and analysis, this research applied a combination of qualitative and quantitative research methods to appropriately address the three research questions.

3.2.1 Case study

Due to the relative novelty of social media research studies, this dissertation investigates its first research question by means of a qualitative method. This approach is appropriate for new areas of research (Eisenhardt, 1989) and is suitable in answering "how" or "why" research questions (Yin, 2009). The research used a multiple case study design that allows replication logic, in which each case aids to confirm or disconfirm the inferences drawn from the others (Yin, 2009). To address the first research question, the crisis communication strategies of eight companies were investigated through collecting the relevant secondary data including online newspaper and magazine articles, online organization press releases, websites, online discussion forums and social media platforms (e.g., Facebook, Twitter, YouTube, and blogs) data. For the purpose of data analysis, an in-depth descriptive examination for each case study was conducted. The focus rested on how the social media crisis emerged, how each company responded, and what were the outcomes. The analysis was made in three sections targeting "the components of social media crisis", "crisis communication strategies", and "crisis outcomes". This research is presented in chapter 4 of the dissertation.

3.2.2 Online survey

To address the research questions 2 and 3, an online survey was designed with the intention to examine "online users' perceived credibility of social media information" and "determinant

factors of users' engagement in online brand communities". The questionnaire was tested with 15 graduate students of Polytechnique Montreal. Suggested modifications were applied and the second version was tested with the same group. The research used the snowball sampling in which the first study subjects recruit future subjects among their friends, family, and contacts. The questionnaire was then uploaded on Lime Survey to become accessible for the survey respondents. Respondents were asked to start with a consent form, which was confirmed by the ethics committee of Polytechnique Montreal. The questionnaire consisted of 45 questions including demographic components and questions that query a series of user patterns in online social media environment. The average response time was 25 minutes and the survey was open for data collection for 6 months (May 1st to October 31th, 2014). The complete version of questionnaire is represented in Appendix A. For the second research question, Data analysis included descriptive statistics followed by a two-tailed test of Pearson Correlation using SPSS version 22. Regarding the third research question, a logistic regression model was used and the data analysis was executed by STATA version 12.1. The aforesaid studies are presented in details in chapter 5 and 6 of the dissertation.

3.3 Research contributions

This PhD dissertation contributes to the growing literature of social media studies through presenting the three original articles as follows:

- Hosseinali-Mirza, V., de Marcellis-Warin, N., Warin, T. (2015). Crisis Communication Strategies and Reputation Risk in the Online Social Media Environment. *International Journal of Business and Social Science*, Vol. 6, No.5, pp. 7-21Hosseinali-Mirza, V., de Marcellis-Warin, N., Warin, T. Perceptions of information credibility during a social media crisis. Submitted to *Public Relations Review* on May 19, 2015.

- *Hosseinali-Mirza, V., de Mar*cellis-Warin, N., Warin, T. Users' engagement in online brand communities: a study of commenting behaviour in social media environment. Submitted to *Journal of Interactive Marketing* on May 27, 2015.

3.4 Research framework

Figure 3-1 represents the research framework that is used to guide the dissertation. The framework is built upon the review of literature, problem statement and research questions, and

research methodology that result in three articles, which contribute to the social media studies in communication field of research. This research investigated some of the prospective risks and opportunities of social media environment, and suggested a series of practical implications with regards to avoiding the risks and benefiting from the opportunities in social media era. In what follows, each of the three articles is briefly explained.

3.4.1 Article 1: Crisis communication strategies and reputation risk in the online social media environment

This research explores organizations crisis communication strategies in the online social media environment. The study aimed to respond the first research question based on an in-depth analysis of eight social media crises in order to extend the understanding on how organizations respond to crises in the social media environment to prevent and avoid undesirable outcomes. The results reveal that each organization employs different crisis communication strategies that result in various outcomes. It was found that companies respond to social media crisis through both social media and traditional media, and their crisis response messages include apology and compensation. Some companies respond to social media crisis in a timely manner whereas others respond with delay. The study suggests an elevated model of social media crisis communication strategy that aims to meet the requirements of social media crisis response. This research is presented in chapter 4.

3.4.2 Article 2: Perceptions of information credibility during a social media crisis

This study presents the results of an online survey conducted to investigate how online users perceive the credibility of social media information in normal time versus crisis time. Moreover, the users' perceptions of crisis communication strategies and social media crisis outcomes are investigated. The study addresses the second research question through conducting an online survey, using an actual social media crisis case study. The findings which are practical for public relations reveal that: (i) online users allocate different levels of credibility to information sources in normal time compared to crisis time; (ii) online users with higher level of social media engagement give more importance to an organization' social media activities during a crisis; and

(iii) online users suppose that social media crisis has negative long-term impact on an organization's reputation and brand credibility. This study is presented in chapter 5.

3.4.3 Article 3: Users' engagement in online brand communities: a study of commenting behaviour in social media environment

This study seeks for a better understating on how online users social media adoption relates to their engagement in online brand communities. The study addresses the third research question through an online survey pointing out to assess the influential factors of social media users' commenting behavior. Results indicate that "social media activities", "perceived trust", "subject of interest", and "country of origin" could explain some of the commenting behaviors of social media users. Marketing and brand strategists can be guided by the findings of this research with regards to the factors to be considered for engaging social media users in online brand discussions. This research is presented in chapter 6.

Figure 3-2 summarizes and outlines the eight chapters of the Ph.D. dissertation that resulted in three original scientific articles that contributes to social media research studies.

Social media potential risks and opportunities for organizations

Potential risks:
-   Rumors, false, and biased information;
-   Social media crisis;
-   Reputation risk;
-   Crisis communication strategies (prior communication strategies are not entirely applicable to social media crises)

Potential opportunities:
-   Easy and quick access to unlimited information;
-   Easy reach to stakeholders;
-   New marketing opportunities (building online brand communities to engage social media users in brand discussions that could be beneficial for the brands)

Research question 1
How do organizations communicate and respond to social media crises to avoid undesirable outcomes?

Research question 2
How online users perceive the credibility of social media information in normal time and during a crisis?

Research question 3
How users' social media adoption relates to their engagement in online brand communities?

Qualitative research method

Multiple case studies

Quantitative research method

Online survey

Quantitative research method

Online survey

Article 1
Crisis communication strategies and reputation risk in the online social media environment

Article 2
Perceptions of information credibility during a social media crisis

Article 3
Users' engagement in online brand communities: a study of commenting behavior in social media environment

Figure 3-1 : Framework for the dissertation guidance

Chapter 1:
Introduction

Chapter 2:
Literature review

Chapter 3:
Research methodology

Chapter 4: Article 1: Crisis communication strategies and reputation risk in the online social media environment

RQ 1: How do organizations communicate and respond to social media crises to avoid undesirable outcomes?

Qualitative research method: Multiple case studies + descriptive data analysis

Findings: Proposing a model of social media crisis communication.

Implications: Public relations and crisis managers

Chapter 5: Article 2: Online users' perceived information credibility in times of social media crisis

RQ 2: How online users perceive the credibility of social media information in normal time and during a crisis?

Quantitative research method: Online survey + descriptive data analysis

Findings: Users allocate different level of credibility to information sources based on the actual situation.

Implications: Public relations

Chapter 6: Article 3: Users engagement in Online Brand Communities (OBC): a study of commenting behaviors in social media

RQ 3: How users' social media adoption relates to their engagement in online brand communities?

Quantitative research method: Online survey+ Logistic regression analysis

Findings: Trust, subject of interest, and country of origin could explain social media users' engagement in OBC.

Implications: Marketing and brand strategists

Chapter 7:
General discussion

Chapter 8:
Conclusion and recommendations

Figure 3-2: Ph.D. dissertation structure

CHAPTER 4   ARTICLE 1: CRISIS COMMUNICATION STRATEGIES AND REPUTATION RISK IN THE ONLINE SOCIAL MEDIA ENVIRONMENT

Abstract[4]

This study explores crisis communication strategies in the online social media environment based on an in-depth analysis of eight social media crises from 2007 to 2011. The emergence and rapid expansion of social media request organizations to revisit their crisis communication strategies. Due to the nature of social media, earlier strategies are not entirely applicable to manage crises that originate from or amplified by information circulation in the social media channels. In social media age, crisis communication strategies must be redefined to properly respond to social media crises and to prevent undesirable outcomes. Our results reveal that each organization employs different crisis communication strategies that result in various outcomes. It was found that companies respond to social media crisis through both social media and traditional media and their response messages include apology and compensation. Some companies respond to social media crisis in a timely manner whereas others respond with delay. This article extends our understanding on how organizations respond to crises in the online social media environment to prevent undesirable outcomes.

Keywords: Social media; social media crisis; crisis communication strategy; crisis response; reputation risk

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4.1 Introduction

The popularity and rapid expansion of social media call for organizations to take these new tools in to account in their assorted activities. In recent years, we have witnessed companies facing social media crises, like what happened in Québec (Canada) to Lassonde Industries Inc. in 2012. The story began in 2005, when Lassonde sued a small Québec-based soap company– Olivia's Oasis – for using the word "Oasis" as one of its product line's brand name. For seven years, Olivia's Oasis faced problems over this conflict, until finally on April 7, 2012, public support using online social media put an end to the battle. Following a news article from "LAPRESSE.CA" that the court had ruled in Lassonde's favor, a social media storm across Twitter and Facebook was released (Hamilton, 2012). Over 900 comments were posted to Lassonde's Facebook page and Twitter exploded with attacks on Lassonde. After receiving messages from customers to boycott its products, Lassonde took action and sent an executive to meet the owner of Olivia's Oasis with a promise to cover all her legal costs for the last seven years. Two days later, Jean Gattuso, Lassonde's president, wrote a post on his blog titled "Lassonde listens to its customers": " […] This experience still held a silver lining: Lassonde has acknowledged the importance of consumer opinion. I thank you and I invite you to maintain this dialog with us" (Gattuso, 2012).

Social media are emerging as "hot topic" for crisis communication (Coombs, 2011a). Despite the popularity of social media and their significance in organizations' persistence, little is known about how companies approach crisis communication in the social media environment (Ki & Nekmat, 2014). In order to address the research gap and to contribute to the growing literature of social media studies, this research investigates organizational crisis communication strategies in the social media environment through conducting a multiple case study research. The purpose of this study is to understand how organizations communicate with public in the event of a social media crisis by analyzing eight case studies that occurred or amplified through information dissemination in the social media platforms. Because of the significance and pervasiveness of social media in organizations persistence, this article aims at finding out communication strategies in the social media environment that result in crisis acceleration or attenuation. This article aims to answer the following question:

RQ- How do organizations communicate and respond to social media crises to prevent undesirable outcomes?

The flow of the paper is as follows: First we begin with summarizing previous research on social media and crisis communication studies to put our contribution in to perspective. That section is followed by a description of research method, selected case studies, research analysis, and the results. Then, we conclude by implication for practitioners and research limitations that suggest avenues for further researches.

4.2   Background

The rise and rapid growth of social media has led to quick and open access to information for online users. As Veil, Sellnow and Petrun (2012) state social media are channels for a story to go viral in a short period of time; "share" on Facebook", "re-tweet" on Twitter, "email this video" on YouTube are options that offer online users the opportunity of information diffusion. Safko and Brake (2009, p. 6) define social media as "activities, practices and behaviors among communities of people who gather online to share information, knowledge, and opinions using conversational media". Kaplan and Haenlein (2010) categorize social media into (1) collaborative projects (e.g., Wikipedia), (2) blogs, (3) content communities (e.g., YouTube), (4) social networking sites (e.g., Facebook), (5) virtual game worlds (e.g., World of Warcraft) and (6) virtual social worlds (e.g., Second Life).

4.2.1   Social Media Crisis

The use of social media is a "double-edged sword". On one hand, its role in online dissemination of information can help an organization manage a crisis and on the other hand, it can create a crisis (Veil et al., 2012). A crisis is an unexpected event that creates high levels of uncertainty and threatens corporate main goals (Seeger, Sellnow & Ulmer, 2003). Coombs (2011b) defines crisis as significant threat to operations, which can possibly damage the company, its stakeholders and even an industry. The threats associated with crisis are "public safety", "financial loss" and "reputation loss" (Coombs, 2011b). The open access given by social media enables individuals to create and distribute all types of contents. In an organizational context, if

viewership of these contents goes viral, spreading exponentially through social media, it could create a crisis (Veil et al., 2012). A crisis involving social media could originate from posting a video on YouTube, sharing a post on Facebook, tweeting on Twitter or writing a blog post. Owyang (2011) defines social media crisis as "an issue that arises in or is amplified by social media, and results in negative mainstream media coverage, a change in business process, or financial loss".

4.2.2 Crisis Communication Strategies and Social Media

In crisis communication procedure, organizations provide an explanation to public about what happened and offer a solution to the problem (Millar & Heath, 2003). Selecting the appropriate crisis response is a function of crisis origin (external or internal), crisis information form (e.g., Tweet) and crisis information source (Jin & Liu, 2010; Liu, Jin, Briones, & Kuch, 2012). Crisis response strategies are used to repair the reputation and to prevent more negative effects of the crisis (Coombs, 2007). Inappropriate communication and response strategies accelerate social media crises (Ott & Theunissen, 2014). Crisis impacts organization reputation and creates secondary reactions such as boycotting (Coombs, 2007; Dowling, 2000). Post-crisis communication strategies are used to repair reputational loss and prevent reputational damage (Coombs & Holladay, 2005).

During a crisis, social media can serve as a platform for online communication, acting as an informal communication channel through which personal or organizational information is conveyed, shared, and managed (Austin, Fisher Liu, &Jin, 2012). For instance, at the time of natural disaster social media often remain the only form of communication when all others fail (Bird, Ling, & Haynes, 2012).

Social media provide emotional support after a crisis through enabling people to virtually stay connected, share information, and demand resolution (Chio & Lin, 2009). Social media users assign a higher level of credibility to social media coverage compare to traditional mass media crisis coverage (Sweetser & Metzgar, 2007; Procopio & Procopio, 2007). However, most public relation practitioners do not consider social media as a credible and accurate communication medium (Perry, Taylor, & Doerfel, 2003; Wright & Hinson, 2009).

4.2.3 Situational Crisis Communication Theory (SCCT)

Situational Crisis Communication Theory (SCCT) provides a framework for understanding how to maximize the reputational protection by crisis communication and identifies how key features of crisis situations impact attributions about the crisis and organizational reputation (Coombs, 2007). The model includes steps in reputational threats evaluation in crisis situations and propositions for crisis managers to determine which crisis response strategy to apply to increase reputational protection. Coombs (2007) classifies crisis response strategies as primary (attack the accuser, denial, scapegoat, excuse, justification, compensation, and apology) and secondary (reminder, ingratiation, and victimage).

SCCT model is not customized for social media context. The main focus on this study is to suggest a model that embraces social media crisis, social media crisis communication strategies, and social media crisis outcomes. In the next section, we present the research method and an inclusive description for each case study.

4.3   Research Method

Due to the novelty of social media studies, we investigate our research question using an qualitative method, as this approach is appropriate for new areas of research (Eisenhardt, 1989). The method is suitable in answering "how" or "why" research questions (Yin, 2009). We applied a multiple case study design that allows replication logic, in which each case aids to confirm or disconfirm the inferences drawn from the others (Yin, 2009). Table 4.1 presents the eight selected case studies.

Table 4.1: Case studies summary

	Company	Industry	Number of employees	Year of social media crisis occurrence
1	Mattel	Toys and games	28.000	2011
2	GAP	Retail	137.000	2010
3	Nestlé	Food processing	339.000	2010
4	United Airlines	Airlines	87.000	2009
5	Domino's Pizza	Restaurants	220.000	2009
6	Motrin	Pharmaceuticals	126.500	2008
7	JetBlue Airways	Airlines	15.000+	2007
8	Taco Bell/KFC	Restaurants	175.000+	2007

In this research, we study the crisis communication strategies of eight companies with different sizes and industries. We have selected these cases because: the selected companies are large and known; the cases attracted media and public attentions at the time of their occurrence; the cases are mentioned in numerous online and offline news; different sources of data are available for these cases; and most importantly they exemplify social media potentials in creating crisis. We collected secondary data including online newspaper and magazine articles, online organization press releases, websites, online discussion forums and social media platforms (e.g., Facebook, Twitter, YouTube, and blogs) data.

4.4   Case Studies

In what follows we describe each of the social media crisis case studies in detail. This detailed explanation of each case is beneficial for the process of research analysis.

4.4.1   Mattel versus Greenpeace

On June 2011, a conflict between Mattel and Greenpeace moved into a social media combat. Greenpeace launched a global campaign against Mattel accusing the company to use packaging from Indonesian rainforest to wrap its toys. Part of the campaign was an online video featured on YouTube which, according to Greenpeace, ten days after it was first uploaded in July 2011, was viewed over a million times in multiple languages.[5] The video was about Ken breaking up with Barbie over rainforest destruction. Greenpeace enabled its site visitors to share campaign information on Twitter and Facebook. The battle continued when activists started posting critical messages on Barbie's Facebook page. On Facebook, Mattel shut down commenting on the page and deleted any mention of rainforests. On Twitter– @BarbieStyle–Mattel was silent, whereas it normally featured ten or more tweets a day. Also it was revealed that @Barbie was not Mattel sponsored and that the organization had no control over it. Greenpeace set up @ken_talks for tweeting and putting more pressure on Mattel. On June 8, in a post on its corporate Facebook page, Mattel directly addressed the Greenpeace charges and announced that Mattel instructed its

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[5]http://www.ethicalcorp.com/supply-chains/social-media-and-environmental-campaigning-brand-lessons-barbie

suppliers to avoid wood and paper from suppliers involved in deforestation allegations.[6]The campaign continued for four months and eventually on October 2011, Greenpeace won the battle and, as a result, Mattel stopped doing business with Asia Pulp and Paper (APP). Mattel announced that, by the end of 2010, 70% of its paper packaging would be composed of recycled or sustainable materials and, by the end of 2015, it would increase to 85%.[7]

4.4.2 GAP's New Logo

On October 2010, following a consumer backlash on Facebook and Twitter, Gap was forced to scrap an expensive new logo, days after its launch on www.gap.com website. The original Gap logo, showing the word "GAP" in capital letters inside a dark blue square, was replaced with a white square encasing a small blue square sitting over the letter "p" in "Gap".[8]Unhappy consumers criticized Gap by commenting on its Facebook page and showing their disappointment about the new logo. They also set up a Twitter account in protest and a website named "Make your own Gap logo", provoking lots of mockery versions. Gap's official Facebook page was the main channel through which the company posted updates and responses to the criticism regarding the new logo. On Twitter page, Gap remained silent.[9] Eventually, Marka Hansen, Gap North America president, informed that the company's marketing department acknowledged that the logo switch was a mistake and that the company would be postponing any changes for the future.

4.4.3 Nestlé versus Greenpeace

On March 17, 2010, Greenpeace launched an online campaign accusing Nestlé to buy palm oil for its popular chocolate bar Kit Kat from an Indonesian supplier –Sinar Mas – that clears vast areas of Indonesian forest for its plantations and destroys the natural habitat of the endangered orangutans. The campaign included a 60-second video of an office employee having a Kit Kat,

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[6]http://latimesblogs.latimes.com/greenspace/2011/06/mattel-rainforest-greenpeace-social-media.html

[7]http://www.triplepundit.com/2011/10/mattel-greenpeace-app/

[8]http://www.theguardian.com/media/2010/oct/12/gap-logo-redesign

[9]http://adage.com/article/news/gap-scrap-logo-return-design/146417/

which appeared to be a chocolate-covered ape finger. The video was uploaded on YouTube, and Nestlé asked YouTube to remove the clip, mentioning copyright concerns.[10]Greenpeace re-posted the clip to Vimeo.com and used Twitter to spread the word about the attempted censorship. Many Web users also re-posted the clip to YouTube and other destinations on the Internet.[11]Greenpeace encouraged its supporters to change their Facebook profile photos to anti-Nestlé slogans and co-opted logos and to attack Nestlé's Facebook page.[12]Nestlé's Facebook team started threatening their Facebook fans to delete comments made by those using modified versions of their logo.[13]Twitter users joined the conversation, encouraging people to visit Nestlé's Facebook comments. Negative Twitter comments appeared every 15 minutes.[14]The backlash continued to grow until Nestlé backed down and apologized on Facebook for deleting posts and being rude.[15]Eventually, Nestlé declared its commitment to using only "Certified Sustainable Palm Oil" by 2015 when, it said, sufficient quantities should be available.[16]

4.4.4 United Airlines Breaks Guitars

On July 2009, Dave Carroll –a Canadian musician – created a protest song "United Breaks Guitars" after he found his $3,500 guitar broken by United Airlines' baggage handler at Chicago Airport. The incident happened in the spring of 2008 and Dave communicated with United Airlines' customer service for nine months asking them to compensate for his loss.[17] The airline refused to do so and he promised to write and produce three songs about his experience and release them online. The YouTube video was posted on July 6, 2009 and collected 150,000 views within one day. The video gathered over half a million hits by July 9, five million by mid-

[10]http://www.cnn.com/2010/WORLD/asiapcf/03/19/indonesia.rainforests.orangutan.nestle/index.html

[11]http://www.cnn.com/2010/WORLD/asiapcf/03/19/indonesia.rainforests.orangutan.nestle/index.html

[12]http://psamablog.blogspot.ca/2011/03/Nestlé-finds-out-hard-way-that-brands.html

[13]http://www.techguerilla.com/Nestlé-facebook-greenpeace-timeline-in-proces

[14]http://www.techguerilla.com/nestle-facebook-greenpeace-timeline-in-proces
[15]http://money.cnn.com/galleries/2011/technology/1104/gallery.social_media_controversies/2.html

[16]http://www.theglobeandmail.com/report-on-business/kit-kat-spat-goes-viral-despite-nestls-efforts/article1503795/?cmpid=1

[17]http://www.flightwisdom.com/2010/03/02/the-united-breaks-guitars-trilogy-comes-to-an-end/

August 2009,10 million by February 2011, and 13.3 million by September 2013.[18]United's Managing Director of Customer Solutions telephoned Carroll to apologize and United offered Carroll $1,200 in flight vouchers, which he declined. The UK Daily Mail claimed that, as a result of this event, United lost 10% of its share value, or $180 million.[19]The causality of this loss was intensely disputed on the Internet.

4.4.5 Domino's Pizza YouTube Video

On April 15, 2009, two employees at Domino's Pizza in Conover (NC) created videos showing a male sticking cheese up his nose and then putting it on a sandwich that was to be delivered to a customer. His colleague also filmed him partaking in other unsanitary acts with the food and uploaded the videos to YouTube.[20] The video went viral as, on the same day (9:30 p.m.), it had 930,390 views combined with all the comments on Twitter.[21]At first, Domino's decided to do nothing publicly not to attract more attention, but the viewership of the video continued to grow. Domino's contacted YouTube and was successful in removing the original video, but numerous sites had already downloaded and reposted the video.[22] Domino's fired the two employees and the franchise owner discarded all open containers of food and sanitized the location. Domino's uploaded a two-minute video apology from the company USA President, Patrick Doyle, and posted it where the whole story started – on YouTube.[23] Eventually, Domino's activated a Twitter account two weeks earlier than planned to answer the dialogue about the incident. The company also promised to review its hiring practices.[24]

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[18]http://en.wikipedia.org/wiki/United_Breaks_Guitars#cite_note-davecarrollmusic1-9

[19]http://www.dailymail.co.uk/news/article-1201671/Singer-Dave-Carroll-pens-YouTube-hit-United-Airlines-breaks-guitar--shares-plunge-10.html

[20]http://www.prsa.org/Intelligence/TheStrategist/Articles/view/8226/102/Domino_s_delivers_during_crisis_The_company_s_step#.U9FpD4BdVbw

[21]http://www.webpronews.com/dominos-pizza-deals-with-youtube-nightmare-2009-04

[22]http://www.goodasyou.org/good_as_you/2009/04/video-let-the-dominoes-appall.html

[23]http://www.sfgate.com/business/article/How-Domino-s-responded-to-prank-video-3163363.php

[24]http://www.sfgate.com/business/article/How-Domino-s-responded-to-prank-video-3163363.php

4.4.6 Motrin Advertisement

On November 16, 2008, Johnson & Johnson's online advertisement on Motrin's website caused a backlash from moms. The ad –available online and in printed version–was about baby wearing, suggesting that moms wear their babies to be fashionable and thus not practical.[25]Online moms seemed to be offended by the idea that carrying their babies was "fashionable". On the same evening, this subject was the most tweeted on Twitter. The day after, there was a nine-minute video on YouTube, showing screen shots of the twitter posts with photos of moms carrying their babies in slings, and bloggers also began calling for boycott.[26]At that time, neither Motrin nor McNeil Consumer Healthcare, which was responsible for the Motrin brand, had a representative present in social media. Motrin took the advertisement down from its website the night of November 17 and sent an apology email to some of the bloggers who campaigned to protest against the ad. Also, another apology note was posted on Motrin's website from the Vice-President of Marketing of McNeil Consumer.[27]

4.4.7 JetBlue Valentine's Day Flight

On Valentine's Day, February 14, 2007, a bad winter storm caused JetBlue passengers to spend as many as 11 hours trapped on planes in New York. Because of the storm, passengers of the airline experienced delayed and cancelled flights, but JetBlue thought it would be able to fly and did not cancel its flights. Passengers were on their cellular phones and, as a result, horror stories of overflowing toilets, hungry and thirsty passengers and a non-responsive airline quickly spread via mass media, Internet blogs, and YouTube videos.[28] As a response to the social media crisis, JetBlue's founder and CEO, David Neeleman, explained what went wrong and how he would solve the problem on almost all major network morning shows and cable news

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[25]http://adage.com/article/digital/twittering-critics-brought-motrin-mom-campaign/132622/

[26]http://parenting.blogs.nytimes.com/2008/11/17/moms-and-motrin/?_php=true&_type=blogs&_php=true&_type=blogs&_r=1

[27]http://bloombergmarketing.blogs.com/bloomberg_marketing/2008/11/update-11-18-08.html

[28]http://jon8332.typepad.com/force_for_good/2007/02/recovering_from.html

networks.[29]JetBlue also uploaded the CEO's apology video on YouTube. The airline offered a full refund and a round-trip ticket to all customers whose flights had been delayed for more than three hours. The CEO also announced a $30 million investment to restore the procedures in customer service and to launch a customer "bill of rights".

4.4.8   Taco Bell/KFC rats in Kitchen

On February 23, 2007, a pack of a dozen rats scurrying around a KFC/Taco Bell restaurant in New York City's Greenwich Village was shown on a morning television talk show. KFC and Taco Bell are owned by Yum! Brands.[30] A New York station, WNBC-TV, made the report following a consumer call. By the same day, more than 1,000 blogs had cited or spread the story and footage, and a search on Google News for "rats and KFC" yielded 443 stories.[31]The video of rats running around the restaurant was posted to YouTube and, soon after, duplicated and versions started multiplying. To date, these videos have been viewed more than 1.6 million times. In response, Yum! Brands Inc. issued an official statement which was placed on the press pages in the company-information menus, and consumers could hardly find that information.[32] The statement described the incident as an isolated occurrence and mentioned that the restaurant would not reopen until it had been sanitized and given a clean bill of health.[33]

4.5   Analysis

For the purpose of data analysis, we conducted an in-depth descriptive examination for each case study. The focus rested on how the crisis emerged, how each company responded and what was the outcome. The analysis was made in three sections. First, we investigated the components of social media crisis. In social media environment, occurring an event could create a crisis. The related information diffuses among social media channels and if it goes viral, crisis will happen.

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[29]http://www.imediaconnection.com/content/14452.asp

[30]http://money.cnn.com/2007/02/23/news/companies/taco_bell/

[31]http://adage.com/article/news/taco-hell-rodent-video-signals-era-pr-crises/115184/

[32]http://adage.com/article/news/taco-hell-rodent-video-signals-era-pr-crises/115184/

[33]http://www.nytimes.com/2007/02/25/nyregion/25rats.html

For the analysis of social media crisis, we investigate: origin of crisis, reason for crisis, and channels of information diffusion. Next, we explored crisis communication strategies for each case. For this purpose, the focus was on the crisis response and the timeframe in which the company responded to the crisis and which channels of communication were employed. Therefore, the three phases in analyzing crisis communication strategies are: crisis response timing; crisis response channel, and crisis response. Ultimately and to complete our data analysis, we examined the probable outcomes of social media crisis on each company.

4.5.1 Social Media crisis

In this section we review each case study based on its origin of occurrence, reason for occurrence and channel of information diffusion. Table 4.2 shows the origin of occurrence for each crisis. In two cases, a NGO (Greenpeace) originated the crisis; in one case employees were crisis originator; in one other case, crisis commenced by a T.V. report; in three cases, customers initiated the crisis; and in last case, company' Facebook fans including customers and non-customers started the social media crisis.

Table 4.2: Origins of Crisis

	Company	Origin of crisis
1	Mattel	NGO
2	GAP	Facebook fans
3	Nestlé	NGO
4	United Airlines	Customers
5	Domino's Pizza	Employees
6	Motrin	Customers
7	JetBlue Airways	Customers
8	Taco Bell/KFC	Journalist T.V. report

Table 4.3 demonstrates the reason for each crisis occurrence. Reasons are various including company wrongdoing, a supplier mistake or even no mistake. For instance in GAP case, the reason for crisis happening was that the company launched a new logo. This case is similar to Motrin case that the crisis happened because of company new advertisement on one of its products. In these two cases, an event created a crisis without any misdeed. In Nestlé and Mattel cases, a third party (supplier) wrongdoing (deforestation act) caused a NGO (Greenpeace)

initiates the crisis. In United Airlines, JetBlue Airways, and Taco Bell/KFC, company misdeed resulted in crisis occurrence. And in Domino's Pizza case, employees created the crisis purposefully.

Table 4.3: Reasons for Crisis

	Company	Reason for crisis
1	Mattel	Supplier deforestation act
2	GAP	Company launch of a new logo
3	Nestlé	Supplier deforestation act
4	United Airlines	Company customer service
5	Domino's Pizza	Employees' prank video
6	Motrin	Company new advertisement
7	JetBlue Airways	Company decision failure
8	Taco Bell/KFC	Company hygienic issue

Table 4.4 represents the channels of information diffusion through which information about the event disseminated, went viral and created the crisis. In all cases, mutual effect of social media and traditional media (such as T.V. and newspapers) caused the acceleration of information diffusion. In some cases, crisis information disseminated across social media channels first and then followed by other media. In Nestlé case, for instance, Green peace's success was created by social media activities, which were followed by specialist media such as GreenBiz and TreeHugger, as well as mainstream media, such as the Guardian and newswires like Reuters (The Guardian, 2010). The significance of social media and traditional media channels in crisis information dissemination differs among cases. For example, in Mattel case, Greenpeace launched an online campaign by releasing a YouTube video in which Ken discovers Barbie's deforestation habits in Indonesia and dramatically ends their relationship. Greenpeace's main move was its use of Facebook and Twitter to join the public in its campaign (Stine, 2011). Other media then followed the story and disseminated the crisis information.

Table 4.4: Channels of Information Diffusion

	Company	Channels of information diffusion				
		Social media				Traditional media (examples)
		Blog	Facebook	Twitter	YouTube	
1	Mattel	☑			☑	Los Angeles Times, Huffington Post
2	GAP	☑	☑	☑		Times, Forbes
3	Nestlé		☑	☑	☑	Economist, The Guardian, Wall Street Journal
4	United Airlines	☑	☑	☑	☑	BBC News, The Guardian
5	Domino's Pizza				☑	BusinessWeek, The New York Times
6	Motrin	☑		☑	☑	USA Today, The New York Times, The Washington Post
7	JetBlue Airways	☑			☑	The New York Times, BusinessWeek
8	Taco Bell/KFC	☑			☑	The New York Times, CNN Money

In all cases except Taco Bell/KFC, the diffusion of information began in social media channels and then other media picked up the story and enhanced information circulation. In Taco Bell/KFC, the event information first launched on T.V. and then disseminated through social media. However, in all cases both social media and traditional media are involved, bolstering each other in information diffusion during crisis.

4.5.2 Crisis Communication Strategies

One of the characteristics of social media channels is the speed with which information circulates among these channels and reaches to the large number of audiences. It is organization choice to respond to the crisis immediately or with delay. Table 4.5 represents the companies timing in addressing the crisis. Five companies responded to crisis with delay and three of them immediately addressed the social media crisis. Each company had a reason for its late or immediate reaction to crisis. For example, Domino's Pizza did not want to attract more attention to the YouTube video and therefore, the company waited 48 hours before addressing the crisis and as a result, the YouTube video received nearly 1 million views before it was taken down (York, 2009).

Table 4.5: Crisis Response Timing

	Company	Crisis response timing	
		Immediate	Delayed
1	Mattel		☑
2	GAP		☑
3	Nestlé		☑
4	United Airlines	☑	
5	Domino's Pizza		☑
6	Motrin	☑	
7	JetBlue Airways	☑	
8	Taco Bell/KFC		☑

Table 4.6 exhibits the media through which the companies responded to the crisis and communicated with the crisis audiences. Four out of eight companies addressed the crisis using both social media and non-social media channels; for instance, Nestlé's response was through its Facebook page and also its official website. Two other companies responded only through non-social media channels and Domino's Pizza addressed the social media crisis by employing two different social media channels.

Table 4.6:Crisis Response Channels

	Company	Crisis response channels	
		Social media channels	Traditional and other media channels
1	Mattel	Facebook	Reuters
2	GAP	Facebook	Huffington Post
3	Nestlé	Facebook	Nestlé's website
4	United Airlines	-	Phone call
5	Domino's Pizza	YouTube and Twitter	-
6	Motrin	-	Email and Motrin's website
7	JetBlue Airways	YouTube	National TV channels
8	Taco Bell/KFC	-	Yum! Brands' website

Table 4.7 points out the crisis response strategies applied by the companies. Three companies tried to censor the crisis information, five companies apologized for the crisis happening and all eight companies applied compensation strategy.

Table 4.7: Crisis Responses

	Company	Crisis responses		
		Censorship	Apology	Compensation
1	Mattel	☑		☑
2	GAP			☑
3	Nestlé	☑	☑	☑
4	United Airlines		☑	☑
5	Domino's Pizza	☑	☑	☑
6	Motrin		☑	☑
7	JetBlue Airways		☑	☑
8	Taco Bell/KFC		☑	☑

Appendix B includes detailed explanation about each company crisis response choices.

4.5.3 Crisis Outcomes

Based on the available data, social media crisis result in a variety of outcomes such as: negative impact on reputation, image, and brand value. It also results in call for boycott and financial concerns. Table 4.8 shows the outcomes of social media crisis for each company based on secondary data analysis. Two companies faced with customers call for boycott, six companies experienced negative impact on their reputation, two companies challenged negative impact on their brand value and eventually five companies confronted negative financial results. Appendix C represents detailed descriptions on the outcomes of social media crises for each company.

Table 4.8: Crisis Outcomes

	Company	Call for boycott	Negative impact on reputation	Negative impact on brand value	Negative financial impact
1	Mattel		☑		
2	GAP			☑	
3	Nestlé		☑		☑
4	United Airlines		☑		☑
5	Domino's Pizza		☑	☑	☑
6	Motrin	☑			
7	JetBlue Airways		☑		☑
8	Taco Bell/KFC	☑	☑		☑

In what follows, we present the results of the study and propose our social media crisis communication model. We then conclude by discussing the research implications and venues for further studies.

4.6 Findings

In this paper, we studied companies' communication strategies in response to social media crisis. The research units of analysis were companies that faced a crisis in the social media environment, in which the event information was disseminated and went viral through social media channels and created a crisis. We selected eight companies, which varied in their sizes and industries. This study examined its research question using a multiple case study research method.

The research question was: How do organizations communicate and respond to social media crises to prevent reputation risk? To address this question, we first investigated social media crises based on origin and reason for crisis and channels of information diffusion. We found out that social media crisis could originate from different sources, such as: stakeholders, other companies, and mainstream media. The reason for social media crisis also varies. It could be because of organization misdeed or stakeholders' wrongdoing. In social media environment, even if there is no mistake or misdeed, a crisis could occur. Channels through which the information disseminates are both social media, traditional and other media. Social media channels cause information goes viral and creates crisis. Traditional and other media strengthen and support information diffusion but social media crisis mainly appears by information diffusion in social media websites.

Next, we examined crisis communication strategies in terms of crisis response timing, channels, and messages. We found out that the majority of companies respond to social media crisis with significant delay because of different reasons. For instance, Domino's Pizza didn't want to attract more attention to the case and because of this reason, the company waited 48 hours before addressing the crisis. Regarding crisis response channel, we found out that the majority of companies used both social media and traditional media in order to address the social media crisis. Concerning crisis response strategy, all companies applied compensation messages, and

the majority of them apologized. However, some companies tried to stop the diffusion of more information or tried to censer it. This added to the diffusion of crisis information. Regarding the social media crisis outcomes, we found variety of outcomes such as: negative impact on reputation and brand value, call for boycott, and negative financial outcomes. The negative financial impacts of social media crisis were temporary and minor. Based on the available news and reports on the crises, the main impact was on companies' reputation

Based on the research findings, we suggest a model of social media crisis communication (Figure 4-1) in terms of social media crisis, crisis communication strategies, and crisis outcomes. As shown in the model, social media crisis is created out of an event because of viral diffusion of information in social media channels. The diffusion of information in social media channels is supported and amplified by traditional and other media. When social media crisis happens, based on its origin, reason of happening, and channel of information diffusion, the company needs to address the crisis. The crisis communication strategies include crisis response timing that could be an immediate or late response; crisis response channels that are social media or traditional media; and crisis responses, which are apology and compensation.

In social media environment, companies are able to censer the information but we did not consider this act as a response message, so it is not included in the model. Crisis communication strategies could result in amplification or attenuation of crisis. If the company applies appropriate strategies, the crisis attenuates, otherwise it amplifies and the situation becomes worse. As shown in the model, the social media crisis puts company reputation in to danger. Reputation risk is one crucial outcomes of social media crisis.

4.7 Discussion and Conclusion

This research explored organizations' crisis communication strategies in the social media environment. Organizations apply apology and compensation response strategies to communicate with crisis audiences in the social media environment. Findings indicate that the social media crisis impacts the organization's reputation, brand, and financial status. It also causes secondary crisis impacts, such as call for boycott. The speed of information dissemination through social media channels causes the crisis impact to appear fast and therefore, organizations

need to have suitable social media crisis communication strategies based on social media requirements. One important requirement of social media is the speed of information circulation, which urges organizations to address the crisis in a timely manner.
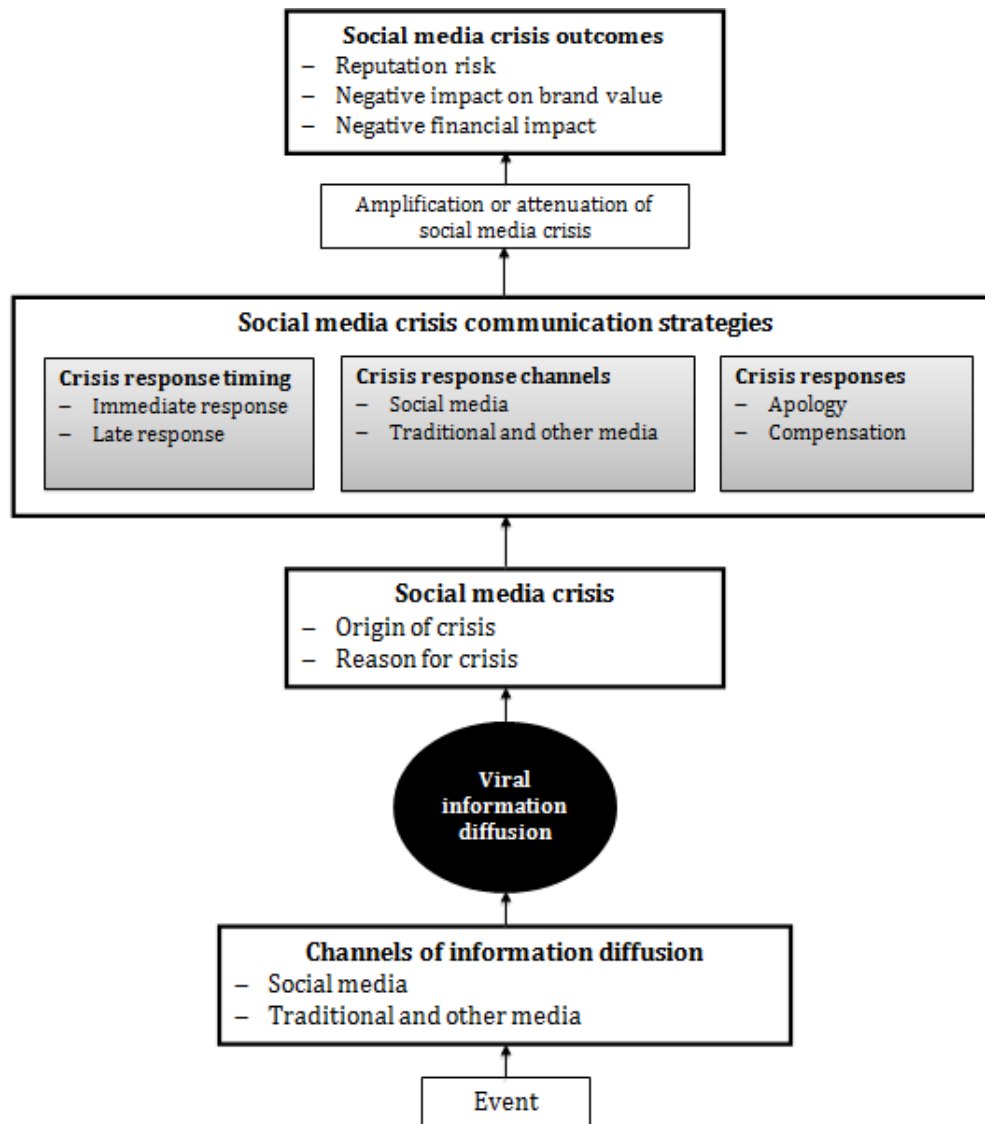
Figure 4-1: Social Media Crisis Communication Model

Social media crises could happen for all organizations regardless of their social media employment and engagement. For example in Motrin case, the company had no social media

presence at the time of crisis and therefore it could not communicate with audiences through social media channels. It is beneficial for companies to be present in social media environment and monitor the conversations about them frequently and get prepared to respond to possible crises using appropriate communication channels.

Social media has the capability of making information goes viral. Because of this, if the information about any event goes viral, it could result in a crisis. Individuals or other organizations (e.g., competitors) might take advantage of this social media capability and cause a social media crisis. Companies must be present in social media environment, monitor the conversation, and be responsive in proper time. For social media crisis communication purposes, companies need to carefully consider the channel of crisis response and the time of responding. Apart from traditional crisis response messages, companies need to be more attentive about speed and channel of crisis responses in social media environment.

We conclude by emphasizing on two key findings of this research. First, because of social media nature, if the information about any event disseminates among social media channels and goes viral, crisis could appear. Traditional or other media do not have similar function to diffuse information to numerous audiences in a short time. Second, companies need to carefully consider social media crisis qualifications, and respond to them with customized strategies that fit social media crisis requirements.

4.7.1 Limitations and Future Research

Like any research, this study suffers from several limitations, which can be used as a guide for future research. First, because of the qualitative nature of the study, findings are considered exploratory and therefore they might not be applicable to all situations. Second, this study only relied on secondary online data and did not investigate the social media platforms of the organizations in the real time of crisis occurrence. Future studies could extend investigations to all social media websites of companies to examine the social media communication strategies in crisis responses and conversations. Third, part of our data could be lost or altered because companies are able to delete or modify the contents of their social media pages. Fourth, the study

did not determine the separate contribution of social media and traditional media in information dissemination, which resulted in crisis creation.

Future studies might determine each media segments in information diffusion to understand the share of each (social media and traditional media) in creating the social media crisis. Further studies might also explore the duration of social media crisis consequences and the strategies for post-crisis communication purposes. Furthermore, determination of channels companies employ to deliver post-crisis messages to crisis audiences to address the reputation damage could be of interest.

CHAPTER 5   ARTICLE 2: PERCEPTIONS OF INFORMATION CREDIBILITY DURING A SOCIAL MEDIA CRISIS

Abstract[34]

This article presents the results of an online survey conducted to investigate how online users perceive the credibility of social media information in normal times and when a company faces a crisis. Furthermore, through a case study of an actual social media crisis, we examine online users' perceptions of communication strategies during a social media crisis. One hundred and seventeen online users participated in our survey. The analysis conducted in this study revealed that: (1) online users allocate different levels of credibility to information sources in normal time compared to crisis time; (2) online users with higher level of social media engagement give more importance to an organization' social media activities during a crisis; and (3) online users suppose that a social media crisis has a negative long-term impact on an organization's reputation and brand credibility. Public relations could employ our findings in order to accurately position social media in an organization's communication agenda.

5.1 Introduction

Social media are "the umbrella term that refers to social networking sites (like Facebook, LinkedIn, and Google Plus) as well as to information- and media-sharing sites that users may not think of in terms of networking such as Twitter, Instagram, and Tumblr" (Madden et al., 2013). The individuals' use of online social media is on the rise for different purposes such as gaining news and information (Westerman, Spence, & Van Der Heide, 2012) in disaster and crisis times (Sutton, Palen, & Shklovski, 2008). Likewise, organizations are increasingly using social media technologies to reach and interact with their stakeholders (Wu & Pinsonneault, 2011). The speed of the information diffusion has additional importance during crisis, in which organizations are expected to provide credible information that stand against rumors and false noises to protect them and help stakeholders to have a valid picture of the situation. Although online social media platforms are reliable tools to share information to target audiences in a timely manner (Osatuyi, 2013), there are major concerns about the credibility of information shared through social media channels (Sutton et al., 2008).

This study aims to understand how online users perceive social media information credibility in normal times compared to crisis times. Moreover, we investigate online users' perception of the impacts of a social media crisis on organizations and their evaluation of crisis communication effectiveness in times of a social media crisis. Hence, this paper aims to answer the following questions:

RQ1   *How online users perceive the credibility of social media information in normal times?*

RQ2   *How online users perceive the credibility of social media information during a crisis?*

RQ3   *How online users evaluate organization crisis communication strategies in response to a social media crisis?*

RQ4   *How online users assess the impacts of a social media crisis on an organization?*

This study makes the following contributions: (a) it compares the credibility of social media information in normal times versus crisis times, (b) it explains online users' evaluation of crisis communication strategies in a social media environment and (c) it evaluates online users' perception of the impacts of a social media crisis on an organization.

The rest of the paper is organized as follows: next section presents a review of the literature that helps us position our research contribution. Then, the research design and procedure are described. Next, we discuss the results and conclude the paper with implications and venues for further research.

5.2 Background

Today, the evolution and growing usage of social media technologies is outstanding. Social media are "activities, practices and behaviors among communities of people who gather online to share information, knowledge, and opinions using conversational media" (Safko & Brake, 2009, p. 6). Kaplan and Haenlein (2010) categorize social media into (1) collaborative projects (e.g., Wikipedia), (2) blogs, (3) content communities (e.g. YouTube), (4) social networking sites (e.g. Facebook), (5) virtual game worlds (e.g., World of Warcraft) and (6) virtual social worlds (e.g., Second Life). The social media rising has changed the way in which individuals and organizations communicate and interact. One reason for this change is that individuals are faced with an overload of information in social media environment that their credibility needs to be verified (Sunder, 2008). In what follows, we define the notion of credibility and review the credibility of information in online media.

5.2.1 Online information credibility

"The Internet has changed people's relationships with information" (Fox, 2011. p.2). Online social media have become increasingly popular as information sources (Kim, Yoo-Lee, & Joanna Sin, 2011) and have shifted the paradigm of communication in our day and age. Social media sites are used for a variety of purposes. For example, social networking sites like Facebook are used for "everyday life information seeking" whereas Wikipedia is typically used in professional information seeking situations (Kim et al., 2011). Social media are also increasingly used for seeking information related to disaster and crisis situations (Spence et al., 2006; Westerman,

Spence, & Van Der Heide, 2014). One significant concern in using social media for information seeking reasons is the credibility of online information. It is more complex to identify the credibility of online media compared to traditional media as there is no control on publishing information in the online environment and consequently, online information is potentially "distorted", "inaccurate", "biased", "misleading', or even "false" (Flangain & Metzer, 2000; Metzger & Flanagin, 2013). Castillo, Mendoza, and Poblete (2011) observed that after the earthquake in Chile in 2010, rumors posted and re-posted on Twitter and resulted in an increased sense of public chaos and anxiety.

Credibility is "the quality of being believed or accepted as true, real, or honest[35]". Fogg and Tseng (1999, p.80) indicate, "Credibility can be defined as believability. Credible people are believable people and credible information is believable information". Fogg et al. (2001) point out that in order to evaluate credibility, we need to assess the two components of credibility, which are "trustworthiness" and "expertise." "The trustworthiness dimension of credibility captures the perceived goodness or morality of the source" (Fogg et al., 2001). Credibility is a "perceived quality" (Fogg & Tseng, 1999) and therefore, what we always mean by credibility is in fact the perception of credibility (Petty & Cacioppo, 1996). In this article, our main focus is on credibility in the sense of "perceived trustworthiness."

Social media users assign a higher level of credibility to social media coverage compared to traditional mass media crisis coverage (Sweetser & Metzgar, 2007; Procopio & Procopio, 2007). Consumers of online information are responsible about the perceived credibility of information they use in social media environment (Westerman et al., 2012). Users evaluate the trustworthiness of social media information by taking actions like: "compare the content with other sources", "check others reaction/opinion", and "check the information about the author" (Kim et al., 2011).

Few studies have examined people assessment of the credibility of online information. For example, the results of a study by Flangain and Metzger (2000) show that people perceive

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[35] http://www.learnersdictionary.com/definition/credibility

Internet information as credible as television, radio and magazines but not as credible as newspapers' information. Castillo et al., (2011) assessed the credibility of a set of tweets based on an automatic method and found that credible news are disseminated through authors who have written a large number of messages before and have many re-posts. Westerman et al. (2012) found that having too many or too few followers and followings on Twitter decreases the perceived credibility of the source. Nevertheless, what is relatively less studied is how online users evaluate social media information in normal times compared to crisis times regarding the credibility and trustworthiness. To the extent of our knowledge, this study is amongst the earliest that aims to address this gap and evaluates users' perceived information credibility in normal times compared to crisis times in online social media environment. Essentially, we review social media crisis and crisis communication strategies in online environments, in order to illustrate the subject of information credibility during an online crisis.

5.2.2 Crisis communication in online environment

Crisis is a "sudden and unexpected event that threatens to disrupt an organization's operations and poses both a financial and a reputational threat" (Coombs, 2007). A crisis involving social media could originate from posting a video on YouTube, sharing a post on Facebook, tweeting on Twitter or writing a blog post. Owyang (2011) defines social media crisis as "an issue that arises in or is amplified by social media, and results in negative mainstream media coverage, a change in business process, or financial loss". Because of the social media specification, the true or false information circulates fast and the crisis might occur quicker than before (Hosseinali-Mirza, de Marcellis-Warin, & Warin, 2015). An organizational crisis impacts reputation and creates secondary crisis reactions like boycotting (Coombs, 2007).

Through crisis communication strategies, organizations provide an explanation about what happened and a solution or a process to identify a solution to the problem (Millar & Heath, 2003). In addition, crisis response strategies are used to repair the reputation and to prevent more negative effects of the crisis (Dowling, 2000; Coombs, 2007). Selecting the appropriate crisis response strategy is a function of crisis origin (external or internal), crisis information form (via which channel the message is conveyed, e.g., Tweet, press release, etc.) and crisis information source (who the information is sent by, e.g., journalists, bloggers, other organizations, etc.) (Jin

& Liu, 2010; Liu, Jin, Briones, & Kuch, 2012). Online social media are channels for diffusion of crisis information, and at the same time organizations could use social media for communication purposes. During a crisis, the Internet causes the loss of a certain amount of control organizations have over their communication channels and that is why organizations might have difficulties to be heard against many other available noises in online environment (Freberg, 2012). Some organizations employ the Internet in crisis communication strategies, but the majorities are hesitant to consider social media as an accurate and credible information source and prefer to use traditional public relations tactics (Perry, Taylor, & Doerfel, 2003; Wright & Hinson, 2009).

In the following section, we present the research method and procedure based on exemplifying a social media crisis case study.

5.3   Research methodology

This research is based on an online survey designed to explore how online users evaluate social media information in terms of credibility in normal times as well as during a social media crisis; how they assess crisis communication strategies in response to a social media crisis; and what they believe the outcomes of a social media crisis could be. For this purpose, we used a case study in our survey to better illustrate the context of a social media crisis. A case study is "a detailed examination of a single example" and as long as the case is carefully chosen, it is possible to generalize from one single case (Flyvbjerg, 2006, p.220). We selected a social media crisis that happened to Domino's Pizza on 2009. Our survey includes a detailed description of the crisis and the strategies that Domino's Pizza applied to manage the crisis. The Domino's Pizza crisis is an exclusive case in which a social media crisis could be studied thoroughly. In this case, the crisis information initiated and diffused across social media channels. Besides, Domino's Pizza responded to the crisis by using social media as its communication platform to reach to its stakeholders. The story is as follows:

> *On 15 April 2009, two Domino's Pizza employees in Conover, N.C. franchise,*
> *uploaded videos on YouTube showing a male sticking cheese up his nose and*
> *then putting it on a sandwich that was to be delivered to a customer while a*
> *female colleague was filming him (Jacques, 2009). The video went viral on*

the same day and it had 930,390 views combined with enormous negative comments on Twitter (Hobson, 2009). For the first 48 hours, Domino's Pizza did not react with the intention of not to attract more attention to the case, but the viewership of the video continued to grow. Domino's contacted YouTube and asked to remove the original video. However, numerous sites had already reposted the story related videos (Hooper, 2009). As a response to the crisis, Domino's fired the two employees and the franchise owner discarded all open containers of food and sanitized the location. Domino's posted a press release on company website to explain about the incident. The company also uploaded a 2-minute apology video from Domino's USA President -Patrick Doyle- on YouTube. Eventually, Domino's activated a Twitter account to address the crisis and promised to review company's hiring practices (Evangelista, 2009).

The survey is conducted based on the actual case study so that the respondents have a better understanding of the social media crisis context and the organization's crisis communications. We also included several photos related to the story in order to better illustrate the crisis, which left with lots of disgusted audiences. Domino's Pizza is an inclusive social media crisis case study that could be generalized to the restaurant and fast-food industries.

5.3.1 Survey instrument

The questionnaire designed for this study was tested with 15 graduate students of a North-American university. Suggested modifications were included and the second version was tested again with the same group. After approving that all questions are comprehensible, we uploaded the questionnaire on our server in our research center using Lime Survey (special software to manage questionnaires) and provided required information to the surveyed participants. The survey included 27 questions that seek to examine online users' perception of: social media information credibility in normal times and during a crisis, crisis communication strategies, and social media crisis outcomes. The questionnaire also included demographic questions and questions concerning online users' engagement in social media environment.

5.3.2 Procedure

The survey was conducted online and was first sent to the students of two North-American universities. We used snowball sampling in which the first study subjects recruit future subjects among their friends, family, and contacts. As the sample was built up, enough data were gathered to be suitable for the study. Participants were requested to start with a consent form, which was confirmed by the ethics committee of the authors' affiliated universities. The questionnaire included 27 questions divided in 5 sets, including: (1) demographic information, (2) online users' social media engagement, (3) online users' perceived credibility of social media information in normal and crisis times (4) online users' perception of organization crisis communication strategies, and (5) online users' perception of social media crisis impact on organization (Table 5.1).

Table 5.1: Classification of survey questions

Survey questions	Number of questions
1. Demographic information	3
2. Users' social media engagement	10
3. Users' perceived credibility of social media information in normal time	4
4. Users' perceived credibility of social media information in crisis time	5
5. Users' perception of crisis communication strategies	2
6. Users' perception of crisis impact on organization	3

The average response time was 20 minutes and the survey was open for data collection for 4 months (May 1st to August 30th, 2014).

5.3.3 Participants

Table 5.2 represents the sample demographic information. The total number of responses is 130 but we only considered 117 complete responses for the data analysis. Participants are Internet users with a minimum of five hours of online activities per week. The participants are 57 females and 58 males. The ages ranged from 19 to 65 [19-26 (n=61), 27-40 (n=37), and 41-65 (n=19)]. Five respondents are online users with no social media engagement.

Table 5.2: Demographic information

	n	%
Gender (n=115)		
Male	58	49.6
Female	57	48.7
Age (n=117)		
19-26	61	52.1
27-40	37	31.6
41-65	19	16.2
Occupation (n=117)		
Student	64	54.7
Other	53	45.3

We have 64 students and 53 of the respondents have occupations such as employee, professional, manager, retired, and unemployed. Our sample is comparable to PEW representative sample of social media users. The results of a Pew Research Center factsheet (2014) reveal that 74% of online adults use social networking sites including 72% men, 76% women, 89% young adults (aged 18-29), 82% (aged 30-49), 65% (50-64), 49% (65+); and 73% have more than college graduates.

5.3.4 Data preparation and analysis

The data for this study were collected through an online survey and we only considered complete responses (n=117). Descriptive analysis was conducted followed by a two-tailed test of Pearson Correlation to explore associations among variables. The questions were categorized into a five-point Likert scale and the entire analysis in this research was conducted with SPSS version 22.

5.4 Result and discussion

In this section, the descriptive statistics and two-tailed Pearson correlation results are presented together with the discussion of the findings.

5.4.1 Online users' social media engagement

Table 5.3 summarizes users' online presence based on their Internet surfing hours, social media surfing hours, number of social media contacts, and number of social media groups and communities. The results show that users' Internet surfing varies between 6 to 80 hours a week (M^{36}=28.04, SD^{37}=15.55, n^{38}=116), whereas their social media surfing varies between 0 to 60 hours per week (M=10.43, SD=10.34, n=116). The average number of contacts on social media platforms is M=340.04 (SD=271.45, Min=0, Max= 1087, n=116), and the average number of their groups and communities is M=16.58 (SD=39.78, Min=0, Max=300, n=117). Correlation findings reveal that men are likely to have more contacts on social media ($p < 0.5$).

Table 5.3: Users' online presence

	Mean	SD	Min	Max	n
Number of Internet surfing hours per week *(e.g., email, online searches, etc.)*	28.04	15.55	6	80	116
Number of social media surfing hours per week *(e.g., Facebook, Twitter, YouTube, etc.)*	10.43	10.34	0	60	116
Number of social media contacts *(e.g., friends on Facebook)*	340.04	271.45	0	1087	116
Number of social media groups and communities *(e.g., brands fan on Facebook)*	16.58	39.78	0	300	117

On a scale of 1 to 5, the average of online users level of social media activity is M=2.84 (SD=1.12, Min=0, Max=5, n=114) and the details are shown on table 5.4.

Table 5.4: Users' level of social media activity

	Not at all active	Not very active	Somewhat active	Active	Very active	*Response count*
Level of social media activity (e.g., *like, share, and comment on Facebook posts)* M=2.84, SD=1.12	10.3 % (12[39])	30.8% (36)	29.1% (34)	18.8% (22)	8.5% (10)	*97.4% (114)*

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[36] Mean
[37] Standard Deviation
[38] Number
[39] Numbers in parentheses represent the frequency of responses

We asked respondents about the number of social media platforms they have an account with. Results reveal that 104 online users have Facebook account, followed by LinkedIn (n=90), Google Plus (n=60), YouTube (n=58), Twitter (n=45), Instagram (n=26), Pinterest (n=12), Tumbler (n=6), MySpace (n=3), and Flicker (n=1). Figure 5-1 represents the percentage of online users' number of social media accounts. Moreover, we found that 71.8% (n= 84) of users indicate Facebook as their primary social media platform. 12% (n=14) consider Linkedin, 4.3% (n=5) mention Twitter, and 3.4% (n=4) refer to Pinterest as their main social media website. Similarly, the results of a Pew research on social media sites show that 52% of online adults use multiple social media sites and Facebook remains the most popular site for those who only use one (Duggan, Ellison, Lampe, Lenhart, & Madden, 2015). We also found that students have more personal accounts on social media platforms compared to other groups of online users (p<0.1).
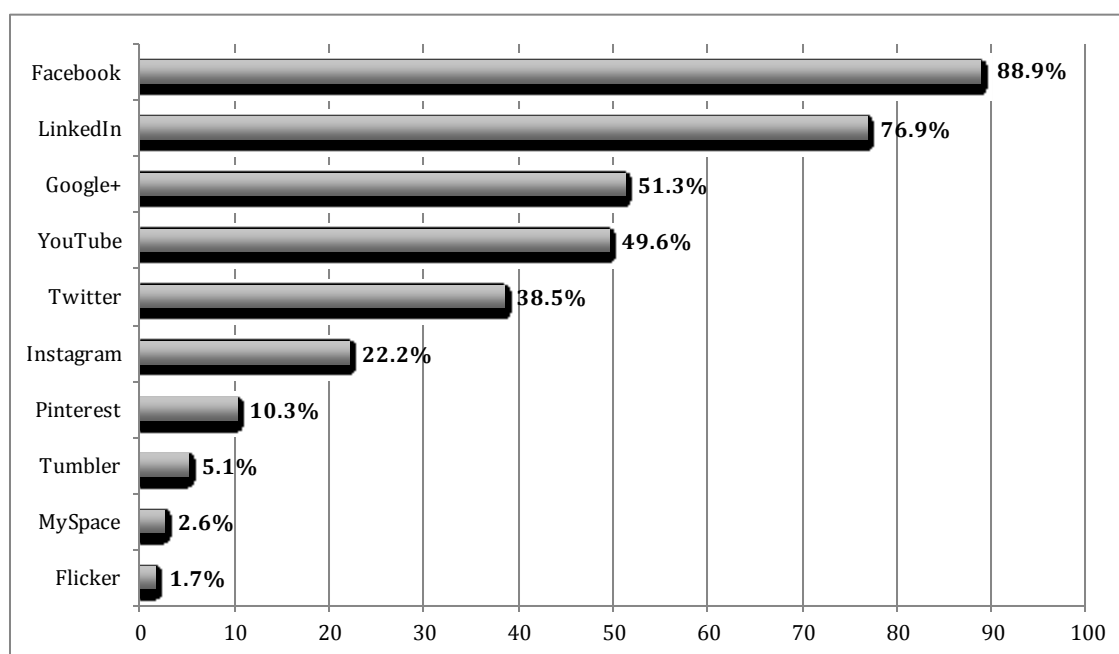
Figure 5-1: Percentage of users' social media accounts

Table 5.5 represents the frequency and percentage of perceived level of social media importance in users' personal and professional life. The average of perceived social media importance in

users personal life is M=2.69 (SD=1.11, Min=1, Max=5, n=115) and in professional life is M=2.52 (SD=1.25, Min=1, Max=5, n=114). There is a positive and significant correlation between users' number of social media surfing hours per week and users' perceived social media importance in personal (p<0.001) and professional life (p<0.01).

Table 5.5: Users' perceived level of social media importance in personal and professional life

	Not at all important	Not very important	Somewhat important	Important	Very important	*Response count*
Level of social media importance in user personal life M=2.69, SD=1.11	16.2 % (19)	27.4% (32)	29.9% (35)	20.5% (24)	4.3% (5)	*98.3% (115)*
Level of social media importance in user professional life M=2.52, SD=1.25	23.9% (28)	29.9% (35)	21.4% (25)	13.7% (16)	8.5% (10)	*97.4% (114)*

Figure 5-2 represents the reasons for which online users employ social media platforms. "To stay in touch with family and friends" is the most (n=97) and "to share information about products and brands" is the least (n=3) important reason for online users social media usage. Other reasons are: "to get information" (n=72), "to establish professional and business contacts" (n=56), "to share information" (n=55), "to share experiences, photos, and videos" (n=43), "to make new contacts" (n=25), and "to get information on products and brands" (n=18) respectively. Other reasons for social media engagement are: "entertainment", "to organize group events and activities", and "to be in touch with school and work" (n=10). The correlation results show that women are more likely to employ social media for the purpose of staying in touch with family and friends (p<0.1). Besides, users aged 19-26 are more likely to employ social media to share experiences, photos, and videos (p<0.1) and less likely to make new contacts (p<0.1). Our results are similar and comparable to the representative data on social media usage of Pew Research Center. Pew findings of a study on American use of social media show that their primary consideration of their adoption of social media tools is connections with family members and friends (66%), and 14% of users say that connecting around a shared hobby

or interest is a major reason they use social media, and 9% say that making new friends is equally important (Smith, 2011).
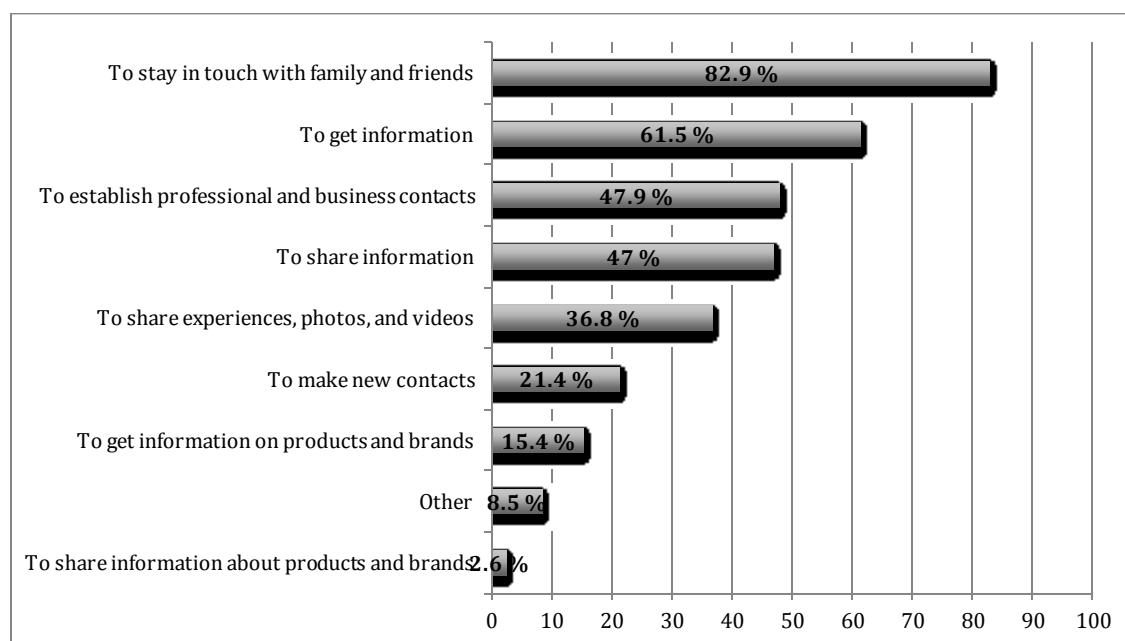
Figure 5-2: Reasons of users' social media employ

5.4.2 Users' perceived credibility of social media information in normal time

The survey included 9 questions concerning online users' perceived credibility of social media information in normal times and during a social media crisis. Table 5.6 represents descriptive statistics of social media perceived information credibility in normal times based on frequency and percentage of responses. The mean of users' trust in social media information is M=2.79 (SD=0.93, Min=1, Max=5, n=112). The average of the times that users come across social media information that turns out to be false later, is M=2.62 (SD=0.86, Min=1, Max=5, n=94), and the average of the times that users verify social media information to make sure about its trustworthiness is 3.61 (SD=1.26, Min=1, Max=5, n=105). The results of correlation tests show that men are more likely to verify the information source to make sure about its trustworthiness ($p<0.05$). Moreover, there is a positive and significant correlation between Internet surfing hours and the times that user comes across the information that turns out to be false later ($p<0.1$) and the times that user verifies the information source to make sure about its trustworthiness ($p<0.05$). There is also a positive and significant correlation between users' perceived level of

social media importance in personal and professional life and their perceived level of confidence of social media information ($p<0.001$).

Table 5.6: Users' perceived credibility of social media information in normal time

	1	2	3	4	5	*Response count*
Level of user' trust in social media information M=2.79, SD=0.93 *(1= not at all trustworthy, 5= very trustworthy)*	8.5% (10)	25.6% (30)	40.2% (47)	19.7% (23)	1.7% (2)	*95.7% (112)*
The frequency that user comes across social media information that turns out to be false later M=2.62, SD=0.86 *(1= never, 5= very often)*	4.3% (5)	35% (41)	31.6% (37)	6% (7)	3.4% (4)	*80.3% (94)*
The frequency that user verifies social media information to make sure about its trustworthiness M=3.61, SD=1.26 *(1= never, 5= very often)*	6.8% (8)	12.8% (15)	15.4% (18)	28.2% (33)	26.5% (31)	*89.7% (105)*

Table 5.7 represents users' perceived level of credibility of different information sources in normal times. The respondents rated each information source from 1 to 5, in which 1 is "not at all credible" and 5 is "very credible". The most credible information source is "national press" (M= 4.15, SD= 0.76) followed by "national information channels"(M= 3.99, SD= 0.87), "local press" (M= 3.60, SD= 0.94), "company's website" (M= 3.56, SD= 0.98), "local information channels" (M= 3.53, SD= 0.94), "online search engines" (M= 3.53, SD= 0.85), "company's weblog" (M= 3.03, SD= 0.97), "company's Twitter" (M= 2.95, SD= 1.06), "company's Facebook" (M= 2.87, SD= 1.00), and "company's YouTube" (M= 2.86, SD.= 1.05). The correlation results represent that users with more hours of social media surfing perceive more credibility for company Twitter ($p<0.001$), company Facebook ($p<0.01$), and company YouTube ($p<0.01$) as information source in normal times.

Table 5.7: Users' perceived credibility of different information sources in normal time

Information sources	Not at all credible	Not very credible	Somewhat credible	Credible	Very credible	*Response count*
National press M= 4.15, SD= 0.76	0% (0)	2.6% (3)	13.7% (16)	44.4% (52)	32.5% (38)	*93.2%* *(109)*
National information channels M= 3.99, SD= 0.87	0.9% (1)	6% (7)	12.8% (15)	47% (55)	26.5% (31)	*93.2%* *(109)*
Local press M= 3.60, SD= 0.94	1.7% (2)	10.3% (12)	24.8% (29)	41% (48)	13.7% (16)	*91.5%* *(107)*
Company's website M= 3.56, SD= 0.98	2.6% (3)	9.4% (11)	27.4% (32)	35.9% (42)	14.5% (17)	*89.7%* *(105)*
Local information channels M= 3.53, SD= 0.94	1.7% (2)	12% (14)	23.9% (28)	40.2% (48)	11.1% (13)	*88.9%* *(104)*
Online search engines (e.g., Google, Yahoo!, MSN, etc.) M= 3.53, SD= 0.85	0.9% (1)	8.5% (10)	33.3% (35)	38.5% (49)	10.3% (12)	*91.5%* *(107)*
Company's weblog M= 3.03, SD= 0.97	4.3% (5)	17.9% (21)	35.9% (42)	17.1% (20)	6% (7)	*81.2%* *(95)*
Company's official Twitter page M= 2.95, SD= 1.06	8.5% (10)	12.8% (15)	27.4% (32)	19.7% (23)	3.4% (4)	*71.8%* *(84)*
Company's official Facebook page M= 2.87, SD= 1.00	8.5% (10)	17.9% (31)	31.6% (27)	19.7% (23)	2.6% (3)	*80.3%* *(94)*
Company's official YouTube page M= 2.86, SD.= 1.05	8.5% (10)	17.1% (20)	24.8% (22)	18.8% (29)	2.6% (3)	*71.8%* *(84)*

There is a positive and significant correlation between users perceived confidence in social media information and perceived credibility of company twitter ($p<0.001$), company Facebook ($p<0.01$), company weblog ($p<0.01$), and company YouTube ($p<0.01$) as information source in normal times. This means that even though the majority of online users perceive more credibility for traditional media, users with confidence in social media information (M=2.79, SD=0.93) perceive more credibility for social media information compare to traditional media.

5.4.3 Users' perceived credibility of social media information in crisis times

As mentioned earlier, we included Domino's Pizza story as an inclusive social media crisis case study in our survey in order to better achieve the respondents' perception of the whole context. We first asked respondents if they have already heard about the story and whether they trust this story to be real. 83.6% (n=101) of online users had not heard about Domino's Pizza case and 13.7% (n=16) already knew the story. Also 71.8% (n=84) of respondents assumed that the story is not real, whereas 28.2% (n=33) trusted it to be a real story. We found a positive and significant correlation between users' perceived confidence in social media information and their perceived believability about the story ($p<0.1$). We then asked respondents if they are willing to share the mentioned YouTube video on their primary social media platform. 88.9% (n=104) of respondents had no intention to do so, whereas 11.1% (n=13) intended to share the video. Users with more confidence in social media information are more likely to share the Domino's Pizza YouTube video on their social media platform ($p<0.05$). Next, we asked about respondents' reasons for sharing the video. Only 35 users answered this question and their reasons are: "to alert the circle of contacts" (n=13), "to inform the circle of contacts" (n=12), "to ask not to trust the company" (n=6), and "to call for boycott the company" (n=2).

Respondents were questioned about the information sources they perceive credible, in case they want to verify the trustworthiness of the mentioned crisis. Figure 5-3 represents the level of credibility that online users assign to different information sources in crisis times. They perceive "online search engines (e.g., Google, Yahoo!, MSN, etc.)" as the most credible sources of information (n=97) during a crisis occurrence. Other sources are: "national press" (n=64), "company's website"(n=51), "national information channels" (n=43),"local press"(n=30), "local information channels" (n=23), "company Twitter" (n=10), "company weblog" (n=9),"company Facebook"(n=13), and "company's YouTube"(n=4) respectively.
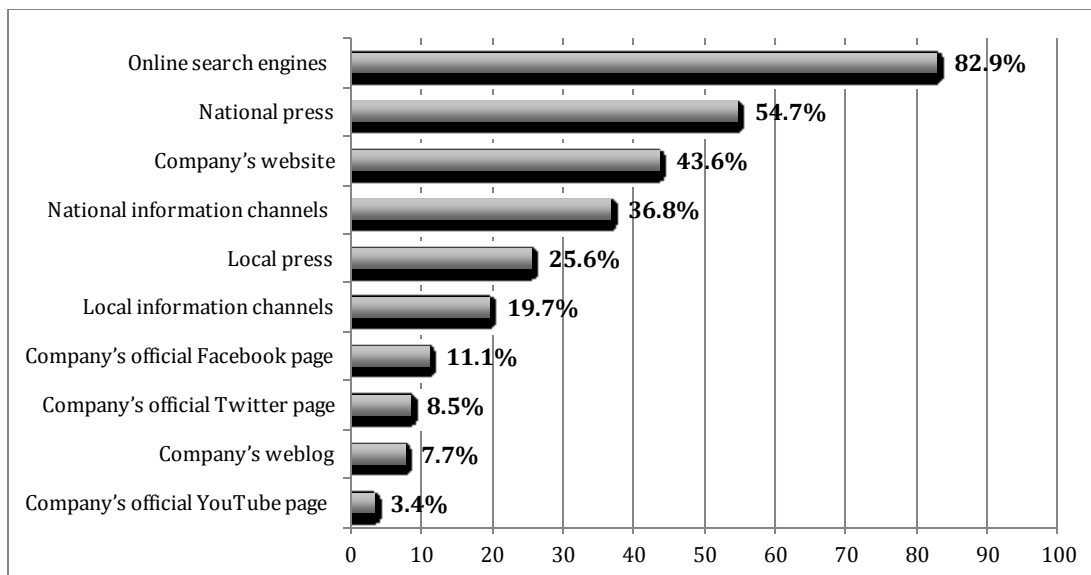
Figure 5-3: Users' perceived credibility of different information sources in crisis time

We compared our results with Edelman Trust Barometer (2015) study on trust in sources for general news and information, which show that online search engines (72%) are the most trustable source followed by traditional media (64%), hybrid media (63%), social media (59%) and owned media (57%). Our results reveal that online search engines are the most credible source in crisis times whereas traditional media is still the most credible source in normal times. This could be explained by the nature of online search engines that enable users to have access to variety of information sources in a short time. Time and credibility of information source is more crucial during crisis occurrence.

5.4.4 Users' perception of crisis communication strategies

In order to evaluate users' perception of crisis communication strategies, we asked respondents to rate Domino's Pizza strategies in response to the crisis. Table 5.8 represents the online users perceived level of importance for each strategy as follows: "to lay off the two employees" (M= 4.47, SD= 0.90), "to upload a public apology video on YouTube" (M= 4.14, SD= 1.20), "to post a press release on company website to clarify the incident" (M= 4.25, SD=0.78), "to optimize the company's hiring practices" (M= 4.06, SD.= 1.03), "to discard opened containers of food" (M= 3.99, SD= 1.12), and "to initiate company Twitter to provide information about the incident"

(M= 3.39, SD= 1.25). Women perceive more importance for Domino's Pizza "public YouTube video apology" as crisis communication strategy (p<0.1). Also, there is a positive and significant correlation between users perceived confidence in social media information and perceived importance for Domino Pizza Twitter account initiation to provide information about the incident (p<0.05). This means that even though this strategy is the least important on the list, engaged and confident social media users approve Domino's Pizza Twitter initiation as an important crisis communication strategy.

Table 5.8: Users' perceived level of importance for crisis communication strategies

Crisis communication strategies	Not at all important	Not very important	Somewhat important	Important	Very important	*Response count*
To lay off the two employees M= 4.47, SD= 0.90	1.7% (2)	2.6% (3)	7.7% (9)	18.8% (22)	61.5% (72)	*92.3% (108)*
To upload a public apology video on YouTube M= 4.14, SD= 1.20	6% (7)	6% (7)	6.8% (8)	23.1% (27)	49.6% (58)	*91.5% (107)*
To post a press release on company website to clarify the incident M= 4.25, SD=0.78	0% (0)	2.6% (3)	12% (14)	38.5% (45)	41% (48)	*94% (110)*
To optimize the company's hiring practices M= 4.06, SD= 1.03	2.6% (3)	6% (7)	12.8% (15)	33.3% (39)	37.6% (44)	*92.3% (108)*
To discard opened containers of food M= 3.99, SD= 1.12	1.7% (2)	9.4% (11)	19.7% (23)	18.8% (22)	47.2% (50)	*92.3% (108)*
To initiate company Twitter to provide information about the incident M= 3.39, SD= 1.25	11.1% (13)	7.7% (9)	28.2% (33)	24.8% (29)	20.5% (24)	*92.3% (108)*

Table 5.9 shows the users' overall satisfaction about Domino's Pizza crisis communication strategies. As shown, 9% of users are "not at all satisfied", 10.3% are "not very satisfied", 27.4% are "somewhat satisfied", 38.5% are "satisfied", and 16.2 % are "strongly satisfied" (n=109).

Table 5.9: Users' overall satisfactions about crisis communication strategies

	Not at all satisfied	Not very satisfied	Somewhat satisfied	Satisfied	Very satisfied	*Response count*
Overall satisfaction about Domino's Pizza responses to a social media crisis M= 3.63, SD= 0.93	0.9% (1)	10.3% (12)	27.4% (32)	38.5% (45)	16.2% (19)	*93.2% (109)*

5.4.5 Users' perception of crisis impact on organization

We investigated respondents' perception of crisis impact on Domino's Pizza. As shown in Table 5.10, online users perceive negative impact on "company's reputation" (M= 4.00, SD= 0.97), "brand credibility" (M= 3.93, SD= 1.01), and negative "financial" impact (M= 3.41, SD= 1.18) as the results of social media crisis. Recalling that only 28.2% (n=33) of respondents trusted that Domino Pizza story is a real case, it is notable that 41.9% (n=49) of respondents perceive "strong" and 33.3% (n=39) perceive "very strong" negative impact on a company's reputation because of the social media crisis.

Table 5.10: Users' perceived level of crisis impact on organization

	1	2	3	4	5	*Response count*
Negative impact on company's reputation M= 4.00, SD= 0.97 *(1= no impact, 5= very strong impact)*	1.7% (2)	7.7% (9)	12.8% (15)	41.9% (49)	33.3% (39)	*97.4% (114)*
Negative impact on brand credibility M= 3.93, SD= 1.01	1.7% (2)	7.7% (9)	18.8% (22)	35% (41)	32.5% (38)	*95.7% (112)*
Negative financial impact M= 3.41, SD= 1.18	9.4% (11)	11.1% (13)	23.9% (28)	35.9% (42)	17.1% (20)	*97.4% (114)*

Figure 5-4 represents how users perceive the duration of crisis impact on Domino's Pizza. 31.6% of users perceive "long-term" negative impact on reputation (n=37), 31.6% perceive "long term" negative impact on brand credibility (n=37), and 9.4% perceive "long term" financial impact (n=11).
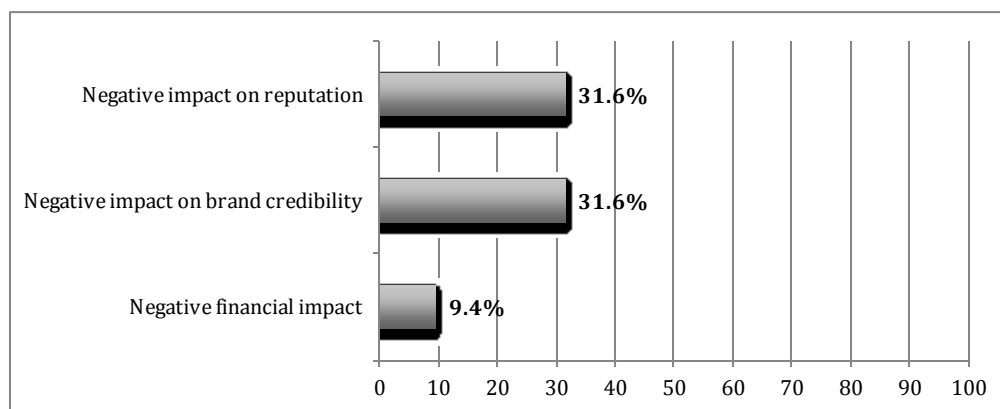
Figure 5-4: Users' perceived duration of crisis impact on organization

As the last question, we asked whether respondents continue to be Domino's Pizza customer. 43.6% (n=51) will and 56.4% (n=66) will not be Domino's Pizza customer after learning about this story (n=117). The correlation matrixes of the study are shown in appendix D and E.

5.5 Conclusion

This study reports an examination of online users' engagement and perceived information credibility in online social media environment. Particularly, this paper investigates how users evaluate online information credibility, since in social media environment there is no filter for distorted information. We compared online users' perceived credibility of information in normal times compared to crisis times. Our results confirm that online users allocate different levels of credibility to information sources based on the actual conditions. Traditional media are perceived more credible in normal times, whereas online search engines (e.g., Google, Yahoo!, MSN, etc.) are perceived the most credible information sources in crisis times. This could be because of online search engines characteristic that enable online users to have quick access to a variety of information sources. Regarding the perception of crisis communication strategies in online

environments, we found that users do not perceive high level of importance for organization' social media activities during a crisis. However, online users who are more engaged in social media environment perceive high level of importance for crisis response strategies that are built on an organization' social media activities. Regarding the impacts of a social media crisis, our findings reveal that online users consider negative long-term impacts on reputation and brand credibility as the results of a social media crisis.

This study includes numbers of practical implications for crisis managers and public relation experts. It can be learnt that perceived credibility of information sources varies based on whether the users search for information in normal times or in crisis times. Therefore, public relations must employ appropriate communication strategies through comparable channels of communication based on an organization's actual situation. Moreover, organizations should always communicate with their stakeholders through accurate and uniformed messages. The organizational messages must be distributed through assorted communication channels to properly respond to the needs of different audiences who perceive different levels of credibility for different media in various times.

CHAPTER 6   ARTICLE 3: USERS' ENGAGEMENT IN ONLINE BRAND COMMUNITIES: A STUDY OF COMMENTING BEHAVIOR IN SOCIAL MEDIA ENVIRONMENT

Abstract[40]

Social media are tremendous platforms through which brands are able to interact with customers and non-customers. Brands can create online brand communities (OBC) on social media platforms such as social networking sites (e.g., Facebook) or content communities (e.g., YouTube) and place their messages, photos, and videos. Social media users can join to online brand communities and express their thoughts, insights and experiences by leaving comments on brand posts. In this article, we present the results of a survey conducted to investigate factors influencing social media users' commenting behavior. This study seeks for a better understating on how social media users "online presence", "social media activities", "perception" and "topic of interest" communicate to their commenting behavior. To address the research questions, an online survey was designed and administrated to one hundred and twenty five social media active users to assess the influential factors of users' commenting behavior. Results from a logistic regression analysis reveal that "social media activities", "perceived trust", "subject of interest", and "country of origin" could explain some of the commenting behaviors of social media users. Our results contribute to a better understanding of social media users' engagement in commenting practices among online brand communities. Brand strategists can be guided by our findings with regards to the factors need to be considered to engage social media users in online brand discussions.

6.1 Introduction

The rapid expansion of Web 2.0 and precisely social media is changing the ways people communicate with one another, and with the brands. The number of the world Internet users has reached to more than 3 billion people (Internet World Stats, 2014). The results of a Pew research (2014) reveal that 74% of online adults use social networking sites and that 52% of them use multiple social media sites (Duggan, Ellison, Lampe, Lenhart, & Maddan, 2015). The adoption of social media is not limited to individuals. A study on Fortune 500 companies explains that 80% of these companies are on Facebook, 83% use Twitter, and 97% embraced LinkedIn (Barnes & Lescault, 2014). Consequently, more than 50% of social media users follow brands in social media and 36% post brand-related content (Whiltshire Online, 2011). While numerous studies have been done on the subject of individuals and brands interaction in social media environment, little is known about the influential factors of social media users' commenting behavior. That is, social media users engagement in online brand communities in form of commenting on brand posts.

The aim of this research is to investigate factors that drive social media users to express themselves in form of commenting on brand post in online brand communities. In fact, we intend to understand the dynamics that cause the creation of user-generated content (in form of comment) in response to brand-generated content (in form of brand post). We develop a conceptual framework based on four categories of users' social media embracement as: online presence, social media activities, perception, and topic of interest. We gathered data by conducting an online survey among 125 social media users to answer our research questions. With this research we contribute to the growing literature of social media studies, which is of interest for academics and practitioners. To the best of our knowledge, this paper is among the premiers to study the influential factors of social media user engagement in online brand communities in form of comment on brand post. Our research provides valuable insights for brand strategists who intend to employ or extend brand social media activities.

The paper is organized as follows: we begin with summarizing prior researches to put our contribution in to perspective; we then describe our conceptual framework, research questions, data sample, and the variables included in data analysis. That section is followed by explaining our method and the results. We continue with a summary and analysis of our results, and conclude by implication for practitioners and propose some limitations that suggest avenues for further researches.

6.2 Background

In just a few years, social media have become surprisingly popular in communication sphere. An update of social media users statistics denotes that Facebook has 1.35 billion monthly active users followed by YouTube with 1 billion, Google Plus with 540 million, Instagram with 300 million, Twitter with 284 million, and LinkedIn with 187 million users (The social media hat, 2015). According to an eMarketer forecast, the global social network audience will reach to 2.55 billion by 2017 (eMarketer, 2013). The popularity of social media and growing engagement of individuals and brands in social media settings have attracted the attention of researchers and practitioners of different disciplines to this area of research. Our study contributes to the growing literature of social media studies through examining the determinant factors of social media users' engagement in online brand communities in form of comment to brand posts. For this purpose, we first review the prior research on public and brands social media adoption, individuals' engagement in online brand communities (OBC), and user-generated content (UGC) in social media environment. We then continue by positioning our research contribution based on the literature gap and suggest our research questions.

6.2.1 Individuals and brands social media adoption

Social media are "activities, practices and behaviors among communities of people who gather online to share information, knowledge, and opinions using conversational media" (Safko & Brake, 2009, p.6). Kaplan and Haenlein (2010) classified social media as (1) collaborative projects (e.g., Wikipedia), (2) blogs, (3) content communities (e.g., YouTube), (4) social networking sites (e.g., Facebook), (5) virtual game worlds (e.g., World of Warcraft) and (6) virtual social worlds (e.g., Second Life).

The emergence of Web 2.0 and social media has shifted the paradigm of communication among individuals and companies. Social media have empowered consumers to post their complaints resulting from dissatisfying experience with products and services in the form of negative electronic word-of-mouth (NWOM) with just one click (Van Noort & Willemsen, 2012). People adopt social media for variety of reasons like searching, communicating with each other, and expressing their ideas and opinions (Tsimonis & Dimitriadis, 2014). Users could display particular behaviors in social media environment based on different motives. For instance, the results of a study by Hargiatti (2007) explain that individuals' gender, race, ethnicity, and parental educational backgrounds are all associated with their social media utilization.

Other than individuals, companies also increasingly employ social media for reasons like marketing and brand building activities (Gallaugher & Ransbotham, 2010), enhancing consumer relations from dialogue to trialogue (Magnold & Faulds, 2009), and customer engagement purposes (Tsimonis & Dimitriadis, 2014). Social media are communication tools through which messages could instantly disseminate to particular audiences (Avery et al., 2010). There is no better way than through social media to spread messages, opinions and thoughts to thousands of audiences through countless number of channels (O'Keefe, 2013). That is why companies are changing their communication strategies and trying to include social networking sites in their communication settings to involve customers in online discussions (Dijkmans, Kerkhof, & Beukeboom, 2015).

6.2.2 Individuals engagement in Online Brand Communities (OBC)

Social media platforms are a "stage to engage" (Dijkmans et al., 2015). In the last two decades, the term "engagement" has been diversely defined across a range of social science disciplines including psychology, sociology, political science, and organizational behavior (Brodie, Hollebeek, Juric, & Ilic, 2011). "Customer engagement" (CE) includes all customer firm-related behaviors such as: online discussions, commenting, information search, and opinion polls that could result in positive or negative consequences for firms (Gummerus, Liljander, Wamen, & Pihlstrom, 2012). Van Doorn et al. (2010, p.254) indicate that "customer engagement behaviors (CEB) can go beyond transactions, and may be specifically defined as a customer's behavioral manifestations that have a brand or firm focus, beyond purchase, resulting from motivational

drivers that can be both positive (i.e. posting a positive brand message on a blog) and negative (i.e., organizing public action against a firm)". Concerning the online environment, Mollen and Wilson (2010, p.923) define online engagement as "a cognitive and affective commitment to an active relationship with the brand as personified by the website or other computer-mediated entities designed to communicate brand value". Engagement with a website cause a web user to visit it, be attentive to it, recommend it, or get disappointed if it is no longer available (Calder, 2009). In online social media, customer engagement includes all communication through brand communities including: word-of-mouth, recommendations, blogging, and writing reviews (Van Doorn et al., 2010).Online brand communities are suitable platforms for online engagement purposes.

A brand community is "a specialized, non-geographically bound community, based on a structured set of social relationships among admirers of a brand. It is specialized because at its center is a branded good or service" (Muniz & O'Guinn, 2001, p. 412). Companies build online brand communities to make relationships with customers and get feedback (Wiertz & de Ruyter, 2007). There is trend on consumers becoming fans of brands on social media and using social media platforms as a source of information about their brands (Bruhn, Schoenmueller, & Schafer, 2012). For example, big brands like Coke have flourished in social media world, ranking as the world's most valuable brand and attracting the biggest Facebook fan base. It is world's number one brand with 56.8 million fans on Facebook and more than half a million fans talking about content per day (Ernan Roman Direct Marketing Corp., 2013). Social media brand community provides benefits to users and brands. It facilitates information sharing and reinforces the customers' relationship with other customers and the brand that could result in brand trust and loyalty (Laroche, Habibi, & Richard, 2013). Being able to keep social media users close to the brand fan page is a great opportunity for companies to turn a simple user into a fan and loyal customer (Tsimonis & Dimitriadis, 2014). Dijkmans, et al. (2015) found that engagement in company social media activities is positively related to corporate reputation, especially among non-customers, which have different reasons to become engaged in online brand communities. This could be a good reason for companies desire to engage non-customers in their communities and involve them in their online conversations.

In the present study, we regard the engagement of customers and non-customers in online brand communities in form of commenting behavior. Brand social media page (e.g., brand Facebook fan page) is a form of online communities through which social media users can interact with the brand by leaving their comments on brand post. User comments are a type of user-generated content, which is discussed in the next section.

6.2.3 User-generated content (UGC) in the online social media environment

Social media create interactive platforms through which individuals and communities can "share, co-create, discuss, and modify user-generated content" (Kietzmann, Hermkens, & McCarthy, 2011, p.241). Kaplan and Haenlein (2010, p.61) define user-generated content (UGC) as "published content outside of professional routines and practices that can be seen as the sum of all ways in which people make use of social media". User-generated contents are forms of consumer engagement that can be found across social media platforms (Smith, Fischer, & Yongjian, 2012) and are considered important means through which social media users express themselves and communicate with one another (Boyd & Ellison, 2007).

Smith et al. (2012) indicate that brand-related user-generated content has the potential to shape brand perception. Consumers tend to rely on peer consumers opinions (Park, Lee, & Han, 2007) in form of online reviews. One objective of brand posts on brand fan pages is to encourage brand fans to get engaged in form of liking, commenting or sharing that post (de Vries, Gensler, & Leeflang, 2012). The exchange of positive experience in form of comment to a brand post has a positive effect on the likelihood the recommend the product (Gruen, Osmonbekov, & Czaplewski, 2006). Dhar and Chang (2009) investigated the impact of user-generated content in the forms of blogs and social networks on music sale and found out that the future sale is positively correlated with the volume of blog posts about an album. Positive comments can enhance the value of brand post and even generate empathy among brand fans (de Vries et al., 2012). In a study on Amazon.com and BN.com, Chevalier and Goolsbee (2003) found out that products with more positive word-of-mouth (WOM) had higher sales; however, negative word-of-mouth (NWOM) had a greater impact on sales than positive reviews.

In sum, the literature review demonstrates researches based on the content analysis of social

media discussions. Nevertheless, hardly any study reviews the motivational factors of social media users' engagement in online brand discussions. We aim to investigate the determinant factors that could explain commenting behavior of social media users. Additionally, we study these factors among social media users in different countries to gain valuable insight into users' diversities in terms of commenting practices. In contrast to previous researches, we opt to study customers and non-customers commenting behavior as one reason for brands to adopt social media is to access new audiences and reach a wider range of people (Tsimonis & Dimitriadis, 2014).

6.3 Conceptual Framework and Research Questions

Figure 6-1 represents the conceptual framework, which is used to guide this study. We seek to find out the determinant factors of social media users' engagement in online brand communities in form of comment on brand posts. We argue that users' online presence, social media activities, perception, and topic of interest could explain their commenting behavior in online brand communities.
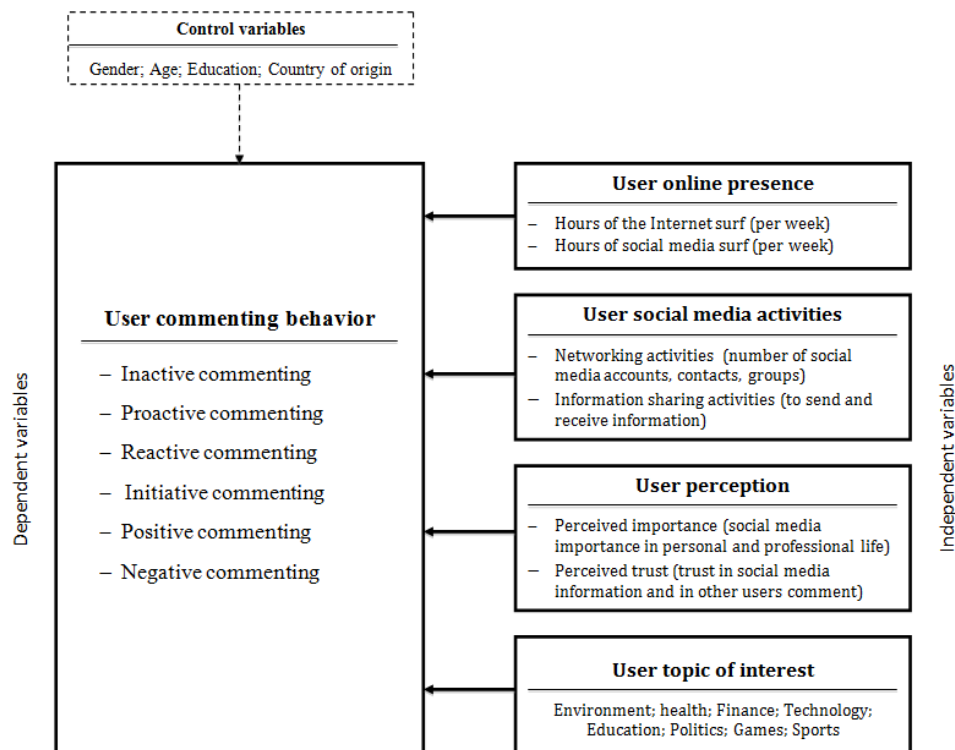
Figure 6-1: Conceptual framework

Hence, we aim to answer the following questions:

RQ1   *How users' online presence relates to their commenting behavior?*

RQ2   *How users' social media activities relate to their commenting behavior?*

RQ3   *How users' perception relates to their commenting behavior?*

RQ4   *How users' topic of interest relates to their commenting behavior?*

The control variables are: gender, age, education, and country of origin. In the next section, methodology and data collection process are explained together with a detailed description of the study dependent and independent variables.

6.4 Methodology and data

This study is based on an online survey designed to collect data on users' "online presence", "social media activities", "perception", and "topic of interest" in social media environment, and how these elements relate to users' commenting behavior. Moreover, we discuss the link between user gender, age, education and country of origin and intention to engage in online brand communities in form of comment.

6.4.1 The sample

Data for this study is collected through an online survey. The questionnaire includes demographic components (Table 6.1) and questions that query a series of user patterns in online social media environment. A total of 125 eligible respondents completed the questionnaire. The respondents must have at least one hour of social media activity per week. The questionnaire starts with a consent form, which is confirmed by the ethic committee of the authors' affiliated universities. The average response time was 20 minutes and the survey was open for data collection for 6 months (May 1st to October 31st, 2014). In order to examine the reliability of the survey, the questionnaire is tested with 10 graduate students of an engineering school. The survey was then uploaded on Lime Survey to be answered by eligible respondents.

Table 6.1: Demographic information

Demographic information (n=125)	n	%
Gender		
– Male	59	47.20
– Female	66	52.80
Age		
– 19-26	66	52.8
– 27-40	41	32.8
– 41-65	18	14.4
Education		
– Master &PHD	72	57.60
– Other	53	42.40
Country of origin		
– Canada & USA	48	37.42
– Western Europe	37	30.58
– Middle east & Africa	30	24
– Others	10	8

6.4.2 Dependent variables

In this study, we consider six possible types of users' engagement in online brands communities in form of comment to brand post, indicated by: "inactive commenting behavior" in which user only reads other users' comment on brand post but doesn't comment; "proactive commenting behavior" in which user proactively comments on brand post; "reactive commenting behavior" in which user comments on brand post in response to other users' comment; "initiative commenting behavior" in which user is the first person who comments on brand post; "positive commenting behavior" in which user leaves positive comments on brand post; and "negative commenting behavior" in which user leaves negative comments on brand post. Table 6.2 represents dependent variables with their description.

Table 6.2: Dependent variables and their description

Social media users' commenting behavior	Description
1. Inactive commenting	User reads other users' comment on brand post but doesn't comment.
2. Proactive commenting	User proactively comments on brand post.
3. Reactive commenting	User comments on brand post in response to other users' comment.
4. Initiative commenting	User is the first person who comments on brand post.
5. Positive commenting	User leaves positive comments (e.g., to recommend a product or service) on brand post.
6. Negative commenting	User leaves negative comments (e.g., to complain about a product or service) on brand post.

6.4.3 Independent variables

Based on the literature review, we determined four sets of independent variables representing user embracement of social media. Table 6.3 represents the list of independent variables and their description. First set of independent variables is "user online presence" including "hours of the Internet surf" and "hours of social media surf" per week. Second set of independent variables is "user social media activities" that includes "networking activities" and "information sharing activities". "Networking activities" are assessed by user' "number of social media accounts", "number of social media contacts", and "number of social media groups and communities". "Information sharing activities" aims to assess whether the user is only a "receiver" of the information or he both "sends and receives information" in social media environment. Third set of independent variables is "user perception" that includes "perceived importance of social media in user personal life", "perceived importance of social media in user professional life", "perceived trust on social media information", and "perceived trust on other users' comment". The last set of independent variables is "user topic of interest" that examines the topics that user is interested to have an active participation in. The selected topics are: environment, health, finance, technologies, education, politics, games, and sports.

Table 6.3: Independent variables and their description

Independent variables	Description
Set 1-User online presence:	
– Hours of Internet surf (per week)	Estimation of the number of hours the user surfs on the Internet during a week.
– Hours of social media surf (per week)	Estimation of the number of hours the user surfs on the social media platforms during a week.
Set 2- User social media activities:	
Networking activities	
– Number of social media accounts	Total number of social media platforms in which the user has a personal account.
– Number of social media contacts	Total number of contacts (e.g., friends on Facebook, followers on Twitter) the user has on social media platforms.
– Number of social media groups and communities	Total number of groups and communities the users is a member of on social media platforms.
Information sharing activities	
– To receive information	User only receives the social media information.
– To send and receive information	User both sends and receives the social media information.
Set 3- User perception:	
Perceived importance	
– Perceived importance in user personal life	Level of social media importance in user personal life.
– Perceived importance in user professional life	Level of social media importance in user professional life.
Perceived trust	
– Perceived trust in social media information	User perceived level of trust in social media information.
– Perceived adverse trust in other users' comments	User perceived level of adverse trust in other users' comments.
Set 4- User topic of interest:	
– Environment, health, finance, technologies, education, politics, games, sports, and others	The discussion topics on which user has an active participation.

6.5 Analysis and results

We included all variables in a logistic regression model and executed the data analysis by STATA version 12.1. Because of the distribution of the responses and the interest in response frequencies, this model shows a satisfactory fit to our data.

6.5.1 Descriptive results

Table 6.4 represents the descriptive statistics for dependent variables. As shown, 72% (n=90) of social media users have inactive commenting behavior (M=.76, SD=.43), 47.6% (n=57) proactive commenting (M=.48, SD=.50), 40.8% (n=51) reactive commenting (M=.44, SD=.49), 27.2% (n=34) initiative commenting (M=.29, SD=.45), 43.2% (n=54) positive commenting (M=.44, SD=.49), and 40.8% (n=51) negative commenting behavior (M=.42, SD=.49).

Table 6.4: Descriptive statistics for user commenting behaviour

Dependent variables	Mean	SD	n	%	Min	Max
1. Inactive commenting	.76	.43	90	72.0	0	1
2. Proactive commenting	.48	.50	57	47.6	0	1
3. Reactive commenting	.44	.49	51	40.8	0	1
4. Initiative commenting	.29	.45	34	27.2	0	1
5. Positive commenting	.44	.49	54	43.2	0	1
6. Negative commenting	.42	.49	51	40.8	0	1

Table 6.5 represents the descriptive statistics for the first set of independent variables: users' online presence. The average hours of users Internet surf per week is M=28.81 (SD= 17.5), and the average hours of users social media surf per week is M=11.10 (SD= 10.90).

Table 6.5: Descriptive statistics for user online presence

Independent variables- set 1	Mean	SD	Min	Max
Hours of Internet surf (per week)	28.80	17.05	6	110
Hours of social media surf (per week)	11.10	10.90	1	60

Table 6.6 represents the descriptive statistics for user social media activities that includes five variables. The mean of user number of social media accounts is M=3.72 (SD= 1.77), the mean of users number of social media contacts is M=347.73 (SD= 267.88), and the mean of user number

of social media groups and communities is M=16.14 (SD= 38.52). Regarding the information sharing activities, 59.84% (n=73) of users are active in both sending and receiving information in social media environment (M=.59, SD=.49), whereas 38.52% (n=47) are only the receiver of social media information (M=.38, SD=.48).

Table 6.6: Descriptive statistics for user social media activities

Independent variables- set 2	Mean	SD	Min	Max
Number of social media accounts	3.72	1.77	0	10
Number of social media contacts	347.72	267.88	1	1087
Number of social media groups and communities	16.13	38.52	0	300
To send information	.38	.48	0	1
To send and receive information	.59	.49	0	1

Table 6.7 represents the descriptive statistics for social media user perception that includes perceived importance and perceived trust. As shown, 57.26% (n=71) of users perceive high importance for social media in their personal life (M=.57, SD=.49), whereas 45.6% (n=57) of users perceive high importance for social media in their professional life (M=.46, SD=.50). The average of users perceived trust in social media information is M=2.84 (SD=.90), and 64% (n=80) of respondents indicate they don't trust other users' comments (M=.75, SD=.43).

Table 6.7: Descriptive statistics for social media user perception

Independent variables- set 3	Mean	SD	n	%	Min	Max
Perceived importance in user personal life	.57	.49	71	57.26	0	1
Perceived importance in user professional life	.46	.50	57	46.72	0	1
Perceived trust in social media information	2.83	.90	-	-	1	5
Perceived adverse trust in other users' comments	.75	.43	80	75.47	0	1

Regarding the users topic of interest, 44% of users are interested in environment, 32,8% in health, 21.6% in finance, 47.2% in technologies, 39.2% in education, 35.2% in politics, 6.4% in games, 23,2% in sports, and 11.2% in other (music, travel, culture, humanities) topics of discussion. Respondents were able to choose more than one topic of interest for this question (Table 6.8).

Table 6.8: Descriptive statistics for user topic of interest

Independent variables-set 4	Mean	SD	n	%
Environment	.44	.49	55	44
Health	.33	.47	41	32.8
Finance	.22	.41	27	21.6
Technologies	.47	.50	59	47.2
Education	.39	.49	49	39.2
Politics	.35	.48	44	35.2
Games	.06	.24	8	6.4
Sports	.23	.42	29	23.2
Other	.11	.31	14	11.2

6.5.2 Logistic regression results

The results of the logistic regression analysis for six dependent variables are shown in table 6.9 and are explained as follows:

Inactive commenting behavior: The results show that there is a positive and significant correlation coefficient between perceived adverse trust in other users comment and inactive commenting behavior (p ≤0.05). Also, there is a positive and significant link between users whose topic of interest is politics (compared to user whose subject of interest is technology) and inactive commenting behavior (p ≤0.1). Moreover, there is a positive and significant link between Middle East and African social media users (compared to Canada & USA) and inactive commenting behavior (p ≤0.1).

Proactive commenting behavior: There is a positive and significant correlation between the hours of social media surf, number of social media contacts, and proactive commenting behavior (p ≤0.05). Also, there is a positive and significant relation between perceived adverse trust in other users comment, social media activity of "to send and to receive information" (compared to social media activity of "to receive information"), and proactive commenting behavior (p ≤0.1). Topic of interest, age and gender are also significantly related to proactive commenting behavior. Users with interest in environment (p ≤0.1) and education (p ≤0.05) topics are more related to proactive commenting behavior. Male are significantly and positively more related to proactive commenting behavior (p ≤0.01). There is also a positive and significant relation between age and proactive commenting behavior (p ≤0.05).

Reactive commenting behavior: The results of the logistic regression show that there is a positive and significant coefficient between perceived trust in social media information and reactive commenting behavior (p ≤0.1). Users with interest in educational topics (compared to technology) are significantly more related to reactive commenting behavior (p ≤0.1). Also, social media users of Middle East and Africa (compared to Canada and USA) are positively and significantly associated with reactive commenting behavior (p ≤0.01).

Initiative commenting behavior: There is a positive and significant correlation coefficient between perceived importance for social media in personal (p ≤0.1) and professional life (p ≤0.05), and initiative commenting behavior. Users with more social media contacts are positively and significantly (p ≤0.01) related to initiative commenting behavior. There is a positive and significant correlation between interest in financial and political topics (compared to technology), and initiative commenting behavior (p ≤0.1). Social media users from Western Europe, Middle East and Africa (p ≤0.01) are positively and significantly related to initiative commenting behavior (compared to Canada & USA). There is also a positive and significant coefficient between age and initiative commenting behavior (p ≤0.1).

Positive commenting behavior: Perceived trust in social media information, topic of interest and country of origin are determinant factors for positive commenting behavior. There is a positive and significant correlation between user perceived trust in social media information and positive commenting behavior (p ≤0.1). Users with interest in financial topics are significantly and negatively (p ≤0.05) related to positive commenting behavior whereas users with interest in sport topics are positively and significantly (p ≤0.01) related to positive commenting behavior. Middle East and Africa social media users (compared to Canada and USA) are positively and significantly related to positive commenting behavior (p ≤0.1).

Negative commenting behavior: There is a positive and significant coefficient between user' number of social media groups and communities and negative commenting behavior (p ≤0.05). Moreover, users with interest in politics (compared to technology) are positively and significantly related to negative commenting behavior (p ≤0.05). There is a positive and significant coefficient between age and negative commenting behavior (p ≤0.1).

Table 6.9: Logistic regression results for dependent variables

Independent variables	Inactive commenting	Proactive commenting	Reactive commenting
User hours of Internet surf	0.088 (0.300)	-0.677 (0.483)	0.241 (0.257)
User hours of social media surf	0.174 (0.523)	**2.528** (1.057)**	0.235 (0.497)
User number of social media accounts	0.064 (0.239)	0.343 (0.350)	-0.289 (0.205)
User number of social media contacts	-0.000 (0.001)	**0.006** (0.003)**	0.002 (0.001)
User number of social media groups and communities	0.052 (0.411)	-0.361 (0.464)	-0.275 (0.334)
User social media activity: to send and receive information	0.036 (0.742)	**1.913 (1.078)***	1.113 (0.711)
Perceived importance of social media in user personal life	-0.198 (0.936)	-1.449 (1.387)	0.208 (0.799)
Perceived importance of social media in user professional life	-1.189 (0.827)	0.470 (0.994)	-0.029 (0.631)
User perceived trust in social media information	0.219 (0.492)	-1.065 (0.834)	**0.880* (0.452)**
User perceived adverse trust in other users' comment	**2.047** (0.921)**	**2.413* (1.270)**	-0.239 (0.772)
Topic of interest: Environment	-0.388 (0.941)	**2.124* (1.114)**	0.322 (0.756)
Topic of interest: Health	1.149 (0.971)	1.360 (1.325)	0.110 (0.794)
Topic of interest: Finance	-1.170 (0.747)	-0.021 (1.147)	-0.477 (0.696)
Topic of interest: Education	-0.276 (0.782)	**2.686** (1.181)**	**1.241* (0.636)**
Topic of interest: Politics	**-1.438*(0.759)**	-1.221 (1.103)	-0.351 (0.677)
Topic of interest: Games	-0.006 (1.917)	-1.059 (1.968)	-0.093 (1.342)
Topic of interest: Sports	0.673 (0.917)	1.680 (1.132)	-0.173 (0.736)
Topic of interest: Other	**-1.811* (1.090)**	-0.018 (1.562)	-1.911 (1.265)
Gender	0.354 (0.808)	**3.357*** (1.210)**	1.033 (0.680)
Age	-1.907 (1.378)	**5.798** (2.537)**	-0.045 (1.264)
Education	-0.369 (0.787)	-0.826 (1.045)	-0.555 (0.659)
Western Europe	0.382 (0.849)	-1.356 (1.348)	1.072 (0.771)
Middle East and Africa	**1.829* (1.067)**	1.978 (1.358)	**2.195** (0.915)**
Other countries	-0.030 (1.193)	2.157 (1.343)	0.590 (1.116)
_cons	6.354 (4.759)	-27.913 (9.976)	-5.191 (4.335)
	Number of observations=97 Degree of freedom=24 LR chi 2=20.46 Prob> chi2=0.670 Pseudo R2=0.219 Log likelihood =-36.305	Number of observations=97 Degree of freedom=24 LR chi 2= 79.32 Prob> chi2=0.000 Pseudo R2=0.589 Log likelihood =-27.571	Number of observations=94 Degree of freedom=24 LR chi 2=42.87 Prob> chi2=0.010 Pseudo R2=0.330 Log likelihood =-43.528

Note: logistic regression coefficients with standard errors in parentheses (**** $p \leq 0.001$, ***$p \leq 0.01$, **$p \leq 0.05$, *$p \leq 0.1$). Omitted variables for topic of interest and country of origin are "Technology" and "Canada & USA" respectively.

Table 6.9: Logistic regression results for dependent variables (continued)

Independent variables	Initiative commenting	Positive commenting	Negative commenting
User hours of Internet surf	0.061 (0.297)	0.114 (0.334)	0.296 (0.263)
User hours of social media surf	-0.243 (0.563)	0.100 (0.574)	-0.168 (0.565)
User number of social media accounts	0.183 (0.238)	-0.083 (0.224)	0.172 (0.230)
User number of social media contacts	**0.005*** (0.002)**	0.002 (0.001)	0.0 (0.001) 1.0
User number of social media groups and communities	-0.026 (0.379)	-0.081 (0.338)	**0.719** (0.367)**
User social media activity: to send and receive information	0.579(0.920)	0.330 (0.776)	-0.448 (0.734)
Perceived importance of social media in user personal life	**-1.828* (1.085)**	0.575 (0.980)	1.498 (0.946)
Perceived importance of social media in user professional life	**1.746** (0.846)**	0.029 (0.709)	0.967 (0.671)
User perceived trust in social media information	0.275 (0.509)	**1.009* (0.521)**	-0.487 (0.487)
User perceived adverse trust in other users' comment	-0.987 (0.965)	0.517 (0.768)	0.601 (0.803)
Topic of interest: Environment	0.045 (0.904)	-0.312 (0.769)	0.181 (0.694)
Topic of interest: Health	1.114 (0.957)	0.767 (0.858)	-0.741 (0.823)
Topic of interest: Finance	-1.600 (0.984)	**-1.921**(0.836)**	-0.170 (0.776)
Topic of interest: Education	**1.562* (0.819)**	0.318 (0.692)	0.490 (0.713)
Topic of interest: Politics	**-2.204* (1.172)**	-0.529 (0.742)	**1.595 (0.763)***
Topic of interest: Games	-0.350 (1.297)	0.616 (1.458)	0.807 (1.241)
Topic of interest: Sports	1.159 (0.870)	**2.460*** (0.872)**	-0.780 (0.879)
Topic of interest: Other	0.624 (1.140)	-1.465 (1.089)	-0.552 (1.185)
Gender	1.367 (0.882)	-0.003 (0.752)	-0.013 (0.779)
Age	**2.588* (1.481)**	-0.036 (1.380)	2.359 (1.402)*
Education	-1.352 (0.869)	-1.057 (0.726)	-1.712** (0.760)
Western Europe	**2.376** (1.164)**	0.089 (0.808)	1.275 (0.817)
Middle East and Africa	**3.802*** (1.426)**	**1.521* (0.868)**	1.100 (0.982)
Other countries	**6.333*** (2.122)**	-	-
_cons	-15.470 (5.738)	-4.925 (4.712)	-11.789 (4.952)
	Number of observations=95 Degree of freedom=24 LR chi 2= 47.04 Prob> chi2=0.003 Pseudo R2=0.408 Log likelihood =-34.082	Number of observations=86 Degree of freedom=23 LR chi 2=43.50 Prob> chi2=0.006 Pseudo R2=0.365 Log likelihood =-37.838	Number of observations=87 Degree of freedom= 23 LR chi 2=41.12 Prob> chi2=0.011 Pseudo R2=0.345 Log likelihood =-39.044

Note: logistic regression coefficients with standard errors in parentheses (**** p ≤ 0.001, ***p ≤0.01, **p ≤0.05, *p ≤0.1). Omitted variables for topic of interest and country of origin are "Technology" and "Canada & USA" respectively.

Users with Master and Ph.D. are also positively and significantly relate to negative commenting behavior (p ≤0.05).

In what follows, we discuss the results and conclude with arguing the managerial insights for practitioners and some limitations that provide opportunities for further research.

6.6 Discussion and conclusion

This article contributes to social media studies literature by shedding light on social media users' commenting behavior in online brand communities. The aim of this paper is to gain a better understanding of the factors involved in the social media user intentions to engage in online brand communities in form of commenting on brand posts. This study reports on an exploratory attempt to use logistic regression analysis in order to examine whether social media users who engage in online brand communities in form of commenting to brand post, are reflected by their online presence, social media activities, perception, and topics of interest. We also set out to test whether users' country of origin reflects their commenting behaviors. This is an important area for research concerning that users-generated contents (e.g., comment) are rich resources of data to study on customers and non-customers behavior. We reflected on different types of user commenting behaviors: inactive, proactive, reactive, initiative, positive, and negative commenting behavior. We attempted on different motivating factors and our findings reveled that "social media activities", "perceived trust", "subject of interest", and "country of origin" are the causes, which could explain users commenting behavior among social media platforms.

Our findings confirm that social media users are mainly involved in inactive commenting behavior, which is a passive attitude. Regarding other types of commenting behaviors that include active attitudes, the numbers of reactive users are slightly less than proactive users, and initiative users are less than proactive and reactive users. We conclude that users somewhat tend to be passive rather than active in social media environment. There is no significant difference among users with positive versus negative commenting behavior.

The findings support that user perceived trust in social media information positively relate to reactive and positive commenting behavior but not on inactive, proactive, initiative, and negative commenting behaviors. This explains that trust in social media information leads to positive but passive commenting behaviors. Moreover, users with adverse trust in others' comment are either

inactive or proactive commenter. This explains that even if users have no trust to other users comment, they still read them, leave their own comments and proactively participate in online brand discussions. The results represent that users with high volume of social media activities show proactive commenting behavior. Users with high social media presence and activities (e.g., number of social media contacts and information sharing activities) proactively participate in online brand communities. Users who are a member of groups and communities are relating to negative commenting behavior. This explains that users who follow brands are more interested to express their negative feedbacks with others.

The regression analysis reveals that topic of interest could also explain some types of commenting behavior. Users with political interests are involved in inactive, initiative, and negative commenting behavior; users with environmental interests are involved in proactive commenting behavior; users with educational interest are engaged in proactive commenting behavior; user with financial interests are associated with initiative and negative commenting behavior; and users with sport interests are involved in positive commenting behavior. Topic of interest is a determinant factor in user commenting behavior and could explain different types of commenting practices in online brand communities. Our findings also shed light on dissimilarities among social media users of different countries. We particularly found that commenting behavior of Middle East and Africa users are unlike other countries. Middle East and Africa users are the most active in inactive, proactive, initiative, and positive commenting behaviors.

6.6.1 Practical implications

There are numbers of practical implications for this study. For instance, the results of this research are beneficial for brand managers in view of how to engage their non-customers in brand posts. Brand managers that run brand posts can be guided by our research and learn more about the determinants of users commenting behavior. Engaging users in brand posts in form of comments could turn a user to a brand fan, or a non-customer to a customer that could be in favor of brand advantages. Expected benefits are financial benefits, acquisition and engagement of users that are potential social media brand fans. It is also important for brands to engage non-

customers in their online discussions and construct a positive perception of reputation as they might become future customers, employees, or shareholders (Shamma & Hassan, 2009).

In line with the findings, brands should be aware of the diversity among users of different countries and their varied commenting behaviors. Brands could have customized online brand communities with respect to the differentiations of social media users around the world. Brand strategists could employ our findings in defining strategies to fulfill an active communication with brand fans by relating different topics to their posts and to engage more social media users in brand online discussions.

6.6.2 Limitations and further research

This research is subject to some limitations that could provide opportunities for further research. Given the immerging field of social media studies, findings should be considered as preliminary and exploratory. As the results of an exploratory study are not usually applicable to a larger population, selecting a larger sample of social media users could increase the reliability of the results. However, the results provide significant insights on how social media user online presence, social media activities, perception, topic of interest, and country of origin contribute to their commenting behavior.

There is a need to study social media user engagement behavior in other forms across brand communication channels. Our study was not focused on a particular social media platform. Future researches may consider studying on specific social media platform which gives the opportunity of comparing potentials of different platforms in engaging social media users in online discussions. In this research, we considered commenting behavior which is one kind of user engagement. It would be desirable to study other types of user engagement and make a comparison among them. Finally, future studies could make a distinction between fans versus non-fans or customers versus non-customers engagement behaviors in online brand communities.

CHAPTER 7   GENERAL DISCUSSION

This dissertation had the purpose of investigating some of the risks and opportunities associated with the relatively new phenomenon of social media from an organizational perspective. The study first took a multiple-case study approach, and through an in-depth analysis of each case, provided insights on social media crisis, and crisis communication strategies in social media environment by proposing an inclusive model of social media crisis communication. The study then took an approach of data collection through conducting an inclusive survey aiming to investigate social media users' perception of online information credibility, and social media users' motivational elements of engagement in online discussions.

This chapter summarises the key findings of the dissertation recalling that the aim of this research was to address how do organizations communicate and respond to social media crises to avoid undesirable outcomes (research question 1), how online users perceive the credibility of social media information in normal time and during a crisis (research question 2), and how users' social media adoption relates to their engagement in online brand communities (research question 3).

The first research question was focused on the organizations' crisis communication strategies in social media environment. In doing so, the study took a multiple-case study approach and through an in-depth analysis of eight social media crisis case studies, patterns for organizational crisis, organizational crisis communication strategies, and crisis impact in social media environment emerged. Based on the findings and to address the first research question, a model of social media crisis communication was suggested including a crisis life process from the time that it appears due to information dissemination across social media platforms till the time that results in negative outcomes for the organization. The model explains that, when an event occurs, its information disseminates through social media channels. Because of the quick diffusion of information in social media environment, the event could immediately turn to a crisis. As a result, organizations expose to the crises like never before, regarding that the crisis information could even be false. The issue of false information in social media environment guided this dissertation to its second research question that addresses the concern of information credibility among social media platforms.

The second research question attempted to point out how online users perceive the credibility of social media information in normal time and during a crisis. To address this question, an online survey conducted among online users to find out how they evaluate online information credibility, given that in social media environment there is no filter for distorted and false information. The findings confirmed that online users allocate different levels of credibility to information sources based on the actual conditions. Traditional media are perceived more credible in normal times, while online search engines are perceived the most credible information sources during a crisis. This could be explained by the quality of online search engines that enable online users to have quick access to a variety of information sources. Social media platforms (e.g., Facebook, Twitter, and YouTube) per se are not among credible sources of information compared to traditional media and online search engines. Moreover, online users assign different level of significance for the communication channels through which organization diffuses crisis information. Users don't consider high level of significance for organization social media activities during a crisis. However, online users who are more engaged in social media environment activities perceive higher level of significance for crisis responses that are disseminated through organization' social media platforms. The results also revealed that users' activities among social media platforms relate to their perceptions and evaluations about organizations. These findings and the significance role of social media users (such as their role in generating contents) directed this research to its third question.

The third research question addressed how users' social media adoption relates to their engagement in online brand communities. For this purpose, an online survey conducted among social media users to gain a better understanding of the factors involved in the user' engagement in online brand communities. In contrast with the prior researches that mainly focused on the analysis of user-generated contents, this study attempted on seeking the motivating factors of user engagement and the findings reveled that "social media activities", "perceived trust", "subject of interest", and "country of origin" are the causes, which could explain users' commenting behavior in online brand communities. The findings explain that users with high volume of social media activities have proactive commenting behavior. Also, users with trust in social media information are more intended to participate in positive commenting practices. Topic of interest is a determinant factor in commenting behavior of social media users and could explain different

types of commenting practices in online brand communities. The findings also shed light on dissimilarities among social media users of different countries. Middle East and African users proved to be the most active in nearly all sorts of commenting practices.

CHAPTER 8   CONCLUSION AND RECOMMENDATIONS

Over the last few years, the phenomenon of social media have emerged and increasingly integrated in individuals' life and organizations' persistence. The popularity and widespread utilization of social media, call for academic research on the topic. This dissertation targeted on the social media studies in communication research field. Hence, this research work investigated a number of potential risks and opportunities that the organizations currently confronted with the emergence and rapid growth of social media. This dissertation discussed the availability of uncontrolled information among social media channels and argued that the fast dissemination of unlimited amount of information could result in social media crisis that expose organizations' reputation to danger faster than ever. One more risk for organizations that is prior crisis communications strategies are not entirely applicable to crises that happen or amplify in social media environment. Organizations are not completely aware of social media crisis requirements and therefore their crisis communication strategies might not be an appropriate response to social media crisis. This is another factor that amplifies the probability of reputation risk. The dissertation then continues with reviewing the possible organization opportunities in social media world. Social media is a stage to engage that give organizations the chance of engaging users in their conversations. If these conversational interactions among organizations and individuals are properly managed, it brings benefits like positive perceptions of reputation for organizations. This chapter summarises the dissertation contributions, recommendations for practical implications, and the research limitations that afford the directions for further studies.

8.1 Dissertation contributions

This dissertation contributes to the relatively new research field of social media studies in the context of organizational studies. Regarding the theoretical contribution, this dissertation proposed an inclusive model of social media crisis communication, which includes the requirements of responding to crises in social media environment. The model encompasses the procedures through which a social media crisis emerges due to the information diffusion in social media channels. The model also includes crisis communication strategies and crisis outcomes in the context of social media. The proposed model is built upon the review of prior research and contributes to the call for efficient crisis communication strategies that answer the requirements

of the relatively new emergent social media environment. Regarding the practical contribution, this dissertation contributes to a better understanding of online users' perceptions and engagement behaviors among social media platforms. The accessibility of unfiltered information among social media platforms raises the concern about the information credibility particularly in critical times like when crises occur. Based on the research gap, this research focused on the subject of social media information credibility in crisis times, and contributed to a better understating of how online users perceive the social media information in normal time compared to crisis time. The dissertation also investigated the factors that explain social media users' engagement behaviors in online brand communities, which are the platforms of interactions among individuals and organizations. Prior research mainly looked at the conversations that are taking place among online brand communities. In order to address the research gap, this dissertation examined a number of driving factors that explained several engagement behaviors of social media users.

8.2 Recommendations for practical implications

There are numbers of practical implications for organizations' crisis manager, public relations, marketing practitioners, and brand strategists who intent to embrace social media or already employed these platforms and aim to take their social media activities to the next level. The findings of this dissertation are helpful for crisis managers who plan to incorporate social media in their strategies and use them as communication channels that perform alongside other organizational communication means. In the light of the findings, public relations need to be present in social media environment, monitor the conversations, get engaged, and be responsive in appropriate time. Apart from traditional crisis communication channels and crisis response messages, organizations must be attentive about the speed of information circulation among social media platforms and be more time sensitive during crises.

The findings are in favor of public relations with regards to the users' perceptions and evaluations in social media environment. User' perceived credibility of information varies based on whether they search for information in normal times or during crisis. Therefore, public relation practitioners should employ appropriate communication strategies through comparable channels of communication based on the actual situation of the organization. Moreover, organizations

should consistently communicate with public through accurate and uniformed messages. The organizational messages must be distributed through assorted communication channels to properly respond to the needs of different audiences who perceive different levels of credibility for different media in various times.

Public relations should monitor social media channels and be aware of the conversation that takes place in different channels about them, and to get involved if they confront any potential risk. Due to the social media quick information dissemination, crisis managers must be aware of any issue rapidly and took immediate action to handle it before it turns to a problem or a crisis. Crisis managers should quickly communicate with public and give them detailed information of the issue, and clearly explain what they are going to do to fix it before the issue gets worse, and to apologize if necessary. All these actions should be made though social media and traditional media channels because public includes variety of audiences who follow different media based on dynamics such as demographic factors. Therefore, organizational crisis response must be immediate, uniformed, and it should be disseminated through social media and traditional media to respond to audiences that are present all around the world.

The results of this study are useful for marketing practitioners and brand strategists in view of how to engage social media users in their online discussions. Brand practitioners that create brand posts could be guided by the findings of this dissertation and learn more about the determinants of users commenting behaviors which result in positive or negative electronic word of mouth (eWOM). Engaging users in online brand discussion in form of comments on brand post could turn a user into a brand fan, or a non-customer into a customer that could be beneficial for the brand. Expected advantages are financial benefits, acquisition and engagement of users that are potential social media brand fans. It is also important for marketing and brand practitioners to engage non-customers in their online discussions, as they might become future stakeholders. Brand strategists should be aware of the diversity among users of different countries and their varied behaviors and expectations. Brands could customize their online brand communities with respect to the differentiations of social media users around the world. Brand strategists could employ the findings of this dissertation to carefully define and update strategies to fulfill an effective communication with brand fans by relating different topics to their posts and engaging more social media users in online brand discussions.

8.3 Limitations and recommendations for further research

This research is subject to some limitations that could provide opportunities for further research. First, given the emerging field of social media studies, findings should be considered as preliminary and exploratory. As the results of an exploratory study cannot be generalized and applied to a larger population, selecting a larger sample of case studies and social media users could increase the reliability of the results. Second, the multiple case studies only relied on secondary online data and did not investigate the social media platforms of the organizations in the crisis real time. Third, part of the data could be lost or altered because companies are able to delete or modify the contents of their social media pages. Fourth, the study did not determine the separate contribution of social media and traditional media in information dissemination that result in crisis occurrence. However, the findings provide significant insights on how public relation practitioners and marketing strategists should use social media platforms to avoid its potential risks and benefit from its probable opportunities as argued in the scope of this dissertation.

Future studies might examine the separate share of traditional and social media in information diffusion that result in crisis. They could also explore for how long and to what extent social media crisis outcomes are continued and what would be the suitable organizational strategies for post-crisis communication purposes. Furthermore, determining the channels to deliver post-crisis messages to crisis audiences could be of interest. This study did not focus on a particular social media platform in examining motivational factors of social media users' commenting practices in online brand communities. Therefore, it could be of interest for future studies to examine a particular social media platform, a particular user engagement behavior across online brand communication channels. It would be desirable to study other types of user engagement and make a comparison among them. Finally, future studies could make a distinction between fans versus non-fans or customers versus non-customers engagement behaviors in online brand communities.

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APPENDIX A – SURVEY AND QUESTIONNAIRE

Your Social Media Utilization

We invite your participation in a research project by CIRANO and Polytechnique Montreal aimed at understanding the utilization of social media, the behavior of its active users and their level of confidence in social media information. We constructed a questionnaire with two sections. The first section should identify and measure social media users activities, involvement, habits, and their perceived credibility of the information received via social media channels. The second part mainly focuses on a case study in social media enviroment.

Your participation in this project is to answer a series of questions based on your personal experience. You will need 20 minutes to complete the online questionnaire. Your participation in this research project is voluntary. You're free to refuse to participate by not responding to the questionnaire or quitting in the middle by closing the window to exit the questionnaire. This research project will not cause you any risk. If you do not know the answer to a question,please feel free not to answer it. You will receive no financial compensation for your participation in the research project.

There are 46 questions in this survey

CONSENT FORM

The online questionnaire is completely anonymous and you are free to participate in this project. In addition, you are free to leave the questionnaire at any time, if you wish to. The only people who have access to data are as follows: Venus Hosseinali Mirza (Ph.D. Candidate), Nathalie De Marcellis-Warin (Research Director) and Thierry Warin (Research co-director). Electronic data will be stored at CIRANO (1130, Sherbrooke W., Montreal, Canada) for analysis for 10 years. All information collected during the research will be kept strictly confidential within the limits provided by law. To protect your identity and confidentiality, you will be identified only by a code. The data of the research project will be published in a scientific journal or shared with others in scientific discussions. However, scientific publication or communication will not contain any information that can be used to identify you. Responding to the online questionnaire, you agree to participate in this research project with the conditions set out therein. Please check YES box at the bottom of this page to accept the terms of confidentiality and access to the questionnaire:

[]Do you agree to answer the questionnaire? *

Please choose only one of the following:

○ Yes

○ No

GENERAL QUESTIONS

[]1. You are:

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ Female

○ Male

[]2. Your age:

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Only numbers may be entered in this field.

Please write your answer here:

[]3. Your level of education:

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ Primary (7 years or less)

○ Secondary (High school)

○ College studies

○ University certificate or diplomas

○ Bachelor studies

○ Master studies

○ PhD studies

○ Other

[]4. What is your current main occupation?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ Office employee

○ Professional

○ Manager/Administrator/Owner

○ Student

○ Retired

○ Unemployed

○ Other [   ]

[]5. Your country of origin:

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please write your answer here:

[   ]

[]6. Your mother tongue:

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ French

○ English

○ Other [   ]

[]7. Please estimate the number of hours you browse on the Internet per week:

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Only numbers may be entered in this field.

Please write your answer here:

[   ]

[]8. Please select all the social media websites in which you have a personal profile:

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose all that apply:

☐ Facebook

☐ Twitter

☐ LinkedIn

☐ Pinterest

☐ Google+

☐ Tumblr

☐ Instagram

☐ YouTube

☐ Flicker

☐ MySpace

☐ None (you are not active on social media)

☐ Other: _____

[]9. On average, how many hours per week do you spend on social media websites?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Only numbers may be entered in this field.

Please write your answer here:

_____

[]10. Please indicate which one is your main social media website among followings?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ Facebook

○ Twitter

○ LinkedIn

○ Pinterest

○ Google+

○ Tumblr

○ Instagram

○ YouTube

○ Flicker

○ Myspace

○ None

○ Other [   ]

[]11. On average, how many contacts (friends on Facebook, connections on LinkedIn, followers on Twitter, etc..) do you have on your main social media website?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Only numbers may be entered in this field.

Please write your answer here:

[   ]

[]12. On average, how many communities or groups are you a member of on your main social media website?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Only numbers may be entered in this field.

Please write your answer here:

[]13. On a scale of 1 to 5 (1=not at all active, and 5=very active), how would you rate your level of activity (consultations, shares, comments, views, etc..) on social media?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ 1
○ 2
○ 3
○ 4
○ 5

[]14. For which reasons do you use social media? (Please select all that apply).

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose all that apply:

☐ To make new contacts

☐ To stay in touch with family and friends

☐ To establish professional and business contacts

☐ To share information

☐ To get information

☐ To share your own experiences, photos, and videos

☐ To get information on products and brands

☐ To share information about brands and products

☐ Other:

[]15. What is the degree of importance of social media in your personal life? (1=not at all important , and 5=very important)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ 1

○ 2

○ 3

○ 4

○ 5

[]16. What is the degree of importance of social media in your professional life (work, study)? (1=not at all important, and 5=very important)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ 1

○ 2

○ 3

○ 4

○ 5

[]17. When you are on social media websites, which one of the following activities you do the most?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose all that apply:

☐ To send inforamtion

☐ To receive information

☐ To send and receive information

☐ Other: [   ]

[]18. What is your level of confidence in the information you get via social media? (1=not at all confident, and 5=strongly confident)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

◯ 1

◯ 2

◯ 3

◯ 4

◯ 5

[]19. Do you follow a company or a brand on social media?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

◯ Yes

◯ No

[]20. How often do you happen to recommend a product or service on your social media websites? (1=never, and 5=very often)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

◯ 1

◯ 2

◯ 3

◯ 4

◯ 5

[]21. How often do you happen to complain on social media of a product or service? (1=never, and 5=very often)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ 1

○ 2

○ 3

○ 4

○ 5

[]22. What are the specific topics on which you are likely to have an active participation in a discussion on social media?(Please select all that apply)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose all that apply:

☐ Environnement

☐ Health

☐ Finance

☐ Technologies

☐ Education

☐ Politics

☐ Games

☐ Sports

☐ Other: [   ]

CASE STUDY QUESTIONS: Domino's Pizza YouTube Video

[]

On April 13, 2009, an employee of Domino's Pizza, Michael, preparing sandwiches while another employee, Kristy, filming. In the video, Michael was putting cheeses in his nose and sneezing on pizzas.They posted their video on YouTube and millions of people saw their actions.

23. Have you heard of this story?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ Yes

○ No

[]24. If you happened to watch this video, do you think this is a true story?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ Yes

○ No

○ I don't know

[]25. On average, what is the share (percentage%) of the information you read on social media that seem false?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

◯ 0% to 10%

◯ 10% to 20%

◯ 20% to 30%

◯ 30% to 40%

◯ 40% to 50%

◯ 50% to 60%

◯ 60% to 70%

◯ 70% to 80%

◯ 80% to 90%

◯ 90% to 100%

◯ Other [   ]

[]26. How often do you receive information that turns out to be false later? (1=never, and 5=very often)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

◯ 1

◯ 2

◯ 3

◯ 4

◯ 5

[]27. How often do you verify the sources of information you receive before you react? (1=never, and 5=Very often)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ 1

○ 2

○ 3

○ 4

○ 5

[]28. If information comes from people you trust you tend:

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ To give them more credibility

○ Not to give them more credibility

○ To make your own opinion

[]29. If you consult other sources of information to ensure the credibility of this story, what are these sources?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose all that apply:

☐ Local information channels

☐ National information channels

☐ Local press

☐ National press

☐ Online search engines (Google, Yahoo, Bing, AOL, MSN, etc.)

☐ Company's website

☐ Company's weblog

☐ Company's official Facebook page

☐ Company's official Twitter

☐ Company's official Youtube page

☐ All of the above

☐ Other: _____

[]30. Please indicate the degree of credibility that you give the following information sources:

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose the appropriate response for each item:

	Not at all credible	Not very credible	Somewhat credible	Credible	Very credible
Local information channels	○	○	○	○	○
National information channels	○	○	○	○	○
Local press	○	○	○	○	○
National press	○	○	○	○	○
Online search engines (Google, Yahoo, Bing, AOL, MSN, etc.)	○	○	○	○	○
Company's website	○	○	○	○	○
Company's weblog	○	○	○	○	○
Company's official Facebook page	○	○	○	○	○
Company's official Twitter	○	○	○	○	○
Company's official YouTube page	○	○	○	○	○
Radio	○	○	○	○	○

[]31. If you happened to watch this video, would you share it on your primary social media website?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ Yes

○ No

[]32. If yes, what will motivate you to share this video on social media?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose all that apply:

☐ To inform your circle of contacts

☐ To prevent and alert your circle of contacts

☐ To request to boycott the products of Domino's Pizza

☐ To request not to trust Domino's pizza

☐ Other: [_____]

[]33. If you happened to watch this video, would you read its comments?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ Yes

○ No

[]34. What is your first reaction when you read a positive comment about a company you do not like:

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose all that apply:

☐ With no doubt, it's surely false

☐ With no doubt, it is surely true

☐ I verify other sources and make my own opinion

☐ I never believe any information I find on the Internet

☐ I don't know

☐ Other: [_____]

[]35. What is your first reaction when you read a negative comment about a company you like:

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose all that apply:

☐ With no doubt, it's surely false

☐ With no doubt, it is surely true

☐ I verify other sources and make my own opinion

☐ I never believe any information I find on the Internet

☐ I don't know

☐ Other: [   ]

[]36. When you read an article on the Internet, how often do you put a comment? (1=never,and 5=very often)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ 1
○ 2
○ 3
○ 4
○ 5

[]37. When you see a fully commented article, how often do you try to add one? (1=never, and 5=very often)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ 1
○ 2
○ 3
○ 4
○ 5

[]38. How often are you the first person to post a comment on an article or a video? (1=never, and 5=very often)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ 1

○ 2

○ 3

○ 4

○ 5

[]39. How often a comment changes your perception about the article you read? (1=never,and 5=very often)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ 1

○ 2

○ 3

○ 4

○ 5

CASE STUDY QUESTIONS: Domino's Pizza Answer to the incident

[]Domino's Pizza did not react immediately and waited 48 hours in order to not to draw attention to the video. On April 14, Domino's Pizza fired two employees and discarded all food containers already opened (which cost hundreds of dollars). The same day, Domino's Pizza issued a statement on the website of the company addressing this matter.

On April 15, the company initiated activities on social media and on a video posted on YouTube the president of Domino's Pizza USA publicly apologized and announced the measures that company had taken to ensure such an incident will not happen again. He added that the restaurant where the video was taken was closed and disinfected, and the company will conduct a review of hiring practices to ensure that similar employees will not be hired. Moreover, Domino's Pizza began reporting on its activities on Twitter to provide information on the brand and on preventive measures to public.

40. What is your level of agreement with the following statement: "Domino's Pizza has done well to wait 48 hours before responding"(1 = not agree at all,and 5 = Strongly Agree).

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5

[]41. Among the steps taken by Domino's Pizza in response to the incident, please indicate the degree of importance you give to following measures:

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose the appropriate response for each item:

	Not at all important	Not very important	Somewhat important	Important	Very important
To initiate company Twitter account to provide information	○	○	○	○	○
To review company's hiring practices	○	○	○	○	○
To close and disinfect the restaurant where the video was taken	○	○	○	○	○
To post a press release on website of the company explaining the incident	○	○	○	○	○
To lay off the two employees	○	○	○	○	○
To discard all containers of foods	○	○	○	○	○
Public apology from the president of Domino's pizza USA in a YouTube video	○	○	○	○	○

[]42. What is your overall level of satisfaction with the responses of Domino's Pizza to the incident? (1=not at all satisfied, and 5=very Satisfied)

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ 1

○ 2

○ 3

○ 4

○ 5

[]43. In your opinion, on a scale of 1 to 5 (1=no impact and 5=lots of impact), what are the potential impacts of such an incident for a company/brand?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose the appropriate response for each item:

	1	2	3	4	5
Loss of company's reputation	○	○	○	○	○
Company's financial loss	○	○	○	○	○
Loss of brand credibility	○	○	○	○	○

[]44. In your opinion, what would be the duration of impact of such an incident on a company/brand?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose the appropriate response for each item:

	Short term impact	Long term impact
Loss of company's reputation	○	○
Company's financial loss	○	○
Loss of brand credibility	○	○

[]45. After such an incident, will you continue to be a customer of Domino's Pizza?

Only answer this question if the following conditions are met:
Answer was 'Yes' at question '1 [Q00]' (Do you agree to answer the questionnaire?)

Please choose only one of the following:

○ Yes

○ No

Thank you

If you have any questions regarding the research project, please contact Venus Hosseinali Mirza at (514) 985-4000, ext.3021 or by email to venus.hosseinali-mirza@polymtl.ca.

If you have any questions regarding your participation in the research project, you can contact the Chair of the Ethics Research Committee of Polytechnique Montreal, Farida Cheriet at (514) 340-4711, ext.4277 or by email to farida.cheriet @ polymtl.ca.

Submit your survey.
Thank you for completing this survey.

APPENDIX B – CRISIS COMMUNICATION STRATEGIES WITH EXAMPLES

	Company	Crisis communication strategies	Example
1	Mattel	Censorship	- Because of hundreds of comments on Barbie's Facebook page, Mattel shut off comments for days and deleted any mention of rainforests.[41] - As part of Greenpeace's Barbie campaign, Greenpeace USA ran satirical Facebook ads and received a notice that the ads were being removed due to a third-party complaint on trademark infringement. This complaint to Facebook was an attempt to stop Greenpeace's campaign.[42]
		Compensation	- The day after Greenpeace launched the campaign, Mattel published a press release stating that it had commanded its suppliers to no longer source from APP.[43][44] […] "We view sustainability as an investment in the current and future generations on whom our business focuses. Our strategic approach to sustainability, "Re-imagine the way we play", inspires the company to make continuous improvement through our three related platforms […] Our Sustainable Sourcing Principles for the procurement of packaging and product comprised of paper or wood fiber support all three of these platforms by establishing a commitment to diligently improve how we conserve these resources, advance our responsible sourcing practices, and seek to encourage our supply chain partners to do the same."[45]
2	GAP	Compensation	- Answering to the public backlash against GAP's new logo, the president of North America Gap Brand, Marka Hansen, released the following statement: "At Gap brand, our customers have always come first. We've been listening to and watching all of the comments this past week. We heard them say over and over again they are passionate about our blue box logo, and they want it back. So we've made the decision to do just that, we will bring it back across all channels […] we've learned a lot in this process. And we are clear that we did not go about this in the right way. We recognize that we missed the opportunity to engage with the online community. This wasn't the right project at the right time for crowd sourcing. There may be a time to evolve our logo, but if and when that time comes, we'll handle it in a different way."[46]

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[41] http://www.ethicalcorp.com/supply-chains/social-media-and-environmental-campaigning-brand-lessons-barbie

[42] http://www.greenpeace.org/usa/en/news-and-blogs/campaign-blog/online-campaign-against-mattel-silenced-by-qu/blog/35241/

[43] http://www.ethicalcorp.com/supply-chains/social-media-and-environmental-campaigning-brand-lessons-barbie

[44] https://secure3.convio.net/gpeace/site/Advocacy?page=UserActionInactive&id=855

[45] http://corporate.mattel.com/about-us/playingresponsibly/

[46] http://adage.com/article/news/gap-scrap-logo-return-design/146417/

APPENDIX B – CRISIS COMMUNICATION STRATEGIES WITH EXAMPLES (CONTINUED)

	Company	Crisis communication strategies	Example
3	Nestlé	Censorship	Nestlé censored the YouTube video claiming a copyright complaint.[47] Greenpeace supporters were encouraged to change their Facebook profile photos to anti-Nestlé slogans and posted them to the Nestlé fan page. Nestlé countered with a mild threat: "To repeat: we welcome your comments, but please don't post using an altered version of any of our logos as your profile picture – they will be deleted."[48]
		Apology	The backlash continued to grow over the next few hours, until the Nestlé representative finally backed down: "This was one in a series of mistakes for which I would like to apologize. And for being rude. We've stopped deleting posts, and I have stopped being rude."[49]
		Compensation	Nestlé developed a plan to identify and remove from its supply chain any company – including Sinar Mas – with links to deforestation.[50]
4	United Airlines	Apology / Compensation	United Airlines called Dave Carroll to apologize and to offer the same $1,200 in flight vouchers he had asked for back in November, plus an extra $1,200 in cash for his trouble.[51] United Airlines also announced that: "His video is excellent, and we plan to use it internally as a unique learning and training opportunity."[52]
5	Domino's Pizza	Censorship	Domino's tried to take down the videos and the original videos are now taken down by YouTube but still available on other websites.[53]
		Apology	Domino's opened a Twitter account to answer questions and also posted a YouTube apology from the company's USA President, Patrick Doyle, which said in part: "It sickens me to think that two individuals can impact our great system, where 125,000 men and women work for local business owners."[54]
		Compensation	Domino's closed the store to sanitize it and the two employees were fired.[55] The store also discarded all open containers of food, which cost hundreds of dollars. Domino's created a Twitter account, @dpzinfo, to address the comments.[56]

[47] http://www.greenpeace.org.uk/blog/forests/nestle-censor-our-advert-and-get-it-pulled-youtube-20100317
[48] http://www.cnet.com/news/nestle-mess-shows-sticky-side-of-facebook-pages/
[49] http://money.cnn.com/galleries/2011/technology/1104/gallery.social_media_controversies/2.html
[50] http://www.cnet.com/news/nestle-mess-shows-sticky-side-of-facebook-pages/
[51] http://www.thestar.com/business/2012/05/18/dave_carroll_is_still_having_problems_with_airlines_roseman.html
[52] http://news.bbc.co.uk/2/hi/americas/8145230.stm
[53] http://www.sfgate.com/business/article/How-Domino-s-responded-to-prank-video-3163363.php
[54] http://www.forbes.com/2009/04/24/dominos-youtube-twitter-leadership-cmo-network-marketing.html
[55] http://www.sfgate.com/business/article/How-Domino-s-responded-to-prank-video-3163363.php
[56] http://www.nytimes.com/2009/04/16/business/media/16dominos.html

APPENDIX B – CRISIS COMMUNICATION STRATEGIES WITH EXAMPLES (CONTINUED)

	Company	Crisis communication strategies	Example
6	Motrin	Apology	This apology was on Motrin's website: "With regard to the recent Motrin advertisement, we have heard you. On behalf of McNeil Consumer Healthcare and all of us who work on the Motrin Brand, please accept our sincere apology. We have heard your complaints about the ad that was featured on our website. We are parents ourselves and take feedback from moms very seriously. We are in the process of removing this ad from all media. It will, unfortunately, take a bit of time to remove it from our magazine advertising, as it is on newsstands and in distribution. Thank you for your feedback. It's very important to us. Sincerely,Kathy Widmer- Vice President of Marketing, McNeil Consumer Healthcare"
		Compensation	Motrin removed the online advertisement.[57]
7	JetBlue Airways	Apology	JetBlue posted a three-minute apology YouTube video clip from CEO, David Neeleman. JetBlue apologized for the service failure and explained how it planned to improve.[58]
		Compensation	JetBlue offered immediate refunds and travel vouchers to customers stuck on Valentine's Day planes for more than three hours. The company also created a "service guarantee" and, on February 20, announced a new "Customer Bill of Rights",[59] which requires the airline to refund in certain situations.[60]
8	Taco Bell/KFC	Apology	KFC/Taco Bell's press release mentioned that: "Nothing is more important to us than the health and safety of our customers […] that this was an isolated incident at a single restaurant at 331 – 6th Avenue in Greenwich Village, New York, and it is totally unacceptable."[61]
		Compensation	Yum! Brands' President, Emil Brolick, made the following statement on the company's website in response to the New York City Taco Bell/KFC rats' incident: "We want to reassure our customers that we take this isolated incident in Greenwich Village, N.Y. very seriously and apologize for any inconvenience this may have caused. We believe each of our brands has the highest restaurant quality standards and they are being followed. We want to reassure customers that our restaurants are clean and safe. We will continue to work closely with the New York City Health Department and if there's ever an issue, we will immediately resolve it." [62]

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[57] http://crunchydomesticgoddess.com/2008/11/16/weve-blogged-and-tweeted-the-motrin-ad-what-can-moms-do-next/
[58] http://www.adweek.com/news/advertising-branding/jetblue-knows-how-communicate-customers-social-and-when-shut-152246
[59] http://www.jetblue.com/flying-on-jetblue/customer-protection/
[60] http://www.businessweek.com/stories/2007-03-04/an-extraordinary-stumble-at-jetblue
[61] http://socialmediaunleashed.wordpress.com/2012/06/21/yum-brands-inc-case-rats-in-kfc-taco-bell/
[62] http://www.qsrmagazine.com/news/kfc-taco-bell-responds-rat-footage

APPENDIX C – SOCIAL MEDIA CRISIS OUTCOMES WITH EXAMPLES

	Company	Social media crisis outcomes	Examples
1	Mattel	Impact on reputation	Greenpeace accused Mattel of destroying the Indonesian rainforest and targeted the company's reputation.[63]
2	GAP	Impact on brand value	As a result of the Gap failure in new logo, the company experienced a slight drop in brand value.[64]
3	Nestlé	Impact on reputation Financial impact	- The effect of Greenpeace and public attacks was a damaged reputation and loss of business, reflected by a dip in its share price, due to its supplier, Sinar Mas.[65]
4	United Airlines	Impact on reputation Financial impact	- United Airlines lost 10 per cent of its share value – a massive $180 million – after damaging Dave Carroll's guitar.[66]
5	Domino's Pizza	Impact on reputation Impact on brand value Financial impact	- Domino's waited about 48 hours to respond and the video received nearly 1 million views before it was taken down, which already represented "significant damage to the brand".[67] - YouGov Research confirmed that the perception of Domino's brand quality went from positive to negative in 48 hours.[68]
6	Motrin	Call for boycott	- Bloggers began calling for boycott and asked their readers to alert the mainstream press.[69]
7	JetBlue Airways	Impact on reputation Financial impact	- The incident hurt JetBlue's image.[70]
8	Taco Bell/KFC	Impact on reputation Financial impact Call for boycott	- Some of the onlookers vowed to never eat at the restaurant again, yet others were only mildly repulsed.[71] - Stocks of Yum! Brands Inc. that owns the chains of KFC, Taco Bell, and Pizza Hut took a drop of at least 2% in one day.[72] - The day of the incident, Yum! Brands' stocks closed at $60.51, down 55 cents.[73]

[63] http://socialmediacauses.over-blog.com/2014/02/when-greenpeace-ruins-mattel-e-reputation.html

[64] https://www.baekdal.com/insights/gaps-failure-wasnt-the-logo

[65] http://www.theguardian.com/sustainable-business/palm-oil-greenpeace-social-media

[66] http://www.dailymail.co.uk/news/article-1201671/Singer-Dave-Carroll-pens-YouTube-hit-United-Airlines-breaks-guitar--shares-plunge-10.html

[67] http://adage.com/article/news/crisis-pr-assessing-domino-s-reaction-youtube-hubub/136086/

[68] http://www.forbes.com/2009/04/24/dominos-youtube-twitter-leadership-cmo-network-marketing.html

[69] http://parenting.blogs.nytimes.com/2008/11/17/moms-and-motrin/

[70] http://www.nytimes.com/2007/02/17/business/17air.html

[71] http://www.nytimes.com/2007/02/25/nyregion/25rats.html

[72] http://socialmediaunleashed.wordpress.com/2012/06/21/yum-brands-inc-case-rats-in-kfc-taco-bell/

[73] http://www.huffingtonpost.com/huff-wires/20070223/restaurant-rats/

APPENDIX D – VARIABLES DESCRIPTION AND CORRELATION MATRIX I

Variable ID	Variable description
A	Gender
B	Age (19-26)
C	Age (27-40)
D	Age (41-65)
E	Occupation
F	Number of Internet surfing hours per week
G	Number of social media surfing hours per week
K	User employ social media to make new contacts
L	User employ social media to stay in touch with family and friends
M	User employ social media to establish professional and business contacts
N	User employ social media to share information
O	User employ social media to get information
P	User employ social media to share experiences, photos, and videos
Q	User employ social media to get information on products and brands
R	User employ social media to share information about products and brands
S	Level of user trust in social media information
T	The frequency that user comes across social media information that turns out to be false later
U	The frequency that user verifies social media information to make sure about its trustworthiness

APPENDIX D – VARIABLES DESCRIPTION AND CORRELATION MATRIX I (CONTINUED)

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
A	Pearson Correlation	1	.217**	-.211**	-.027	.165*	.012	.023	.016	-.180*	.114	-.008	.150	-.061	-.147	-.056	-.151	.068	.206**
	Sig. (2-tailed)		.020	.024	.772	.078	.903	.810	.861	.055	.227	.931	.110	.520	.116	.552	.114	.519	.037
	n		115	115	115	115	114	114	115	115	115	115	115	115	115	115	110	92	103
B	Pearson Correlation		1	-.710****	-.460****	.572****	.008	.140	-.168*	.065	-.144	.011	.016	.163*	-.066	-.061	-.121	.057	.004
	Sig. (2-tailed)			.000	.000	.000	.930	.133	.070	.487	.122	.905	.862	.080	.482	.513	.203	.585	.968
	n			117	117	116	116	117	117	117	117	117	117	117	117	117	112	94	105
C	Pearson Correlation			1	-.299***	-.304****	.019	-.052	.094	.065	.121	-.051	.046	-.061	-.035	.122	-.013	-.034	.008
	Sig. (2-tailed)				.001	.001	.843	.580	.314	.488	.193	.583	.619	.514	.706	.189	.896	.742	.934
	n				117	117	116	116	117	117	117	117	117	117	117	117	112	94	105
D	Pearson Correlation				1	-.391****	-.034	-.124	.110	-.169*	.042	.050	-.081	-.143	.133	-.071	.177*	-.036	-.016
	Sig. (2-tailed)					.000	.715	.184	.239	.068	.653	.595	.388	.123	.152	.444	.062	.728	.872
	n					117	116	116	117	117	117	117	117	117	117	117	112	94	105
E	Pearson Correlation					1	.052	.119	-.238***	.043	-.262***	.135	.092	.017	-.040	.039	-.110	.047	-.088
	Sig. (2-tailed)						.581	.202	.010	.646	.004	.148	.322	.855	.666	.676	.250	.650	.374
	n						116	116	117	117	117	117	117	117	117	117	112	94	105
F	Pearson Correlation						1	.413****	.056	-.112	.074	.104	.066		.163*	.188**	.011	.197*	.234**
	Sig. (2-tailed)							.000	.548	.230	.428	.515	.267	.480	.081	.043	.911	.058	.017
	n							115	116	116	116	116	116	116	116	116	111	93	104
G	Pearson Correlation							1	.078	.392****	.096	.190**	.218**	.341****	.323****	.172*	.285***	.326***	.054
	Sig. (2-tailed)								.405	.000	.307	.041	.019	.000	.000	.065	.002	.001	.585
	n								116	116	116	116	116	116	116	116	112	93	104
H	Pearson Correlation								1	.015	.461****	.177*	.112	-.008	.182**	.047	.096	.090	.025
	Sig. (2-tailed)									.871	.000	.056	.229	.931	.049	.612	.316	.389	.802
	n									117	117	117	117	117	117	117	112	94	105
I	Pearson Correlation									1	.071	.200**	.061	.299***	.194**	.074	.255***	.022	.025
	Sig. (2-tailed)										.444	.030	.513	.001	.036	.430	.007	.833	.802
	n										117	117	117	117	117	117	112	94	105
J	Pearson Correlation										1	.229**	.160*	.015	.066	.061	.063	-.049	-.047
	Sig. (2-tailed)											.013	.086	.874	.482	.513	.506	.637	.635
	n											117	117	117	117	117	112	94	105
K	Pearson Correlation											1	.322****	.170*	.026	.172*	.229**	.104	-.056
	Sig. (2-tailed)												.000	.067	.784	.063	.015	.317	.569
	n												117	117	117	117	112	94	105
L	Pearson Correlation												1	-.090	.191**	.128	.326****	.076	.147
	Sig. (2-tailed)													.336	.039	.168	.000	.465	.135
	n													117	117	117	112	94	105
M	Pearson Correlation													1	.068	-.012	.135	.130	-.069
	Sig. (2-tailed)														.466	.902	.155	.211	.487
	n														117	117	112	94	105
N	Pearson Correlation														1	.231**	.280***	.144	.061
	Sig. (2-tailed)															.012	.003	.165	.536
	n															117	112	94	105
O	Pearson Correlation															1	.156	-.060	.145
	Sig. (2-tailed)																.100	.568	.141
	n																112	94	105
P	Pearson Correlation																1	-.073	.002
	Sig. (2-tailed)																	.494	.984
	n																	90	101
Q	Pearson Correlation																	1	.074
	Sig. (2-tailed)																		.489
	n																		89
R	Pearson Correlation																		1
	Sig. (2-tailed)																		
	n																		

*. Correlation is significant at the 0.1 level   **. Correlation is significant at the 0.05 level   ***. Correlation is significant at the 0.01 level   ****. Correlation is significant at the 0.001 level

APPENDIX E – VARIABLES DESCRIPTION AND CORRELATION MATRIX II

Variable ID	Variable description
1	Gender
2	Number of Internet surfing hours per week
3	Number of social media surfing hours per week
4	Level of social media importance in user personal life
5	Level of social media importance in user professional life
6	Level of user trust in social media information
7	The frequency that user comes across social media information that turns out to be false later
8	The frequency that user verifies social media information to make sure about its trustworthiness
9	User perceived credibility of company website in normal time
10	User perceived credibility of company weblog in normal time
11	User perceived credibility of company Facebook in normal time
12	User perceived credibility of company Twitter in normal time
13	User perceived credibility of company YouTube in normal time
14	User perceived credibility of company website in crisis time
15	User perceived credibility of company weblog in crisis time
16	User perceived credibility of company Facebook in crisis time
17	User perceived credibility of company Twitter in crisis time
18	User perceived credibility of company YouTube in crisis time
19	User perceived importance of Domino's Pizza Twitter initiation as crisis communication strategy
20	User perceived importance of Domino's Pizza YouTube video apology as crisis communication strategy

APPENDIX E – VARIABLES DESCRIPTION AND CORRELATION MATRIX II (CONTINUED)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Pearson Correlation	1	.012	.023	-.077	-.065	-.151	.068	.206**	-.023	-.002	-.071	.012	-.027	.045	.095	.134	.182*	-.097	-.001	-.179*
	Sig. (2-tailed)		.903	.810	.416	.497	.114	.519	.037	.817	.986	.498	.916	.810	.635	.315	.153	.051	.305	.991	.067
	n		114	114	113	112	110	92	103	104	94	93	83	83	115	115	115	115	115	107	106
2	Pearson Correlation		1	-.413****	.250***	.232**	.011	.197*	.234**	.016	.031	.149	.208*	.129	.131	.193**	.334****	.255***	.301***	.110	.049
	Sig. (2-tailed)			.000	.007	.013	.911	.058	.017	.872	.764	.154	.060	.245	.160	.038	.000	.006	.001	.260	.618
	n			115	114	113	111	93	104	104	94	93	83	83	116	116	116	116	116	107	106
3	Pearson Correlation			1	.642****	.276***	.285***	.326***	.054	.102	.095	.297***	.371****	.211*	-.005	-.028	.308****	.277***	.133	.097	-.095
	Sig. (2-tailed)				.000	.003	.002	.001	.585	.303	.361	.004	.001	.055	.954	.767	.001	.003	.154	.318	.335
	n				115	114	112	93	104	104	94	93	83	83	116	116	116	116	116	107	106
4	Pearson Correlation				1	.408****	.348****	.204*	-.022	.087	.152	.292***	.400****	.274**	-.101	-.181*	.324****	.283***	.097	.020	-.034
	Sig. (2-tailed)					.000	.000	.051	.824	.383	.147	.005	.000	.013	.284	.053	.000	.002	.304	.837	.733
	n					114	112	92	103	103	92	92	82	82	115	115	115	115	115	106	105
5	Pearson Correlation					1	.467****	-.068	.139	.125	.173*	.163	.141	.106	.016	.140	.161*	.270***	.074	.311***	.162*
	Sig. (2-tailed)						.000	.519	.164	.209	.097	.120	.207	.344	.866	.138	.086	.004	.434	.001	.100
	n						111	91	102	103	93	92	82	82	114	114	114	114	114	106	105
6	Pearson Correlation						1	-.073	-.002	.225**	.299***	.304****	.386****	.299***	.017	-.041	-.046	.065	-.009	.225**	.124
	Sig. (2-tailed)							.494	.984	.024	.004	.004	.000	.007	.861	.669	.633	.493	.923	.022	.214
	n							90	101	100	90	89	79	80	112	112	112	112	112	103	102
7	Pearson Correlation							1	.074	-.063	-.014	.115	.111	-.023	-.092	-.109	.133	.153	.010	.025	-.228**
	Sig. (2-tailed)								.489	.565	.902	.308	.352	.849	.380	.297	.203	.141	.921	.817	.036
	n								89	86	80	81	72	69	94	94	94	94	94	86	85
8	Pearson Correlation								1	-.097	-.045	-.032	-.014	-.047	.147	.118	.140	.075	.141	.112	-.123
	Sig. (2-tailed)									.357	.684	.769	.904	.682	.135	.230	.154	.446	.150	.273	.230
	n									93	85	86	79	77	105	105	105	105	105	98	97
9	Pearson Correlation									1	.731****	.628****	.603****	.594****	.216**	.033	.110	.146	-.013	-.001	.159
	Sig. (2-tailed)										.000	.000	.000	.000	.027	.739	.266	.138	.898	.989	.119
	n										95	93	83	83	105	105	105	105	105	99	98
10	Pearson Correlation										1	.798****	.709****	.793****	.101	.138	.151	.250**	.047	.227**	.116
	Sig. (2-tailed)											.000	.000	.000	.328	.182	.143	.015	.649	.031	.277
	n											91	81	81	95	95	95	95	95	90	90
11	Pearson Correlation											1	.916****	.920****	.093	-.031	.271***	.330***	.027	.221**	.080
	Sig. (2-tailed)												.000	.000	.372	.769	.008	.001	.797	.038	.459
	n												84	81	94	94	94	94	94	89	88
12	Pearson Correlation												1	.879****	.086	-.109	.251**	.380****	.069	.246**	.055
	Sig. (2-tailed)													.000	.435	.325	.021	.000	.531	.026	.627
	n													78	84	84	84	84	84	82	81
13	Pearson Correlation													1	.055	-.033	.190*	.288***	.137	.281**	.132
	Sig. (2-tailed)														.617	.765	.083	.008	.214	.010	.235
	n														84	84	84	84	84	83	83
14	Pearson Correlation														1	.264***	.238***	.101	.214**	-.051	.080
	Sig. (2-tailed)															.004	.010	.278	.020	.600	.413
	n															117	117	117	117	108	107
15	Pearson Correlation															1	.204**	.141	.299***	.040	-.007
	Sig. (2-tailed)																.027	.129	.001	.680	.940
	n																117	117	117	108	107
16	Pearson Correlation																1	.476****	.532****	.044	.076
	Sig. (2-tailed)																	.000	.000	.650	.439
	n																	117	117	108	107
17	Pearson Correlation																	1	.111	.156	-.064
	Sig. (2-tailed)																		.235	.107	.512
	n																		117	108	107
18	Pearson Correlation																		1	.017	.100
	Sig. (2-tailed)																			.858	.306
	n																			108	107
19	Pearson Correlation																			1	.316***
	Sig. (2-tailed)																				.001
	n																				106
20	Pearson Correlation																				1
	Sig. (2-tailed)																				

*. Correlation is significant at the 0.1 level   **. Correlation is significant at the 0.05 level   ***. Correlation is significant at the 0.01 level   ****. Correlation is significant at the 0.001 level