Don’t Feed the Trolls:

Needs Assessment Analysis for Heuristic to Create Rhetorical Civility in Social Media

by

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ABSTRACT

As an outlet of communication between internet users, digital social media has created opinionated engagement between people that have similar and often contrasting views, just like those in face-to-face communication (Mckenna & Bargh, 2014). The problem is that these digital conversations occur in a synthetic environment, causing users to develop alternative psychological patterns of engagement (Lauren & Hsieh, 2014), that could potentially push them to inadvertently or unknowingly create and participate in negative social interaction with others. The purpose of this study was to determine and assess the needs of a writing heuristic for social media participants to use in engagement with others to increase coherency, civility, and engagement response in content. Research explored existing literature on engagement behavior in digital social media and computer-mediated communication (CMC) and was then used in qualitative sentiment analysis of business-to-consumer social media environments, aiming to recognize the needs in developing a social media writing heuristic. This research found that such heuristic should prompt and advise users to remove ambiguity within engagement practices, encouraging the implementation of salient social markers and nonverbal cues in text. Social media users should also be prompted to create familiarity with others through the posing of messages in an emotional frame that is aligned with their audience's emotional attitudes, increasing persuasive argumentation and discussion. As well, users should be prompted to thoroughly understand the issues in discussion and follow dynamics to create productive engagement, while avoiding engagement with negative commentary.

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Introduction

Over the past several years, the internet as an outlet for social media—forums, chatrooms, blogs, microblogs, media sharing platforms, and social news outlets—has begun to dominate the daily lives of hundreds of millions of Americans and users worldwide (Safko, 2015; Best & Kreuger 2005). With interaction occurring at lightning fast speeds, users are able to connect with individuals they would normally never have the chance to meet with, all while networking in large social mediums. Although these interactions can foster the development of positive relationships between social media users (Mckenna & Bargh, 2000) they can also cause issues between those voicing their opinions and others who have a different outlook on the topic. Many of these problems have been highlighted in recent research with the introduction of firestorms, which are intense and huge waves of anger and outrage on social media occurring swiftly and often within hours of incitement, affecting companies, organizations, and even governments worldwide (Pfeffer, Zorbach & Carely, 2014). These findings call attention to the bombardment of negative comments on social media and the emerging trend of attempts to find causative factors and develop preventative methods for a healthier and more coherent online interaction experience.

Negative social communication is prevalent on social media. Many companies and even countries around the world have received negative social media attention by their employees and citizens. A study reviewing expressions made on Twitter during Germany's 2011 EHEC food contamination crisis uncovered thousands of instances where people negatively reacted to national events as they unfolded (Gaspar, Panagiotopoulos, Pedro, & Seibt, 2015). McDonald's has received similar negative

attention from their customers. In 2012 they launched a Twitter campaign that would need to be completely shut down within two hours of its initial release, after over 1,000 tweeters turned what was supposed to be a hashtag about memorable McDonald memories into a venue for terror stories and company criticism (Pfeffer et al., 2014). Another similar event occurred with Qantas Airways, the Australian airline company whose Twitter campaign of sharing dreams of luxury in-flight experiences was unexpectedly turned into a catastrophe as Qantas received thousands of negatively themed tweets within hours of its release. Unfortunately, negative firestorm activity is not just corporate or business related, as individuals can be found treating each other with similar cruelty in their personal social media engagements.

The reasoning behind negative engagement online is still somewhat questionable. Although it is clear that social media users can and will produce negative commentary purposefully, there are other factors involved in causing online conversations to be received as and responded with rude, hostile, or aggressive user created content. One possibility of this negative engagement may stem from users lacking the knowledge and understanding of how to properly communicate their points of view, as users rarely receive feedback from their social media engagement due to anonymity (Suh, 2016). As well, web-based information channels like social media can be seen as less formal than other forms of publications, making it more likely for these users to write with their own style that is influenced by gender, education, vocabulary, and other subconscious factors.

Little research has looked into helping social media users engage in online discussions in a coherent and socially acceptable manner. Although some social media users engage in firestorm activity purposefully, there may be others who are unaware of

their online communication habits and the effects they have on others, especially in times of crisis or anger. As well, there has not been an execrable amount of research in how naturalistic and socially acceptable responses stem from computer-mediated communication (CMC) and social media user recognition and alteration in writing habits.

This study looks into how negative engagement in computer-mediated social media communication occurs between businesses and their constituents and uses existing literature to compile and develop a qualitative meta-synthesis—the systematic compilation of research that is then analyzed to determine new findings and insights (Walsh & Downe, 2005)—of these works to learn ways in which future studies may address the issue of firestorm activity and its prevention. This qualitative, meta-synthetic literature review analyzes CMC and social media communication to determine recommendations for the development of a social media writing heuristics. Using the insight found through this meta-synthetic literature review, the study then researches existing firestorm and other negative social media engagement occurrences between businesses and their customers on Facebook, incorporating qualitative sentiment analysis as the method of review. This exploration into social media interaction evaluates engagement habits and commonalities of negativity on social media between online users, the companies they engage with, and other individuals who may have similar or differing views. The study's results will help in determining methods to avoid firestorm activity and create rhetorical civility within social media engagement through the development of a writing heuristic for companies and social media communities to provide their social network users.

To achieve a final needs assessment for the development of a social media authoring heuristic, propose recommendations from both the literature review's qualitative meta-synthesis and the qualitative sentiment analysis research. This writing heuristic will answer the worldwide professional communities' need to remedy the incoherent and firestorm prone engagements occurring between businesses, their customers, and all other parties on social networks. The rest of the paper will review existing literature on computer-mediated communication (CMC), social media engagement, and firestorm activity, followed by methods for qualitative sentiment analysis. Results, final discussion, and conclusion of findings will conclude the work.

Literature Review

Research has found that when two strangers meet, for the first time with no other acquaintances around, they usually behave less modestly and present more of their ideal qualities to the other (Tice, Butler, Muraven, & Stillwell, 1995). This idealization of self-qualities has been found to be enhanced online (McKenna & Bargh, 2000), however, more research has shown that members of social interaction must convince themselves they truly possess these heightened qualities, creating what it termed their *social reality* (Baumeister, 1998; Gollwitzer, 1986). Feeling the need to have these attributes acknowledged and affirmed, social members seeking this new reality will select strategies to present themselves in their new manner, with greater success of this form of behavior occurring on CMC (McKenna & Bargh, 2000). Research has found that social feedback has a great impact on determining whether a CMC user will be able to succeed in changing their self-concept (Harter, 1993; Heatherton & Nichols, 1994). It is therefore questionable how and when users should affirm other CMC members' self-perception,

with those receiving disclosure having potential power to regulate the social engagement of others.

Digital Social Networks

Social media engagement is known as a form of CMC, (Smith, 2002), which has been critically and extensively reviewed for engagement (Li, 2007; Vishwanath, 2015) and psychosocial habits (McKenna & Bargh, 2000), reactions to unexpected events (Gaspar et al., 2015), persuasion techniques (Walther, 2006; Hancock & Dunhum, 2001), and other communication strategies (Smith, 2002; Riordan & Kreuz, 2010). Social media, and thus CMC, are two-way communication outlets, a human occurrence not just via the internet but also in reality within our face-to-face interactions (Safko, 2012). What social media allows us as humans to do is greatly enhance our ability to quickly and efficiently interact in the natural practice of social network engagement.

The term social media denotes a *social* and instinctual need for humans to connect with others through *media* that is used to make such a connection (Safko, 2012). In essence, social media is a new range of tools and technology that allows customers, businesses, and interested parties to efficiently connect and build relationships together. Businesses have a vested interest in using social media, as consumer needs have evolved into two-way communication avenues and social networks. This shift in power has left corporate messages shaky and untrustworthy, with consumers wanting to be educated by other users instead of relying on a company's sole message and product. The need for companies to appease social media users has grown as marketing on these social networks continues to gain momentum as a profitable investment for event, product, and brand recognition (Pfeffer et al., 2014).

Companies can now market and promote products that are deemed valuable by members of their network, recognizing that there is a new trend in sales from social media's engagement opportunities. Within the heart of each network of consumer engagement is the business's brand, causing companies to communicate with consumers by use of social media to market goods and services and increase customer support. Businesses no longer question if they should be using social media but instead are determining what forms they will engage in (Safko, 2012). Capitalizing on the increased use of social media for business needs, companies are finding that the benefits of quick access and varying forms of anonymity in CMC can sometimes be out-shadowed by negative engagement and firestorm activity by customers and other users.

Psychological Effects

With greater freedom of expression, social media users lack barriers to social engagement that would normally be available in face-to-face social interaction (Mckenna & Bargh, 2000). Without the variety of social cues that form interaction habits in face-to-face social networks, CMC and social media users develop alternative psychological patterns (Lauren & Hsieh, 2014) in their digital engagements and manifest a variety of new social cues and habits (Mckenna & Bargh, 2002; Rhea, Rovai, Ponton, Derrick, & Davis, 2007; Tsikerdekis, 2013), causing them to sometimes react differently online than they would in face-to-face social interactions (Saini, 2014). Without the context-clues that normally help to guide human interaction, CMC users are left without the ideals generated from traditional social conventions, removing the impact of social pressures and their influences (Lauren & Hsieh, 2014).

The anonymity of CMC, and its lack in barriers to social engagement, each provide social media users greater liberty in self-expression (Mckenna & Bargh, 2000). Freed by a protective shield of anonymity, social media users have a reduced physical appearance and distance from other users, while having greater control over the time and pace of content response. With self-awareness blocked or considerably reduced by environmental conditions, these users generate content in an attempt to persuade others to view their ideals (Friedman, 2013). Many of these social media users have a feeling of closed-group unity and are subject to the effects of deindividuation, the process of permanently or temporarily no longer seeing one's self as an individual but instead as part of a larger community (Mckenna & Bargh, 2000). Deindividuation can cause users to have a tendency of reacting immediately to cues based on emotion, creating an environment of impulsive and disinhibited behavioral manners. These new interaction habits cause CMC and social media users to be less likely to care about what others think of their behavior, while reducing their ability to engage in rational and long-term planning, (Sinai, 2014).

It has been found that those who meet online for the first time tend to like each other more than those who meet in face-to-face interaction (McKenna & Bargh, 1999). Furthermore, familiarity has been found to be the most basic factor in determining attraction (Berscheid & Reis, 1998), with the *exposure effect* finding that repeated observation of previously exposed users, even by merely seeing their name, leads to positive feelings towards an individual (Zajonc, 1968). When social media users engage in chatroom and other CMC outlets, there is a perceived and experienced form of close proximity (McKenna & Bargh, 2000). In topic-based CMC outlets, such as forums for

American trucks or comic book characters, users subconsciously take consideration of the community's commonality in subject matter and interest and thus can and do remove initial interest engagement practices for the development of conversations among other common interests (McKenna & Bargh, 2000). In social media environments of negative engagement and potential firestorm activity, there may be less interest developing content and engagement by users, possibly contributing to the explosion and convergence of negative activity.

One group of individuals who may have a potentially higher rate of negative communication on social media are those with social anxiety. These anxious individuals, who have difficulty forming social connections with others (Leary 1983; Leary & Kowalski, 1995) and are normally anxious in face-to-face interactions, may have diminished social engagements with others and issues with unmet or unrequited feelings of belonging and intimacy (Baumeister & Leary, 1995; Brewer, 1991). Such users may find the normal situational factors causing them anxiety in communication to be absent in CMC, making it easier to form relationships online (McKenna & Bargh, 2000). Research has found that those socially anxious actually have a significantly higher chance of forming relationships online than those without social anxiety issues (McKenna & Bargh, 2000). It is unknown whether a lessened feeling of anxiety and greater freedom caused by CMC causes more negative engagement online or if CMC users' social anxiety causes the engagement habits themselves to be less negative and more positive in search of online relationship creation, maturation, preservation, and positive health.

Relationship formation in CMC is a common occurrence. One study of video game users found that 94% had formed a close relationship with other participants online

(Parks & Roberts, 1998), while a separate survey of 600 randomly selected news group participants showed a strong relationship development 51% of the time, with 79% of respondents saying their internet relationships were as close and real as those off the internet (McKenna, 1998). With the findings that CMC users have a high chance of forming close relations with others online, there is a potential need for these users to want to use a writing heuristic in social media and other CMC engagements to create higher quality relationships through better rhetorical persuasion.

Current Social Media Use

With the rising popularity in Facebook and other social media outlets, there has been a development of terminology to describe this heightened media use, including the terms *media addiction*, *media abuse*, and *problematic media use* (Vishwanath, 2014). Businesses are now recognizing the benefits that CMC can bring to their various operations when capitalizing on these addictions. Internally, companies take advantage of CMC through knowledge dissemination and organization communication; however, companies are now using CMC to engage with external constituents in new ways with the emergence of social media as a medium for the transfer of goods and services and for reviews of transactions and engagements (Cothrel, 2000). These companies use electronic communities to take advantage of the vast amounts of data and information online to gain an edge in their industries (Abassi & Chen, 2008).

Some issues are arising in these new networks of communication. With such an easily accessible and quickly disseminating information medium, businesses are now dealing with issues controlling information quality in their digital communication channels, hindered by the massive, complex data available (Abassi & Chen, 2008). Many

companies deal with thousands of individuals simultaneously in company-related conversations (Herring, 2002) and receive intense indignation by customers, sometimes without blame or reason (Pfeffer et al., 2014). This criticism has similar dynamics to the way rumors are circulated, although there are differences in level of aggression. As the internet gains popularity, companies will need to implement preemptive measures to avoid firestorm activity and keep their social media accounts filled with quality customer service and productive sales initiatives. It is this reason that this study focuses on implementing rhetorical and persuasive communication within social media, enabling more proficient, coherent, and mutually beneficial conversation, as well as business.

The Role of Emotion-Induced Expectancies

Many factors contribute to the engagement habits of CMC and social media users, one of which involves the swaying of opinions through mastery in evocation of emotion and in the framing of emotional arguments (Desteno, Wegener, Petty, Rucker, & Braverman's, 2004). Using persuasion that appeals to emotion, CMC users can leverage insight in emotional framing to dictate the responses from others, just as politicians do in campaigning. For instance, the more angry or sad someone feels, the more likely that individual believes those same emotional events will occur in the future. This leads these individuals to become more positive towards addressing such problems. Reasoning for this comes from a growing view that one's adaptive response to situational appraisal comes from an inner emotional system, where mental processes and motivations are modified causing differential influence on cognitive and motivational actions (Desteno et al., 2004).

When experiencing an emotional state, people can be influenced by events matching the emotion. In fact, people use emotions as informational sources to adapt and morph specific event expectations that are mentioned in conversation (Desteno et al., 2004). The *expectancy-value model* states that one's attitude toward an object is in direct relation to the value they have attached to its characteristics or outcomes and is weighted by the likelihood it will occur. Without motivation or the ability to consider an object's characteristics, one's attitude can be based on "simple cues that are salient at the time of consideration" (p44). This is important when considering CMC, as many users have very little context of the scenario they are engaging in, especially in firestorm comments, which can involve thousands of negative remarks by social media users within an hour or less time (Pfeffer et al., 2014; Katja, 2016).

So how can social media and other CMC users implement emotional framing to their advantage while capitalizing on other users' lack in context clues in discussion? Research shows that a CMC user's message can induce changes to the desirability associated with an object's characteristics, changing the attitude of others whom have a high level of thinking involved in the discussion (Desteno et al., 2004). Subsequently, emotional states have intrinsic ties to environmental appraisals that result in "signal values of source information" (p44). Since participants in firestorm activities are highly emotional and use aggressive word-of mouth attacks in response to perceived violation in behavior (Katja, 2016), finding a way to harness these high emotional states could be the key to removing negativity in social media firestorm activity.

Emotional framing by those trying to defuse firestorms could be very promising in the reduction of these social uprisings. People experiencing anger have an increased

likelihood of attaching themselves to angering events (Desteno et al., 2004), which may explain how firestorms seem to occur by people feeding off of each other's negative comments. Research in 1983 by Johnson and Tversky found that induction of a positive affective state deflates the likelihood of negatively toned events, while negative affective states in the same events inflate the possibility of their occurrence. When one matches content of a message to the "functional basis of a receiver's attitude" they can persuasively influence the message's impact (Desteno et al., 2004, p52). Since one's emotional state signals the characteristics of their environment, these states provide information and goals to increase adaptive response to challenges in their immediate situation (Hancock & Dunham, 2001). The phrasing of an argument could be important in how users determine the context and environment of the message, thus allowing more cognitive and less emotional reasoning in decision making.

Research has found that a match in emotional state and the emotional consequences cited in a message can facilitate favorable attitudes towards that message (Desteno et al., 2004). These recipient emotions from emotionally framed messages undergo an attitude change if there is a match between an emotional state and the emotional consequences found in the message, as long as the recipient has some degree of consideration to the argument (Desteno et al., 2004). When CMC users are angry, unless there are other personal or situational factors causing them to engage a message's content, their anger may prevent interest and consideration of a message. Since negative engagement on social media can occur from disgruntled customers, usually wanting vindication over a previous issue, these individuals could potentially have a high chance of putting effort into their argument, making these people more susceptible to emotional

persuasion. Discrete emotional states conveyed through messages can increase expectancy of the existence of the issue's occurrence and thus possess matching emotional overtones and lead to the message being more convincing. The effectiveness of the opinion rests on the emotion-induced inflation associated with the specific events and attributes of the message (Desteno et al., 2004).

Hyperpersonal Dimensions of Technology, Language, and Cognition

Insight on CMC user engagement was also found through analysis of research on the *hyperpersonal perspective*, by Joseph Walther. This perspective states that certain technological features in CMC allow its users to "augment their self-presentations" to others and idealize other users based on message elements or the circumstances in conversation (Walther, 2006, p2552). In presenting one's self in CMC, the hyperpersonal perspective believes users reveal their attitudes and characteristics of self in a socially desirable manner, creating a "dynamic feedback loop" where exaggerated expectancies are transferred through interaction via biased communication, leading to more extreme impressions than that of normal face-to-face conversation (Walther, 2006, p2539).

Specifically, the hyperpersonal perspective derives much of its platform from the research of Mark Snyder in "Self-Monitoring of Expressive Behavior," which states that individuals in conversation with others have a motivating factor that is concerned with the social view of others and thus causes a management of behavior to provide favorable content (1974). Since CMC users are confined to reviewing only typographic, linguistic, and chronemic information in their digital discussions, they have to accommodate their messages to the medium's allowances (Walther and Parks, 2002). Walther's study in 2006 found that although CMC allows users extra time to write and edit content, the

hyperpersonal perspective was correct in that those users first must be motivated to do such editing before using it to their advantage.

Walther's research also found that composition elements at the language level in CMC can lead to more favorable conversation due to the presentation of one's language (2006). To do so, CMC users can signal positive affect in their content by using personal pronouns more often, which is said to provide greater intimacy and involvement with a topic or person in conversation. As well, his study found that the sophistication of language use in online conversation can be an "indicator of care in language assembly," although the level of language complexity needed was not determined. Walther also notes other research that shows a greater lexical diversity in face-to-face conversation is usually evaluated more positively (Bradac, Courtwrite, & Bowers, 1980) and cites that the linguistic register of CMC appears to be a hybrid of written and spoken word (Ferrara, Brunner, & Whittemore, 1991).

Another important factor in the hyperpersonal perspective is time, as CMC allows an enhanced ability for mindful and deliberate message composition, due to greater temporal freedom (Walther, 2007). When given time to compose a message, there is more extensive cognitive processing which occurs in the content development (Abelson & Reder, 1977; Bower, Black, and Turner, 1979), while those given time to prepare a complex message are more successful at addressing interpersonal audience needs and are more fluent in speech (Green and Lindsey, 1989). Walther confirms that CMC users contribute more intimacy in conversation when they spend more time crafting and editing messages with a strong allocation of cognitive resources (2006). His research also finds that pronoun usage and sentence complexity are directly related to more coherency in

CMC, as proposed by the hyperpersonal perspective. As well, people may engage in behavior compensation in an attempt to minimize anticipated negative reactions by others (Walther, 2007).

Group Decision Making

Internal communication between members of groups with several or people has a dominant role in determining the effectiveness of that group's decision making (Li, 2007). Issues can become noticeable on business and government social media accounts when customers and concerned citizens interact together in a dysfunctional way, blasting organizations for their perceived public injustices. Functioning as a group, these social media firestorms and waves of outcry may be vulnerable to the same issues as those found in functional decision-making professional business groups. Research has looked into how groups make efficient and highly critical decisions in CMC settings. Shu-Chu Sarrina Li, in the article "Computer-Mediated Communication and Group Decision Making: A Functional Perspective," uses functional theory to explain how groups engage in high performing and functional CMC decision making (2007).

Functional theory states that there are five critical task requirements that a group must perform to achieve high-quality decision making, with a positive, direct relationship between critical thinking by members of a group and their performance (Li, 2007). The amount of critical thinking those group members make can be measured by the degree of important communication functions that are performed through their member interaction. This group's functioning degree performance determines the probability they will perform its task successfully. The five requirements for high-quality decision-making follow:

1. Thoroughly understand the problem, including the seriousness, nature, causes, and consequences
2. Establish criteria for specific standards of an acceptable decision
3. Generate all possible realistic choices for the best decision
4. Assess positive aspects of each alternative
5. Assess negative aspects of each alternative (Gouran & Hirokawa, 1996; 2003; Orlitzky & Hirokawa, 2001)

Among these five, three—problem analysis, criteria establishment, and the assessment of negative consequence alternatives—have been consistently found through research to be the most linked to group effectiveness, although the other two have been found to have a moderate positive effect (Hirokawa & Salzar, 1999; Orlitzky & Hirokawa, 2001).

User Gratification

Users on social media have a gratification that occurs when engaging with others, causing them to have more and more friends to gain a larger feeling of gratification (Vishwanath, 2014). According to the *uses and gratifications theory*, which examines how media is used to meet people's social and psychological needs (Ruggiero, 2000), social and other media users will use a medium as long as it meets their expectations, and if failed to do so, will go in search of other means to gain satisfaction (Friedman, 2013). Since this pleasure is recursive and reinforced by more fulfillment (Frideman, 2013; Vishwanath, 2014), it causes users to form habits that are shaped by the perceived gratification received from their online behavior (Vishwanath, 2014). These habits occur at the intersection of goal-directed conscious intentions and unconscious and unregulated

reactions, meaning that although goals are needed to develop habits, these habits are enacted by automatic actions (Vishwanath, 2014). Issues arise when deficient self-regulation occurs, where self-regulation of social media usage happens from lack of awareness, intention, attentiveness, and control over actions (LaRose, 2010; LaRose & Easin, 2002).

The *uses and gratifications theory* can be seen in social media and firestorm activity. Friedman found through research on CMC commenting and user interior motivations, emotions, and expectations that the act of commenting can heighten social media participants' need and right to be responsibly informed (2013). In Friedman's qualitative study, users felt it was their responsibility to educate others, to inject civility and honesty in to conversations, and to act as a sort of watchdog in their CMC communities. Many of these users felt empowered through engagement in CMC, feeling connected to a "social interaction typology" and identity (p57).

Impression Formation

When forming an impression of others there are two factors involved, direct information gathering such as autonomous and other social cues, and indirect information gathering like social markers in speech, verbal elaboration, and other language clues. Once an individual gathers data on others during communication, they use a "variety of inferential heuristics or strategies" which influences their impressions (Hancock & Dunham, 2001, p326). These messages can be significantly altered or reduced due to people forgetting the nature and size of their message, as well as ignoring the fact that they are speaking to other humans and not a mechanical device. The Social Identification/Deindividuation (SIDE) model acknowledges that a lack in cues in CMC

shifts its users' focus to socially identifiable variables in CMC, causing the cognitive processes people use to make inferences of others to occur with small amounts of information based on limited resources. This model states that in CMC there is a significant increase in reliance on the few remaining social cues involved in communication (Lea & Spears 1994; 1995) and infers that these limited cues increase CMC users' reliance on stereotypical representations of others, relying on relevant contextual clues and signals from text-based discourse (Lea & Spears, 1991).

SIDE states that when CMC users see themselves as member of a group, their identity is intensified and more aligned with its overall viewpoint and research confirms that impressions made between people within a community having a group-identity were significantly more intense than groups with members having individual identities (Hancock & Dunham, 2001, p331). Research by Hancock and Dunham (2001) found that CMC users respond less to zero-history user engagements than those in face-to-face communication, with face-to-face communication receiving 14.5% higher occurrence (74.6%) than CMC (59.9%). These results back the hyperpersonal theory's view that CMC environments provide a less complete impression formation for their users, especially during first-time engagements (Walther, 1993). Furthermore, Hancock and Dunham's study revealed that impressions made within CMC are more intense than in face-to-face (2001). These two findings call to attention that social media outlets should provide users the features and interests of other members in an attempt to increase less intense impression formation in CMC, while also raising response rates by those same members. This research reaffirms the hyperpersonal model's impression formation theory (Walther, 1996; 1997) and the notion that CMC users' lack in contextual clues cause an

over attribution of the features of other users and thus influence those users' impressions early on in conversation (Spears & Lea, 1992; Walther, 1997).

Context clues, such as nonverbal ones, have been said to provide information, regulate interaction, and express intimacy in face-to-face conversation (Ekman & Friesen, 1969; Harrison, 1973), with most of those cues lost in text-based communication, including in CMC (Riordan & Kreuz, 2010). These cues regulate, control, and modify messages, making them crucial in preventing miscommunication. As well, nonverbal cues can help disambiguate a message by being placed near confusing phrases and can add extra attention and care to the terms and areas where they are used, helping draw attention to the writer's feelings on a subject (Hara, Bonk, & Angeli, 2000; Yates & Orlikowski, 2002).

In "Cues in Computer-Mediated Communication: A Corpus Analysis," Monica Riordan and Roger Kreuz (2010) identify five nonverbal and symbolic cue categories in CMC:

- Vocal spelling
- Lexical surrogates
- Spatial arrays
- Manipulation of grammatical markers
- Minus features

Vocal spelling, where CMC users spell a word like it sounds vocally such as "maaaaaaaaad," and lexical surrogates, which replace sounds made vocally such as "mhmmm," each use nonstandard spellings to imitate sounds. A spatial array uses

emoticons, such as :) or what is known as a smiley face, and incorporates keyboard characters to represent nonverbal, physical features that are absent in CMC. Manipulated grammatical markers are those which indicate pauses or an attitude, such as using (…) or (!!!). Finally, a minus feature is when there is an absence in language standards, which deviate from normal writing standards, such as lacking capitalization or punctuation in text (Care, 1980). These characteristics have been suggested to provide information on the degree of emotion used by message senders (Harris and Paradice, 2007).

Some researchers have found that underlined and capitalized text and emoticons can be often used as irony in written communication (Kreuz, 1996). One study found that exclamation points used in synchronous computer-mediated communicaton (SCMC) were a significant predictor in recipient's belief in the sender's mood being positive (Hancock et al., 2007). Riordan and Kreuz's study (2010) found that the more cues that users incorporated into their CMC messages the stronger the receiver was able to judge the sender's emotions. They also found that cues are influential in CMC relationship development and that emoticons are a determining factor in whether receivers can understand a sender's message. Specifically, their results found that participants could not determine sender intention without the presence of emoticons, but when they were present, the sender's perception was significantly easier to interpret, indicating nonverbal cues in CMC may decrease ambiguity. Their study also found that when asterisk and capitalized letters are used they are more associated with cognitive mechanisms, although asterisks can indicate negative and positive emotions. Riordan and Kreuz's study concludes that cues can emphasize word meanings, establish intensity of feeling, serve to

clarify sentence meaning, and can be used as a method to highlight words needing reinforcement and acknowledgment.

Businesses Online

For businesses, understanding social communities is a two-step process, one involving the participation within social networks that customers and company constituents are already engaging in (Pfeffer et al., 2014) and the other including companies who facilitate engagement with these constituents by acting as a community itself, such as those having a Facebook or Twitter account. Lon Safko, author of New York Times bestseller *The Social Media Bible*, states that a social network's goal is to build trust within the community of engaging individuals, with each individual participating in a different level of engagement (2012), thus it would seem natural users would want to learn methods for increasing trust on social media.

The social media membership life cycle, as Safko puts it, begins with social media members first initiating their entrance into the community, with stages or levels of engagement such as being a *lurker*- one who visits but does not post, or a *troll*- someone who purposefully posts remarks to incite an irritated response by others (2012). Once comfortable in the social environment, users become a *novice* participant, sharing bits of information with others, then becoming a regular or *insider*, which involves consistently engaging in the community. Finally, there is a *leader* role for those established and recognized within the community as a respectable and referenced member. A member's social level can conclude as being a leader or can progress to being an *elder*, which is when a member leaves the group due to a lack in interest, changed belief system, or disapproval in the community's progression (Safko, 2012).

Members in social networks contribute content and engage with others for a variety of reasons. Many people contribute content to the group with an expectation to receive future insight from others, a mutually beneficial relationship, while others feel a sense of value for their contribution to the needs of the group (Safko, 2012). Studies have shown that when an individual shares information with another person, the recipient receives enjoyment from the feeling of familiarity with that individual (Sprecher, 2012). Those who are on the reciprocating end of this disclosure of information tend to disproportionately have more enjoyment in social conversations until they reciprocate the response of information back towards the original discloser (Sprecher, 2012).

This research confirms that people have an innate need to engage in social networks in an attempt to receive information, trust, and engagement from others. It also provides support for the need of social media environments to help users provide coherent content that will produce reciprocating engagement by others in their social networks. Since different levels of disclosure enjoyment disappear when both parties are in the reciprocating end of information sharing, the motivation to gain familiarity with another individual may offer itself as a driving force in helping implement effective rhetoric into social media interactions.

Methodology

Understanding how to add rhetorical civility into digital social media engagement requires a process of meta-synthetic literature review, performed above, and then analysis of current negative engagement on social media using insight from the meta-synthetic analysis. To be rhetorically persuasive and civil on social media and CMC, users of these

digital environments must learn to recognize that they are engaging in a real social interaction and are forming real relationships, while following conventional social engagement practices (Mckenna & Bargh, 2000). To help these digital social network consumers recognize, recreate the environment of, and engage in a naturalistic and face-of-face style of conversation, they may need a guide, a heuristic in writing coherent and engaging content. Developing such heuristic on social media authoring can provide all CMC users with the tools they need to rhetorically interact with others in ways that more resemble in-person social communication, helping to serve as a reminder that they are in an authentic social interaction.

This study provides an assessment for the needs of such a heuristic's future development, helping to remove the psychological change in mindset that occurs in social media engagement due to CMC's anonymous features, including the marginalization of social identity, alteration of self-presentation, and many other influences on relationship formation (McKenna & Bargh, 2000; Tsikerdekis, 2013; Luarn & Hsieh, 2014; Saini, 2014). The needs for the heuristic's development are determined by the previous qualitative meta-synthetic literature review and subsequent research on current negative social media engagement, incorporating insight found from the literature review to determine the observations and coding needed for the research. A final recommendation of features needing inclusion in the heuristic's future development, determined from both the review and research, are included in the final discussion.

Analysis and coding of social media has been accomplished in many ways. Currently, there are three forms of review one can do in analysis of social media: automated analysis, manual analysis, or a mixture of the two. Automated *qualitative*

sentiment analysis is available to measure CMC messages as having either a positive or negative tone, based on keywords previously coded within the software (Kramer, Guillory, & Hancock, 2014; Thelwall, Buckley, Potoglou, Cai, & Kappas, 2010). Although this is a valuable tool in analyzing social media for crises and emerging risk events (Lachin, Spence, & Lin, 2014) or some other form of response coordination (Purohit, Hamption, Shalin, Sheth, Flach, & Bhatt, 2013), it does have its drawbacks. Sentiment analysis is one dimensional in valence (positive, negative, neutral, ambivalent), and has only a small number of emotions available for analysis with no explicit goal or function in its search (Gaspar et al., 2015). With human emotions ranging in level of intensity and weight, an autonomous approach can limit the potential findings and comparisons from analysis results, with the potential to miscode sarcasm, parody, or other hard to code commentary. Emotional reactions and written content can be deeper than obvious language comparisons, with something positive potentially meaning something inherently negative and vice-versa (Gaspar et al., 2015). As well, neither positive nor negative sentiment is mutually exclusive, as both can occur simultaneously (Frydenberg, 2014).

Social media engagement can be complicated and analyzing conversation between users can be even more complex when trying to determine which posts are positive and negative. In situations of crisis, instead of panicking individuals actually cope with situations using a diverse set of collective skills and strategies previously developed and unique to each person (Drury, Cocking, Reicher, Burton, Schofield, Hardwick, A... & Langston, P, 2009), with the effectiveness of each strategy dependent on the adaptive function it serves (Skinner, Edge, Altman, & Sherwood, 2003). Due to

the abundance of possibilities in social media expression, qualitative analysis needs to recognize each dimension of valence. Taking into consideration the diversity between users and their social habits, manual qualitative analysis on the underlying functions of user posts help to avoid the homogeneous issues of anatomy and take into account all the dimensions of valence each post can have. For maximum analytical results, a mixed method analysis was used to provide the strengths of each method of qualitative analysis.

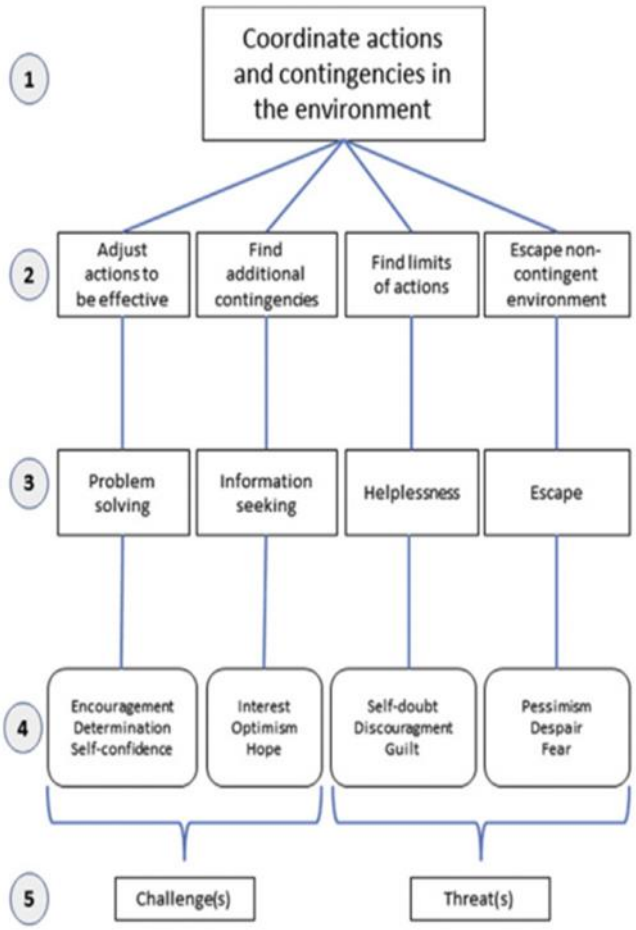


Figure 1. Gaspar et al.'s Adaptive Functions and Corresponding Affective Expressions of Coping: Coordinate Actions in Environment

Manual coding was used for the majority of the work while autonomous computer assisted review of the code was incorporated for linear text analysis on number of swear or derogatory words, exclamation marks and other nonverbal and salient cues. For manual coding, this study followed the *Adaptive Functions and Corresponding Affective Expressions of Coping* diagram (Figures 1 & 2) and its process used by Gaspar, Panagiotopoulos, Pedro, and Seibt (2015) in their qualitative sentiment analysis of social media reactions to unexpected stressful events, using the

coping concept of threat versus challenge. This method was chosen to determine negativity in posts because it examines how each user's comments in social media engagement fit within our innate adaptive functioning to react with external stimuli as a threat or challenge.

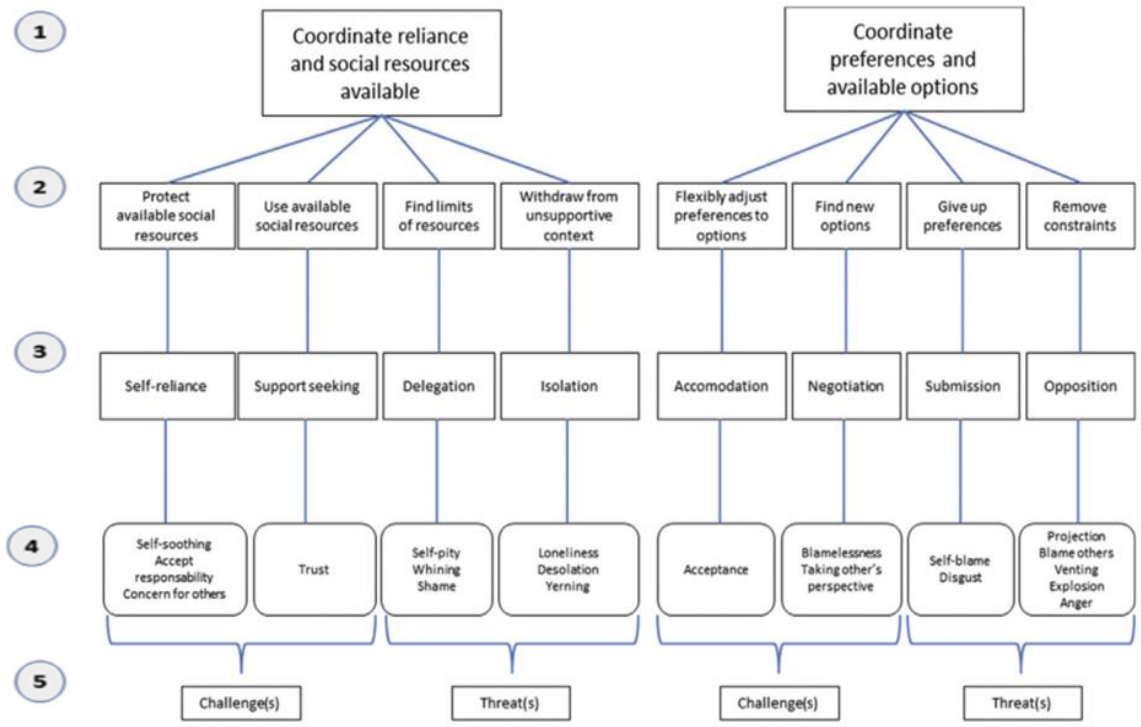


Figure 2. Gaspar et al.'s Adaptive Functions and Corresponding Affective Expressions of Coping: Coordinate Social Resources and Available Preferences/Options

Determined by two types of appraisal evaluation, demand and resource, individuals factor sufficiency into their decision making and evaluate external stimuli to formulate a decision as to whether they are lacking the resources to deal with the situation—if they do consider themselves lacking such resources, the stimuli is placed into a "threat" level of distress category, representing a negative reaction (Gaspar et al., 2015). If the individual under stimulation does believe to be sufficient in resources and

feel they are able to adapt, they make a decision based on the stimuli as being a "challenge" or positive. When a social media user responds to a statement feeling insufficient in their resources, they have a certain set of flexible responses that characterize a threat level of distress (Figures 1 & 2 as level 5; see Appendix A). Posts were determined to be one of twelve families of coping (level 3) and its corresponding challenge or threat level of distress (level 5). Each level is characterized by: 1- adaptive process; 2- family function in adaptive process; 3- coping family; 4- way of coping; 5- level of distress. The coded posts were then grouped with other similar coping family (level 3) groups which were then used to determine correlations between threats and their sub-coping families. Negative posts were labeled as those received as a threat, while positive posts will be defined as a challenge. Using the characteristics displayed by levels one, two, and four in the diagram, posts were checked to ensure proper placement in their level three and five codes.

Sampling of Posts

To select the sampling of posts for coding, the seven groups of factors in firestorm dynamics, developed after reviewing firestorm activity against businesses on social media (Pfeffer et al. 2014), are used. These results find that firestorms tend to have seven commonalities that make them conducive to ignition:

- speed and volume of comment frequency
- binary choices
- network clusters of locality
- unrestrained information flow
- lack of diversity

- cross-media dynamics
- network-triggered decision process

In their research, Pfeffer et al. (2014) mentions Twitter as being a great source for all of these options, as it forces quick commentary that is binary in nature, unrestrained, and is very heavily a cross-media dynamic. Although this is a great medium for firestorm activity and its analysis, it does provide some limitations, mainly due to the 140 character limit imposed by Twitter. Looking to understand how a heuristic for social media authoring can affect CMC in a more general sense, Facebook seemed more of an appropriate analytical source. Since Facebook is used by three-times as many people as Twitter and is the most used social network worldwide (Duggan, 2015), while most social media outlets allow for almost unlimited amounts of commentary, characters in writing, and engagements, it was decided that using Facebook for sentiment analysis would permit a larger amount of data retrieval and also allow for analysis of engagement more commonly used on social media. Since Facebook is used by three-times as many people as Twitter and is the most used social network worldwide (Duggan, 2015),.

Once Facebook was selected, two businesses in separate industries were reviewed to provide an optimal overview of social media negative engagement. To ensure that posts would be inherently negative, the Australian company Qantas Airways was first selected for review. As mentioned in the introduction, Qantas Airways has been a recipient of firestorm activity on their Twitter page (Pfeffer et al. 2014). Spurred by a labor dispute occurring several weeks before their horrendous Twitter promotion, Qantas received a large amount of negative posts that propagated into widespread, mainstream negative publicity, even migrating outside of Australia. With a history of negative social

media interaction and firestorm activity, Qantas Airways seemed like a perfect match for negative engagement review, without explicitly looking to engage in already currently trending negative and firestorm activity.

The second company reviewed in research was Comcast, the nationwide American provider of cable and internet services. Recently fined by the FCC, Comcast was forced to pay $2.3 million in civil penalties for charging customers for services and equipment they did not ask for or receive (Wattles, 2016). The FCC stated that they received over 1,000 complaints from customers who not only received illegitimate invoices but also had to spend a significant time and effort to fix their payment issues, many charges costing people hundreds if not thousands of dollars. With such a large scandal occurring between Comcast and their customers, it was determined that this social community would be perfect to analyze negative communication and potential firestorm activity. What makes this source even more qualified for the study is the fact that Hurricane Matthew was ravaging the east coast during this study's research, taking out thousands of people's electricity, cable, and internet (Farrell, 2016). Tensions can build and cause negativity with so many people stuck without service, especially if Comcast's service is subpar. Gaspar's et al.'s sentiment analysis diagram (Figures 1 & 2) is a perfect analysis tool to use in reviewing stressful events and times of emergency, just as in the case with Comcast and hurricane Matthew (2015).

When comparing these two Facebook accounts with Pfeffer et al.'s seven commonalities that are condusive to firestorm activity, it can be seen that both include a high speed and volume of comments, with network clusters of locality each involving customers who are located within one country and are paying a high dollar service. This

exclusivity of region and price removes a large potential of available users from engagement and causes a lack in diversity between users. Although Facebook and most company pages on Facebook monitor user engagement and remove overtly negative content, there are still some information flow restrictions. Comcast specifically did not allow users to post images on their Facebook page, while both Comcast and Qantas used restrictions on swear words built into Facebook's software itself. Although these are not limiting factors in firestorm activity, the limits on posting content could potentially alter the method and structure of reviewed user engagements. Additionally, Facebook is very well known for its cross-media dynamics, as many people share content from other sources on their Facebook accounts, using it as an aggregator of all their social media content (Safko, 2012). As for the network–triggered decision processes, Facebook perfectly defines this firestorm aspect, as users are able to quickly engage in commentary that can lead to new decisions made from convincing statements provided by other users, effectively altering the decision making processes of other users in real-time. Finally, Facebook also is heavily binary in choices, as users can either "like" a post or page, or reply and/or comment on other people's posts. This ability to like and/or comment causes users on Facebook to have a limited response in its usage, fulfilling the factors in opinion spreading on social media (Pfeffer et al., 2015).

Manual Coding Analyses

During the manual coding process, each post was qualitatively coded to determine common occurrences in content between comments, with factors targeted from methods of textual analysis used to gather information on how people make sense of the world, including its use in uncovering ways members of various cultures make sense of

themselves and their roles within their communities (Mckee, 2016). Reviewing text-based and structural features is critical for CMC textual analysis (Abassai & Chen, 2008) and is a practice used in previous studies, such as in determining CMC community return investments (Cothrel, 2000). Structural features support interaction analysis (Fiore & Smith, 2002) and are used because they are well defined, extractable, and easy to visualize (Abassai & Chen, 2008). Each user post underwent structural-feature and textual-analysis to determine how written content that is negatively coded is similar to other negatively coded engagements on social media. The textual-analysis questions have been developed from Northern Illinois University's Research, Evaluation, and Policy Studies, College of Education's 1997 *Basic Guide to Textual-Analysis*. The questions below will be used to create codes for the analysis.

1. What issue, or in this case, is there an issue being addressed?
2. What position does the writer take?
3. Is there a major claim? Is the claim qualified? If so what kind of supporting evidence?
4. Do they offer any refutations? How?

Rhetorical context was not analyzed; knowing the identity of the writer is irrelevant, as the study looks to work with people as a general whole. As for the analytical review of the text, questions looked into the commonalities between posts and their content, determining how perceived intent and claim quality relate to negative commentary. Using predefined codes from Gaspar et al. (2015) and incorporating textual-analysis from NIU, it was determined which commonalities posts in each of the twelve

adaptive functions (Figures 1 & 2, Level 3) and levels of distress (Figures 1 & 2, Level 5) have with each other. The process of analyzing each post was the same for both Facebook pages. To begin, a post was first read over fully, reviewing its content and purpose. Posts were also coded to determine if the comment had a major claim. If the comment did have a major claim, it was then more narrowly defined to determine if evidence was provided for that claim. If there was evidence, it was then separated into three categories:

- *Bias*—The user provided facts or beliefs on the issue without providing any concrete documentation or sources to back the claim.
- *Professional/academic source or tangible evidence*—The user provided documentation, a photograph, or cited and linked a trusted news, academic, or other professional outlet that provides direct proof or backing of the claim.
- *Web*—The user provided a link to an external webpage but did not cite a source that is inherently trustworthy or recognizable as being professionally qualified or academic in nature, although these sources were not explored to determine their validity.

Once the major claim was determined, the post was then coded based on the user's interest or issue with the company, community, or its members, as mentioned in the post. Each post had eight possible issues or interests of which they were coded by:

- *Complaint*—The user had a complaint about an issue with the company but had a specific point or proven rationalization for criticism.

- *Firestorm*—The post had "intense indignation" with no actual point or specific criticism of the company or its constituents as defined by Pfeffer et al., 2014 (p118).
- *Service Help*—Comment asks for help, information, services, or goods (flight information or customer service for Qantas and cable, internet, or customer service by Comcast).
- Helping—Members of the community offered insight or some other form of help in discussion to help other users or even to help the business itself.
- Friendly—This involves users making positive statements about the company or other members within the community, without having a specific goal of helping or complaining in any form or fashion.
- Irrelevant—Posts that had nothing to do with the company, its members, or the common discussion occurring, as well as those that did not fit within the definition of firestorm activity or those that could not be discerned, including posts that included names of other users as the only comment itself (such posting of user names allows the person referenced to see the topic of discussion).
- Qantas—Posts that were written by Qantas or those in response to other consumers by the company were labeled Qantas.
- Comcast—Posts written in response to others or as original content by Comcast.

After the major claim and issue were determined for a post, it was then coded by alignment and backing for the company, coded to be either *for*, *against*, *neutral*, or *unknown*. This was determined by tone, claim, and issue of the user. Out of all the codes and analysis determined by the study, the placement of user alignment would be

considered most biased out of all the coding, due to personal attitude and belief system differing between each individual. Such limitation should be noted in reviewing the data.

Once the major claim, issue, and alignment of the post were coded, it was then reviewed for salient cues used within its content. Studies have shown that salient cues, such as exclamation marks, asterisks, vocal spellings, and emoticons or other manipulations of text can be important factors in recognizing emotion and intent in CMC messages; each of those cues are reviewed extensively in this study's research. The specific cues analyzed within this part of research include:

- *Quotation Marks* ['',"", or ()]—used to hyper focus one's statement or intent.
- *Exclamation Marks* [!]—used to show excitement, frustration, or anger.
- *Ellipses* […]—used to show an incomplete thought, confusion, or questioning.
- *Emoticons* [💻 or variants such as :)]—used to show facial expressions.
- *Name*—using ones name as a sign-off for comments.
- *Repeated Question Marks* [??? or ?!?, !?!]—used to show confusion or questioning of statement. !?! and all variants are coded as an exclamation mark and question mark.
- *Swear* [swear words, name calling, terms like sucks, you're a joke, or other demeaning inferences]—used to show condescending, hateful, derogatory, or other negative emotions.
- *Symbol* [=, >, or even self-made ones such as ----- or ***] used to refine comparisons or points.
- *Word Language* [all caps text, ASAP, lol]—used to hyperfocus intent of message and emotion.

Once the major claim, issue, alignment, and salient cues were coded, post structure, coping family, and level of distress were determined. Post structure was determined by length, with three categories of type: *one-sentence*, *multiple sentences*, and *paragraph or longer*. Posts were classified based on levels one through four on the *Adaptive Functions and Corresponding Affective Expressions of Coping* diagram (Figures 1 & 2) to determine each user's coping family and the level of distress in their response. First, the post was read to determine if the user was coordinating actions based on environmental needs, if they were coordinating a reliance on social support, or if they were changing preferences depending on the available options they had, the adaptive process (level 1). Depending on the selected coordination, the post would then be reviewed to see which of the family functions in the adaptive process the post served (level 2), which then leads to a coping family determination (level 3) and thus determines the level of distress (level 5). As a form of checking this final determination, the post was reviewed based on the chosen adaptive expression of coping (level 4), which provides details as to the form of expression used by the poster's coping mechanism. By using this level to check the previously coded levels (1-3), posts were given several chances to be properly categorized based on content, issue, alignment, structure, and four levels of adapting and coping. With levels one through five determined, a code for one of the coping families (level 3) was given to the post, followed by the final level of distress determined (level 5).

Automated Coding

With automated coding needed for research and review, the program nVivo11 Pro was determined to be the best fit for the research. Needing to manipulate the manually

coded data for automation, both the manual and automated coding were performed on this program. NVivo11 Pro is a suitable medium for extracting rich datasets off Facebook for manipulation, as it is qualitative and quantitative data analysis software that allows access to online conversations and content to perform research (QSR International, n.d.). Text was extracted from Facebook to nVivo11 Pro's database using the Google Chrome extension NCapture. This program is similar to other textual analysis programs found through literature review, such as the conference electronic transcript linguistic analysis program Pro~Scribe that reviews texts for syllables, pronouns, sentences, and more (Walther, 2006). It is also similar to LIWC, the linguistic inquiry and word count program, which analyzes texts and puts them into categories determined by an internal dictionary (Riordan & Kreuz, 2014). Although nVivo11 Pro does not have the capability to automatically categorize texts based on predefined terms, it does have the ability to quickly group texts based on codes, which can then be quickly cross analyzed and reviewed. Although LIWC may be a viable option of analysis for this study the cost and level of difficulty in preparing and working with the program made nVivo11 Pro a better choice.

Automated textual analysis with nVivo11 Pro was used to determine quantitative analysis on the manual codes evaluated during previous research. The qualitatively coded data were grouped and compared by a number of factors. Focusing on threat vs challenge analysis, each of the twelve families of coping were quantitatively reviewed and analyzed for number of occurrences (Table 1), and the percent of instances involving salient cues (Tables 5 & 6), type of engagement and claims provided, and structure of posts (Table 3). Threat vs challenge was reviewed extensively in all tables and salient, nonverbal cues

were reviewed against all other qualitative codes involving post content (Table 4) Additionally, quantitative comparisons between post engagement types—termed *issues* as in Table 2—were cross analyzed between both companies observed in the study.

Results

The first section of results provides examples of each of the twelve coping families and their associated codes to provide evidence and demonstrate the variety and diversity of the expressions analyzed in the qualitative sentiment analysis. These functions are then shown in a larger context as they are analyzed against structure, issue, position on the subject, major claim and evidence, salient features, and overall distress level. A post labeled as a challenge is considered to be positive, while one deemed a threat is considered negative.

Posts excluded from the study were based on engagement type and determined by how each fit within the context of the conversation. Since businesses like Qantas Airways and Comcast Digital Cable use social media for brand awareness and other forms of marketing, underlying agendas for posting were focused more on increasing user engagement, while focusing less on specific need-based interaction, causing some posts to be irrelevant in conversation and thus not coded or used in the study. In particular, Qantas asked people to "Comment to caption this magnificent aircraft touching down at Los Angeles International Airport (LAX)! #Qantas #A380," in an attempt to generate positive user engagement and strengthen the company's customer network. Many comments found in this particular post alone were not able to be coded to due irrelevance or lack in substance, such as in the text below; comments that engaged on these topics did

however sometimes have some relevance due to other stimuli occurring between the individual and Qantas.

Not Coded	*"Aida Piva Pazos Ale Pazos"* *"Megan 5 weeks till we are on this bad boy"* *"Roo touchdown"*
Coded	*"Not good airline at all ....."* *"I still need advice with my booking. Can you please tell me how I can speak with somebody?!"* *"Qantastic La la….where everything can be your flight of fantasy"*
Delegation	*"I made an AirBnB booking on 5 October and now see that I could have earned Qantas points. Is there any way to add these points after the fact... its a **pity** I did not know as it did not come up as an option when making the booking. Please advise."*
Helplessness	*"Hi Wendy, I'd like to know this too, as I booked an Airbnb property prior to Oct 1 but aren't staying until later this week. The information I found for myself on the Qantas site said that to get points you have to book accommodation via the Qantas portal, not via airbnb. So unfortunately, we might both have missed out there."*

The differences between those excluded from the study (as seen from the text above) are from their lack in customer or service based concern with the company. As well, many of these posts do not have an inherent positive or negative tonality in content. Such comments as "Qantastic La la….where everything can be your flight of fantasy" were used in the textual analysis because the comment acknowledges an opinion about the company in their phrasing. Texts similar to "I still need advice with my booking" were also included for analysis, as they are a common type of customer engagement which occurs on social media and in face-to-face interactions.

Posts outside of those generated by Qantas were coded similarly, with the use of Gaspar et al.'s Adaptive Functions diagram (Appendix A). When users mentioned terms

that were referenced by the diagram specifically, such as using “pity,” then the comment would be placed in the *delegation* level 3 *threat* category because of the level 4 *self-pity* way of coping (found in the examples previously provided). Often there would be a response following a post, where another user would add value or insight to the previous content. Referring to the helplessness on previous examples of post content, the post could have been coded as *submission*, as it has a level 2 description of “giv[ing] up preferences” (Figure 2) and has a level 4 characteristic of *self-blame* and *disgust*. Although the previous comment does lead to the idea that the individual has self-blame, it also fits the *helplessness* level 3 category (Figure 1). This coping family has characteristics of *self-doubt, discouragement,* and *guilt,* all three of which are portrayed by the replied message.

Table 1

Coping Family Rate of Occurrence

Coping Family	% Challenge*	% Threat*	% of Total Challenges	% of Total Threats	% of Total Responses
Accommodation	99.15%	0.00%	56.17%	0.00%	**34.77%**
Opposition	2.75%	97.25%	0.73%	41.57%	**16.20%**
Delegation	0.00%	98.33%	0.00%	23.14%	**8.92%**
Support Seeking	95.92%	0.00%	11.38%	0.00%	**7.28%**
Problem Solving	87.50%	12.50%	10.17%	2.35%	**7.13%**
Helplessness	0.00%	100.00%	0.00%	17.65%	**6.69%**
Info Seeking	95.56%	4.44%	10.41%	0.78%	**6.69%**
Self-Reliance	86.84%	5.26%	7.99%	0.78%	**5.65%**
Escape	4.17%	95.83%	0.24%	9.02%	**3.57%**
Negotiation	100.00%	0.00%	2.91%	0.00%	**1.78%**
Isolation	0.00%	100.00%	0.00%	2.35%	**0.89%**
Submission	0.00%	100.00%	0.00%	2.35%	**0.89%**
*Percent may be less than 100 due to a minuscule amount of posts coded unknown					
**Greyed rows are challenge levels of distress.					

Table 1 provides an overview of the twelve families of coping and their disbursement within the study. Out of the 673 comments that remained in the study after removing the 350 posts that were not codeable, 63.3% of the remaining user engagements were found to have response with a *challenge* level of distress. Although most of the comments used in the study were coded with their associated distress level, such as *accommodation* being considered a *challenge* (Figure 2), some posts were labeled a coping family that had a conflicting labeled distress level when reviewed. This occurred due to each post receiving a position of *for*, *against*, or *neutral*, in relation to how the writer revealed their intentions on the subject within the post's content. For example, 97.25% of posts labeled opposition were coded as a threat level distress response;

however, one user was found as having a position that would seem they were aiming to help Comcast execute its services in a better format but did so in a venting, angered, and aggressive manner, each characteristics for opposition, such as the example below:

> *"Dear Comcast, I wouldn't be so upset about your migrating me to your "new and improved" online streaming page if:*
>
> *it didn't start with the statement "Now connecting to your entertainment experience." first, it's not MY experience it's YOUR experience which YOU have forced upon me…. Basically, you are forcing me - whether online or in home on demand - to re-watch 40 minutes just to see the last 10 minutes of a show*
>
> *If Comcast really wants to 'fit into my life' it has a weird way of showing it. Oh, and by the way, if your response is your standard – 'Hi, my name is _____ with Comcast. If you message me privately with your account number I'll be happy to help you with your issue." - you can save it.*
>
> *What you CAN do is to get this, and my other posts regarding this issue to your web designers/programmers. You know the people who "made it with <3 in Philadelphia.'"*

This post included more content but generally the individual used recurrent word language and bantering to get their point across, seeming to vent with a positive position towards the company, even using the symbol (<3) to represent love towards them as well. Although it had enough substance that it did not seem appropriate to label as uncodeable , the conflicting venting and aggressive behavior made coding the post difficult. It seemed to fit best as an *opposition* coping mechanism that is *for* Comcast's position and thus was

one of the few outliers in the data in the opposition category (as shown in Table 1). Posts that were placed in the uncodeable category include those with little to no content or subject matter in the message, similar to these below:

Uncodeable *"Ahaha Chris Callum"*

"Touch Down Welcome to LAX"

"fuar"

Although relevant to the conversation in their own ways, these posts have nothing to do with the actual engagement between users and the company, nor do they involve customers engaging in a manner that could produce negative or positive engagements from others. Many posts are like the first one mentioned above, with users mentioning other individuals in their comments, having no other content for others to engage with besides the name itself. Posts that do seem to produce engaging content with others, or with the company itself, but seem to either not address any particular subject or opinion towards others or the company are coded as *friendly* (see Table 2). Friendly comments reflect the nature of social media as a medium for conversation between people of mutual interests, developing relationships and redefining the community by such engagement. These engagements include users thanking others for sharing insights and providing compliments to the company for an offer provided or mentioning quality service the user received by the company, such as:

Compliment *"A big thank you to online customer support people: Louisa, Chloe, Helen and Charlie - wonderful service!"*

"Here touch's down the best airline in the world!!"

"Love flying on the a380"

"Looking almost as majestic as a Longreach 747."

"Qantas = Dreammaker"

These friendly posts occurred 4% of the time in Comcast conversations and 61% of the time in Qantas engagements for an overall occurrence of 35% of posts reviewed, the most occurring engagement type out of the five types of issues in Table 2.

Table 2

Qantas Airlines & Comcast Digital Cable Facebook Analysis

Issue Relating to Comment	Comcast	% Total	Qantas	% Total
Questions on Service Help	35	10.61%	56	15.34%
Complaints	154	46.67%	57	15.62%
Firestorm	85	25.76%	4	1.10%
Members Helping Others	33	10.00%	13	3.56%
Friendly Engagements	13	3.94%	223	61.10%
Total Comments	320	100.00%	353	100.00%
Distress Level	Comcast	% Total	Qantas	% Total
Challenge	133	25.43%	298	59.60%
Threat	192	36.71%	64	12.80%
Unknown	2	0.38%	4	0.80%
Uncodable	85	16.25%	33	6.60%
Irrelevant	53	10.13%	14	2.80%
Company Comments	45	8.60%	87	17.40%
Total Comments	523	100.00%	500	100.00%

SINE

Out of the twelve families of coping, four have less than a 5% observed occurrence— *submission, isolation, negotiation, and escape* (SINE), three of which represent a threat level of distress and are associated with responding negatively to a post.

Isolation and *submission* are both found to be extremely rare in occurrence, with each receiving only 0.9% of all codes. Participants were found using *isolation* to withdraw from unsupportive contexts and conversations, removing the individual from their services with the company and even from the social media discussion itself. A typical isolation comment was as such:

Isolation *"Have been paying for service for over two weeks now- and still have not been able to connect to the Internet. Take your business to a competent provider people, as Comcast has shown time and time again they are unable to come through."*

Users incorporated submission into the conversation when giving up preferences in disgust or self-blame, occurring in discussions when users felt appalled by negative customer service experiences with both companies, providing comments such as:

Submission *"Holy crap.... help her first. That's ridiculous"*

"I'm on hold too... 34 mins and counting. Didn't get the option for a call back at the start, so stupidly assumed there would not be much of a wait...!!"

Negotiation, which is the only challenge level of distress of the four, would seem to be a common occurrence in arguments and debates but in actuality this coping family was almost absent in both discussions. Occurring 1.72 % of the time, members in both the Qantas and Comcast Facebook communities seemed to lack the ability to be blameless in action and responsibility, with little taking of others' perspectives. Common negotiations in these discussions include users saying that the Comcast $2.3 million fine was only acceptable if the money applied to their accounts and personal interests, with most comments similarly conforming to these statements:

Negotiation *"Only if that's my cut."*

"Replace million with Billion and then we're getting somewhere"

"It's only enough if they pay me some."

An interesting finding with these negotiations is the fact that almost 40% of them did not specifically cite a personal benefit in their response. Instead, these users focused their message on the punitive justification against the widely known issues of Comcast and Qantas. These selfless acts by community members align with past research findings on the *uses and gratifications theory* in social media, where users feel a sense of responsibility in educating others on social injustices and consider themselves as "teachers and social watchdogs" and thus use the medium due to the gratification received from this information sharing (Friedman, 2013, p56).

The fourth and most common of the underperforming SINE coping families is *escaping*, the pessimistic, despaired, and fear filled engagement of individuals on social media. Occurring 3.43% of the time in the study, *escaping* seems to be used by members who are completely fed-up with company services. Usually occurring in paragraph style (Table 3), those escaping the non-contingent environment do so through negativity and with a threat response, many actually providing valid reasons for their way of coping. A few examples of this occurring are:

Pessimism *"Much damage yet comcast cant turn the system back on! Absolutely ridiculous! So glad this will be my last month with this horrible company. I wont even go into the fight thats coming to try and get reembursed for your lack of service!!!!"*

Despair *"didn't get to watch any of the shows we had recorded because they were all wrong. We just barely signed up with you guys and I want to cancel already."*

Fear *"6 days! 6 freaking days! No internet, no cable, and no alarm system! More lies about when service will be restored to waterford landing in rrichmond hill! All you do is keep pushing the day back everytime you fail to meet your own timeline. How is it the power and the water utilities can repair so."*

Common Threat Responses

Out of the previous four coping families found, the three negative and threat levels (*submission, isolation, and escape*) accumulated only 14.4 % of all recorded threat levels of distress, leaving *opposition*, *helplessness*, and *delegation* as the most frequently used negative response coping mechanisms by those reviewed in the study. *Helplessness*, the least common of the remaining three, received 18% of all the threat level responses. In coordinating actions and finding contingencies in the environment, users who exemplified helplessness filled their commentary with self-doubt, discouragement, and guilt as they looked for all the remaining limits of their actions in the situation and would become deterred and overwhelmed by the issue.

Self-Doubt *"This is probably why I don't have cable, I'll just stick to my DVD's, crooks!!!! Sad they do this to hard working ppl! All I can say is they should be ashamed!"*

Discouragement *"Calling Comcast is, has been, and always will be torture. It starts with the automated voice thing that makes me talk to a machine and ends with your system disconnecting me. Some things will never change."*

Guilt *"Trying to book a hire car but the system continues to freeze; what's going on Qantas? Really frustrating... feel like giving up and going with a different operator. Please respond urgently to confirm the issue."*

Many of the comments assigned in this category were similar in nature and in reaction, with users complaining about issues yet acknowledging that there is nothing they can do to change them.

As users searched for answers on why their engagements with Comcast or Qantas were not appropriate for their liking, observing social media users looked towards their social resources for answers. In coordinating their available social resources, 24 % of observed users illustrated *delegation* in their responses. Broadcasted as whining and self-pity, those using delegation turned the social media community into a method to complain about the company, without requesting action or providing any notion of ways for the company to alleviate their issues. Such comments included:

Whining	*"What the hell am l paying for? I tried fast forwarding through a commercial, and couldn't get it to stop. About time l had another issue, it HAS almost been 2 weeks since the last one, after all."*
	"Same my flight is cancelled. Call back service malfunction. No one answers the customer service line. Its BS really. But they dont care !!!"
Self-pity	*"Seriously tired of having to call #Comcast #Xfinity on a monthly basis because my bill keeps increasing for services that have not changed!"*
	"It's been an 1hr and 15 mins for me. How is it possible to keep people on hold for that long?!"

Holding the majority share out of all the threat level distress coping families, those displaying *opposition* were extremely disgusted and angered, while being open to sharing their opinions with others. Combined, 41.7 % of users coping with a threat response displayed this opposition of angry, blameful, and loud content in their communication within the study. It is within this coping family that firestorm activity

occurs, functioning to remove the constraints and preferences available for each user in an explosive and projecting method of communication. Under the issues and reasons for response coding category, firestorms were found to occur 56.9% of the time in the *opposition* coping family (Table 2), which occurred 15.5% of the time overall between both companies. Such firestorm comments include:

Anger	*"AT TIMES being frustrated....???? Oh please...Comcast is a swindle."*
Projection	*"Comcast. Monopoly. Greedy. Dishonest."*
Blame Others	*"COMCAST GOUGES NEW JERSEY CUSTOMERS!"*
Venting	*"They really stink! How many people won't even bother calling them????? They take too much advantage of people, their day will come!"*
Explosive	*"CHLOE YOU ARE THE UMPTEENTH PERSON TO WRITE THE SAME THOUGHTLESS AUTOMATED RESPONSE. I AM NO TTH EONLY ONE EXPERIENCING THIS. WHEN SOMEONE WANTS TO CONTACT YOUR COMPANY THEY FOLLOW THE PROMPTS ON THE WEB PAGE - NO RESPONSE!!!!!!"*

Oppositional posts that were not considered firestorm activity but were still considered oppositional were generally a paragraph or more in length and include users providing insight on exact reasons for why they were upset, using abrasive and aggressive behavior to get their point across:

Non-Firestorm Anger	*"I just spent a half hour on the phone. Basically told me woops, don't know why we text you. I spent the last two days trying to talk to someone to just get the automated response for the area being out and saying we would have service at 8:36 pm, quite an exact time huh? So they text me 20 minutes tonight before that saying it's on. We're good. NOTHING! I'm so angry. Our cell service is out too."*

Looking into the six threat level distress coping families used by individuals in the study, complaints to the company about service and other issues were found to be more

commonly associated with *delegation*, *opposition*, and *helplessness*, although a new trend emerged when reviewing the amount of complaints in comparison to the total number of each coping family. *Delegation, escape, helplessness, isolation*, and *submission* each have complaint as the majority of the issues made by people displaying those coping mechanisms (see Table 3). Only *opposition* has more activity in something else (firestorms) than complaints. Interesting as well, only 79% of all the complaints made were categorized as threats, while only 78% of firestorms were as such. Firestorm activity almost exclusively occurred in the *opposition* family, although this does not characterize the only adaptive response used, as 19 individuals used firestorm activity as a positive challenge response to their external stimuli, such as when users said:

Opposition

"I'm so ready to dump Comcast after getting our latest bill.Comcast is now more expensive than my PUD bill.40 bucks just in fees are you kidding me.I don't need 60 flipping Latino,Asian,Korean channels but oh wait it's a bundle.You have the technology give us what we want.Oh and your customer service sucks."

"I just spent a half hour on the phone. Basically told me woops, don't know why we text you. I spent the last two days trying to talk to someone to just get the automated response for the area being out and saying we would have service at 8:36 pm, quite an exact time huh? So they text me 20 minutes tonight before that saying it's on. We're good. NOTHING! I'm so angry. Our cell service is out too."

Firestorm

"I just stay with Netflix. lol" and "Replace million with Billion and then we're getting somewhere"

"No one actually likes Comcast as a company. Am I wrong here? #Monopoly"

"How is that 2 million dollar lawsuit going? I hope the FCC continues to ruin your company."

"Good they fkn suck! I'm sure they'll find a way not to pay me"

Table 3

Threat Level Response Issue, Claim, and Structure Analysis

Code	Delegation	Escape	Helpless	Isolation	Opposition	Submission	Challenge	Threat
Complaint	88.1%	91.3%	71.1%	100.0%	41.3%	100.0%	20.9%	79.1%
Firestorm	3.4%	8.7%	11.1%	0.0%	56.9%	0.0%	21.3%	78.7%
Friendly	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Helping Others	0.0%	0.0%	6.7%	0.0%	0.0%	0.0%	93.2%	6.8%
Service Help	8.5%	0.0%	11.1%	0.0%	1.8%	0.0%	85.7%	14.3%
Major Claim	84.7%	87.0%	93.3%	100.0%	63.3%	66.7%	46.9%	53.1%
No Claim	11.9%	13.0%	6.7%	0.0%	34.9%	33.3%	64.6%	35.4%
Refutation	88.1%	78.3%	68.9%	100.0%	38.5%	66.7%	50.5%	49.5%
bias	84.7%	73.9%	68.9%	100.0%	37.6%	66.7%	48.6%	51.4%
pro-academic	0.0%	4.3%	0.0%	0.0%	0.9%	0.0%	66.7%	33.3%
website	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
No Evidence	3.4%	4.3%	22.2%	0.0%	28.4%	0.0%	83.6%	16.4%
One sentence	13.6%	17.4%	24.4%	0.0%	40.4%	16.7%	77.3%	22.7%
Multi Sentences	52.5%	39.1%	42.2%	80.0%	39.4%	50.0%	56.5%	43.5%
Paragraph +	33.9%	43.5%	33.3%	40.0%	20.2%	33.3%	37.8%	62.2%

Another interesting finding comes from the major claims stated by users, as nearly 85% or more of those using delegation, escape, helplessness, and isolation provided an obvious claim in their statement, while a majority of those posts also provided biased refutations for addressing the issue at hand. All but two users did not provide any form of hard evidence in their arguments, with only 33% of all professional, academic, and website references coming from threat-leveled responses—there were only six total. As for the structure of user posts, the length of comment has correlative results. As shown in Table 3, the majority of one-sentence comments are found to be considered a challenge (75%), while posts longer than a paragraph were found to be labeled as a threat 62% of the time, with multiple sentence posts of 2-4 sentences found to be a challenge slightly more than threat (56%).

Salient Cues

Insight on the salient cues used by participants in this study yields some interesting results. Exclamation marks are found to be used in 27% of threat level distress comments, while those coded as a challenge level of distress include salient cues only 18% of the time (see Table 4). Participants in the study have a higher usage of exclamation marks in threat level distress comments, calling attention to implications when comparing this insight to Hancock et al.'s (2007) discovery that exclamation marks are significant in predicting a CMC user's positive view of a post. This mismatch between CMC users having a higher chance of using exclamation marks in threat level distress responses and the fact that recipients usually believe exclamation marks are of positive intent could cause confusion from the misreading of CMC messages. Users may determine some CMC messages to be positive when they are actually in fact threat level responses and negative. It is also interesting to note that firestorm coded text only used exclamation marks 2.3% of the time, while those complaining in general used it in 28% of posts. The term word language is used to code phrases with repetitive word usage, those with all capitalization, and those with acronyms like ASAP and LOL. The predominant use of word language in threat level distress responses is notable as it occurs with a higher chance of inclusion with threat level responses at 17.2%, as compared to 5.1% in challenge coded texts (Table 4). When breaking down the type of response of user posts, word language was found to be used in 18.5% of complaints, with firestorms incorporating them 13.5% of the time. As well, ellipses were found to be used more in threat level responses (11.7%) than challenge ones (5.8%). Word language was also found to be used exceptionally more in paragraph or longer comments (22.7%) than in

one (4.7%) or multiple sentence (9.2%) posts. This difference in use of word language may have a direct linkage with the amount of time users place in their work. With more time, those who write long responses may be able to release emotions and concerns, reaffirming the need to use salient cues to display emotion in social media engagements. When it comes to engaging with salient cues, the challenge threat response turned out to only account for 44.1% of overall cues (Table 5). Out of the nine types of cues recorded, only emoticons and symbols were both predominantly challenge heavy, while quotations marks and exclamation points were each barely over the 50% challenge mark. Threat level of distress response types (Table 6) contain almost all of the swear words, word languages, and names used in posts. This does not mean that those characteristics are inherently negative but that negative posts had those characteristics in common.

Table 4

Salient Cues Adaptive Response, Issue, Claim, and Structural Analysis

Code	"	!	...	emoticon	name	QQ	swear	symbol	word language	No Cues
Challenge	3.7%	18.1%	5.8%	3.5%	0.2%	2.1%	0.2%	3.7%	5.1%	57.5%
Threat	5.9%	27.0%	11.7%	1.6%	0.8%	3.9%	9.0%	0.0%	17.2%	23.1%
Complaint	8.5%	28.0%	11.8%	0.9%	1.4%	5.2%	6.2%	0.9%	18.5%	18.5%
Firestorm	2.2%	2.2%	6.7%	1.1%	0.0%	1.1%	12.4%	0.0%	13.5%	60.7%
Friendly	3.8%	16.5%	5.1%	5.5%	0.0%	0.0%	0.0%	5.5%	1.3%	62.3%
Helping Others	4.3%	19.6%	8.7%	4.3%	0.0%	0.0%	0.0%	4.3%	4.3%	54.4%
Service Help	1.1%	19.8%	8.8%	1.1%	0.0%	7.7%	0.0%	0.0%	8.8%	52.8%
Major Claim	3.8%	21.7%	8.4%	2.9%	0.0%	0.0%	0.0%	0.0%	0.3%	62.9%
No Claim	3.2%	24.7%	4.4%	1.9%	0.0%	0.6%	3.2%	1.9%	8.2%	51.9%
Refutation	8.2%	24.9%	11.0%	1.3%	0.9%	5.4%	6.3%	5.0%	16.4%	20.5%
bias	8.8%	26.0%	11.8%	1.4%	1.0%	4.1%	2.7%	1.7%	14.9%	27.7%
pro-academic	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	50.0%
website	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	80.0%
No Evidence	2.2%	17.6%	5.2%	4.9%	0.0%	1.9%	4.5%	3.7%	2.2%	57.7%
One Sentence	1.3%	13.7%	4.7%	4.0%	0.3%	0.3%	2.0%	3.7%	4.7%	65.3%
Multi Sentences	5.0%	28.1%	9.2%	2.7%	0.0%	4.2%	5.4%	1.5%	9.2%	34.6%
Paragraph +	13.4%	28.6%	13.4%	0.0%	1.7%	5.9%	2.5%	1.7%	22.7%	0.1%

Table 5

Analysis of Salient Cues and Content Structure in Challenge Response Posts

Code	Accommodation	Support Seeking	Problem Solving	Info Seeking	Self-Reliance	Negotiation	Challenge
" "	28.1%	0.0%	18.8%	0.0%	6.3%	3.1%	56.3%
!	27.8%	6.0%	6.0%	7.3%	5.3%	3.3%	55.6%
…	20.0%	1.8%	7.3%	12.7%	3.6%	0.0%	45.5%
?? or !?!	0.0%	15.8%	5.3%	31.6%	0.0%	0.0%	52.6%
Emoticon	65.0%	5.0%	0.0%	0.0%	5.0%	0.0%	75.0%
Name	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	33.3%
Swear	0.0%	0.0%	8.3%	0.0%	0.0%	0.0%	8.3%
Symbol	70.6%	0.0%	23.5%	0.0%	5.9%	0.0%	100.0%
Word Language	4.5%	9.1%	6.1%	3.0%	4.5%	4.5%	32.3%
% of All Cues	21.7%	4.8%	7.5%	6.3%	4.1%	2.2%	53.4%
1 sentence	57.0%	4.0%	3.7%	5.3%	5.7%	1.7%	77.3%
Multiple Sentences	23.0%	11.1%	7.5%	6.7%	6.7%	1.6%	56.7%
Paragraph or More	2.6%	6.9%	15.5%	8.6%	2.6%	2.6%	36.2%

Table 6

Analysis of Salient Cues and Content Structure in Threat Response Posts

Code	Opposition	Delegation	Helpless	Escape	Isolation	Submission	Threat
" "	25.0%	9.4%	6.3%	3.1%	0.0%	0.0%	43.8%
!	19.2%	9.9%	7.9%	5.3%	0.7%	1.3%	44.4%
…	23.6%	7.3%	14.5%	3.6%	0.0%	5.5%	54.5%
?? or !?!	21.1%	15.8%	5.3%	5.3%	0.0%	0.0%	47.4%
Emoticon	5.0%	10.0%	5.0%	5.0%	0.0%	0.0%	25.0%
Name	33.3%	0.0%	33.3%	0.0%	0.0%	0.0%	66.7%
Swear	70.8%	8.3%	4.2%	4.2%	4.2%	0.0%	91.7%
Symbol	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Word Language	37.9%	16.7%	6.1%	4.5%	0.0%	1.5%	67.7%
% of All Cues	23.7%	9.7%	7.2%	4.1%	0.5%	1.4%	46.6%
1 sentence	14.7%	2.7%	3.7%	1.3%	0.0%	0.3%	22.7%
Multiple Sentences	17.1%	12.3%	7.5%	3.6%	1.6%	1.2%	43.5%
Paragraph or More	19.0%	17.2%	12.9%	8.6%	1.7%	1.7%	62.2%

Discussion

The aim of this study is to implement rhetorical civility in social media by developing a qualitative meta-synthesis of existing literature reviewing social media

psychological analysis, engagement habits and practices, and the interaction characteristics of users in an attempt to recognize heuristic needs of those participating in social media dialogue. Using the conclusions found from the literature review this study implemented qualitative sentiment analysis research to evaluate the discussion between companies and their customers on social media, focusing on how response to external stimuli can be a factor in engagement practices between everyone within their Facebook social networks. This existing research formulated from the meta-synthesis of literature review is used in the qualitative sentiment analysis to review two business social media pages on the world's largest social network, Facebook. Using Gaspar et al.'s *Adaptive Functions and Corresponding Affective Expressions of Coping* diagram (see Appendix Figure 1) one of twelve adaptive functions were labeled to each of the 1,023 Facebook posts reviewed to determine commonalities in post content, structure, and issue between those responding negatively in these communities. In search for the best practices needed in building a social media authoring heuristic, research was implemented to determine a method of teaching current CMC users how to engage socially and receive positive and reciprocal disclosure of information and interaction from others.

In reviewing previous research on social media and CMC engagement, the literature review of this study develops distinct needs that CMC and social media users should incorporate into their writing habits to encourage engaging, likeable, compelling, and persuasive content. Meta-synthetic review on dozens of works has created six distinct additions to apply in computer-mediated and social media communication and three critical engagement methods to avoid in those scenarios as well. These recommendations in content will help users succeed in rhetorically engaging with and receiving reciprocal

disclosure of information from others within their digital social communities and should be incorporated into a social media writing heuristic for businesses and social networks to provide members in their social media networks. Table 7 has listed these recommendations for a heuristic to be developed for social media content development and engagement. Following the recommendations provided by the Social Identification/Deindividuation (SIDE) model of social engagement, social media users should include more social cues and markers in speech when writing CMC content. Without the vocal tones provided by natural speech, users need reaffirmation as to what is being intended. The use of social cues in text is beneficial in dialogue by providing subtle directions and gestures on conversation progression through word painting, use of lexical surrogates, and other replications of verbal and social cues, helping create more persuasion, empathy, and motivation for engagement. As well, emotional framing of messages can be important in converting user opinions. By matching one's CMC response with the same emotional tone that is associated with the original discloser's emotion, social media users can increase persuasion over other users in an effort to create familiarity and deflate anger.

Following SIDE is the *cues filtered out theory*, reinforcing the need for clues or "cues" within CMC text. Along with verbal cues missing from CMC and social media engagement, nonverbal cues are also missing from the normative language engagement practices that usually occur in face-to-face interactions. Without hand gestures and facial expressions, intent and emotion can be lost in communication; therefore, it is a necessity for a social media authoring heuristic to include nonverbal cues in its recommendations for enhanced user engagement. Such cues include the use of emoticons (:P), underlined

words or phrases, and the use of multiple exclamation points and question marks. The more cues used in CMC the stronger empathetic ability for others to understand content, creating more potential engagement and sense of connectedness and unity between group members. Issues may also arise if nonverbal cues are lacking in occurrence, as is the case in the recommendation to remove minus features within text. This removal of certain normative grammatical features can cause unintended and ill effects, so the heuristic should advise writers to use proper capitalization, punctuation, and spelling in their online engagements—unless the change occurs in use of symbolic word language specific to certain contexts.

Heuristic development should also focus on grammatical features for content. The *hyperpersonal perspective* advises to add contextual clues on one's point of view, helping to increase motivation by others to spend more time constructing messages that relate the their audience's specific and defined viewpoint. As well, adding more positive pronouns with a higher lexical diversity, sophistication in language, and sentence complexity can add coherency from greater personalization of text, facilitating a close group unity effect on heuristic users from disclosure of information by others, causing familiarity between those involved. For the group as a whole to come together in unity they must first recognize the issues at hand, establish criteria for acceptable standards, and assess the negative consequences of all potential outcomes. These three requirements (Table 7) for functional group engagement are aspects of the *functional model* that should be included in a heuristic to increase the overall quality of communication within social communities.

Meta-Synthetic Literature Review Analysis and Recommendations

Needs Assessment for Rhetorical Civility on Social Media

Theory/Model		Improve Content by	Effect	Improves Persuasion By	Improves Group Engagement	Studies Confirming
SIDE	Add	social cues	less ambiguity	improved content = more strategies to improve impression	improved strategies = more potential for positive engagement	Lea & Spears, 1991; 1994; 1995; Hancock & Dunham, 2001; Desteno et al., 2004
		markers in speech				Hancock & Dunham, 2001
Expectancy-Value	Add	salient clues to text	ability to consider traits adds motivation	improved clues= accurate attitude assessment	accurate attutide assessment= more motivation for communicaiton	Desteno et al., 2004
Cues Filtered Out	Add	nonverbal cues	more cues = stronger reception	stronger reception= more engagement	more engagement= greater sense of connectedness	Hancock & Dunham, 2001; Riordan & Kreuz, 2010; Spears & Lea, 1992; Walther, 1997; Ekman & Friesen
		emoticons				Kreuz, 1996; Riordan & Kreuz, 2010
		underline				Kreuz, 1996
		exclamation point				Hancock & Dunham, 2001; Riordan & Kreuz, 2010
	Remove	minus features	reinforce language standards	commonality in writings= more coherency	more commonality/coherency= more empathetic engagement	Riordan & Kreuz, 2010
Emotional Framing	Add	match message emotion to discloser's emotional framing	persuasion based on emotion	improves adaptive response to situation	deflated anger results in more enaging conversation	Johnson & Tversky, 1983; Desteno et al., 2004
Hyperpersonal	Add	contextual clues on view	more motivation to engage	More motivation= more time constructing message	more time constructing message= more coherency and intimacy	Walther 1996, 1997, 2006, 2007; Hancock & Dunham, 2001;
		positive pronouns	greater intimacy	greater personalization with others	close group unity	Walther 2006
		sophistication in language	greater care in language assembly			Walther 2006
		lexical diversity	evaluated more positively			Bradac, Courtwrite, & Bowers, 1980
		sentence complexity	more coherency			Walther 2006
Functional	Add	thoroughly understand problem	removes abiguity and misunderstandings	addresses key points needing discussion	improved decision making causes more coherency and engagment	Hirokawa & Salzar, 1999; Orlitzky & Hirokawa, 2001; Li, 2007
		establish criteria for standards				
		assess negative consequences				
Uses and Gratificatio	Remove	ambiguous text	more coherent content	more details= more engagement from others	more engagement= greater sense of connectedness	Friedman, 2013; Vishwanath, 2014
		autonomy	regulate one's self and message through conscious self-awareness	self-regulation= more persuasive communication	more persuasion = more knowledge transferrance	LaRose, 2010; LaRose & Easin, 2002
Self-conception	Remove	social feedback of negative commentary	Removes ability for users to self-conceptualize themselves from negative comments	less feedback= less negativity, as users will search for other ways to receive disclosure	self-conceptualization from positive only messages increases positive postings, limiting negative engagement and firestorms	Harter, 1993; Heatherton & Nichols, 1994; McKenna & Bargh, 2000

In generating the heuristic for social media authoring, *uses and gratifications theory* should also be taken into account. Ambiguity should be removed from content to increase the potential for other users to find topics and concerns that interest them in the post, causing more engagement and disclosure of information and increasing the sense of connectedness between those in the social network. As well, CMC and social media users should remove autonomy from their engagement practices and habits. By focusing on the writing itself, users can remove the mindless and automated responses that can become habit online and instead refocus attention to the audience in mind. In using the *uses and gratifications theory* with the heuristic's development, it is interesting to note that it may be possible that firestorm users are feeding on this sense of education and watchdog status that their negative engagement provides them, forgetting the focus and social connection between users. By using a heuristic, writers are forced into thinking of their audience's needs and perceptions, and firestorm activity could be positively affected. Finally, *self-conception theory* points to the heuristic's need to remove social feedback to those displaying negativity in social engagements. Since CMC users positively feed on the disclosure of others towards their content, it is essential that the heuristic guides social media users to avoid directing content towards those who provide negativity (Table 7).

This study leaves many questions for future researchers in social media sentiment analysis. In determining why submission, isolation, negotiation, and escape were used considerably less than the other negative affective statements, one must look toward the effects of anonymity on users of CMC. Since the number of negotiation affective responses are also considerably limited, as compared to other challenge level responses, it

would seem that CMC users are in no real motivation to take another person's perspective, at least when communicating on a business's social media community as this study revealed. The low percentage of times the escape affective coping mechanism was used backs these findings. With social media users lacking the cues and motivations that can persuade self-concerning and healthy conversation factors, CMC and social media users may feel there is little need to run from digital social scenarios or to submit to another person's needs and points of view.

The issue is that since many social media and CMC users lack SINE in their affective coping skills online, there is a raised reliance and usage of the opposition coping mechanism, an enraging, explosive, and angrily projecting removal of environmental constraints that seems to dominate much of social media usage found in the research. With SINE receiving just 6.9% of commentary in the study, while opposition received 15.2%, there is a clear differentiation between the extreme removal of constraints displayed by those using opposition and other affective responses to external stimuli. In fact, those who responded with helplessness, having characteristics of self-doubt and discouragement, had nearly as many occurrences (6.4%) as SINE (6.9%). As well, delegation—the whining, shameful, and self-pitied response of users in search of their remaining limits of resources, had an extremely larger disbursement than those within SINE (8.6%).

It would seem that these SINE families are absent for a reason, as the distancing factors from CMC could cause users to lose the ability to blame themselves, yearn, fear, or take other's perspectives, each of which seem to be issues of lacking empathetic associations with others. This lack in SINE coping abilities may prove to be the answer in

how to deal with firestorm activity online, as users of a social media authoring heuristic may display these coping abilities if triggered in the right way. Since social media users are removed from the social cues, localization, and close proximity of others in their online communities, these users may already feel isolated and withdrawn from others around them, which can be useless in coping in an emergency or time of stress. As well, escaping contingencies online provides CMC users no benefits in their financial or other restoration needs, which seemed to be a commonality amongst many of the complaints and requests of services. Although the adaptive responses involved in SINE can produce valuable persuasive outcomes in face-to-face communication, there seems to be an absence of its usage and need online. Although it is out of this study's scope to determine if the users reviewed in research had previously implemented support seeking, information seeking, problem solving, accommodation, or some other form of challenge affective response, it is clear that these users found Facebook to be an appropriate outlet for opposition, delegation, and helplessness.

With firestorms and complaints both having over 20% of their usage involving challenge-based responses, there is some question as to the basis of firestorm activity. Although much of what was found in the study shows complaints and firestorms being stemmed by negatively reacted interactions, there are still a large amount of responses that make what could be seen as negative remarks, even though they are actually doing so to provide positive outcomes for themselves or others. Another compelling factor in firestorm and negatively responded engagement occurs in the type of evidence provided by those arguing, as one would think those refuting an issue would provide more than biased and generalized statements in their arguments. There could be a reason for this

lack in anecdotal evidence, as one limitation to this study was the format of Comcast's Facebook page. In coding, the study looked as to how people were presenting their information in three possible ways: whether in a biased format or with cited sources, via a qualified academic/professional articles or proof of evidence, or via websites which may or may not be qualified. Although the webpages were not checked for validity, accreditation of each source was determined by their name recognition, such as CNN, MSN, or some other news outlet. The type of evidence provided is normally a factor on Facebook because users are allowed options of posting photos and linking external pages to posts. However, on Comcast's webpage it seems they changed their user posting abilities to be strictly text-based, which removes the constraints of photo or document postings and could have significantly limited each commenter's ability to cite sources for their complaints. This posting format does still allow for webpage citation and external linking, which was found occurring on the Comcast page in commenter postings. This change in posting ability was not noticed in coding until a commenter pointed this fact out, mentioning, *"I love how the page won't let you post pictures or rate the business like most business pages."*

When it comes to sentence structure, study results point to some interesting findings. With one-sentenced posts being coded as a challenge 77% of the time, there seems to be a correlation between length of post and how the writer adapts to the external stimulation occurring. With 62% of posts that were a paragraph or longer being labeled threat level distress responses, there is a need for future research to dive deeper into social media analysis and the structure and length of user responses. One limitation to this analysis is in the actual outlook of the writers of one-sentence comments, as less text

can be harder to determine favorable meaning. Due to this issue, many one-sentence posts were labeled as uncodeable to deter from any false-positive analyses.

Review of this study's research into sentiment analysis found many implications for the future development of a social media writing heuristic. Such heuristic needs to encourage social media users to acknowledge the viewpoints of others in their writings, a method of facilitating the negotiation coping family. By forcing heuristic users to review, become aware of, and respond with the insight of others, users may rely on opposition or delegation coping less in their engagements and thus respond more positively. These heuristic users should also explain their points of view obviously, with direct claims and meaning of intended insight as to what that individual wishes to see occur. These individuals should also provide evidence for refutations, as those who used academic, professional, or unverified web sources having a higher rate of positive challenge affect (as seen in Table 3). Responses should also include longer sentences, instead of one-liner responses. With 77% of one-sentence statements coded as a threat, there is real concern that the ambiguity of one-line responses could have a strong association with texts being perceived as negative due to lack of content to help make informed decisions. Heuristic insight should advise writers to write several sentences, never displaying just one, removing ambiguity and the reliance on stereotypes and emotion in response and review by others.

Qualitative sentiment analysis into social media authoring also found insight on salient cues in text, as word language was used 67.7% of the time by those in threat level response (Table 6). This may be due to those users portraying a threat level response were in need of restoration from some injustice and thus were forced to spend more time

authoring and providing insight on their emotions in their text. By advising writers to reflect on the emotions they wish to portray in the writings, heuristic users may incorporate emotion, such as with popular acronyms like “lol” or “haha,” in their writings and create familiarity with others. Emoticons were found to be extremely one-sided towards positive challenge responses. Heuristic users should be prompted to describe their emotions with recreations of verbal and physical feelings and those corresponding manifestations in character and body language. With this prompt, heuristic users can capitalize on the removal of ambiguity through emoticon and word language usage and create meaningful associations with others through salient cue reciprocation in discussion.

Conclusion

Overall, this study provides many insights for future research. With social media’s popularity increasing rapidly, there is little question that knowledge on how to increase rhetorical civility and coherency between online users is needed. With businesses and governments now relying on social media to reach their intended and sometimes unintended audiences, a social media authoring heuristic may be necessary in creating coherent, contextual, and engaging content. Internally, companies can offer this heuristic in their closed, employee-only social networks as a method of building high quality relationships and developing reliable and competent group decision making abilities. Externally, the social media authoring heuristic can help businesses reach their customers more effectively by requesting users to follow the guide before posting in discussion. With many customers looking to social media for answers on product or service related issues and injustices, the development of a coherent and engaging

community from guidance by a writing heuristic could be the balancing factor needed in removing and preventing negative and firestorm activity, while increasing the response level of company service departments by more accurately assessing the needs of complaints by customers due to increased contextual data.

Technical communications as a discipline can learn and implicate new meaning and uses to a social media authoring heuristic. With technical communication occurring across continents and cultures, there is also a need to increase communication quality and coherency. Furthermore, technical communication in college is growing, with social media discussions becoming the norm in undergraduate and graduate work. Educational institutions can evaluate and develop a heuristic that incorporates both the meta-synthetic and sentiment analyses found in this research to fit the needs of students and employees in their work. Future research should combine results found in this study to create and test the effects of the heuristic in CMC and social media outlets and determine which recommended features provide the most needed advancements for a greater and more chivalrous online social network.

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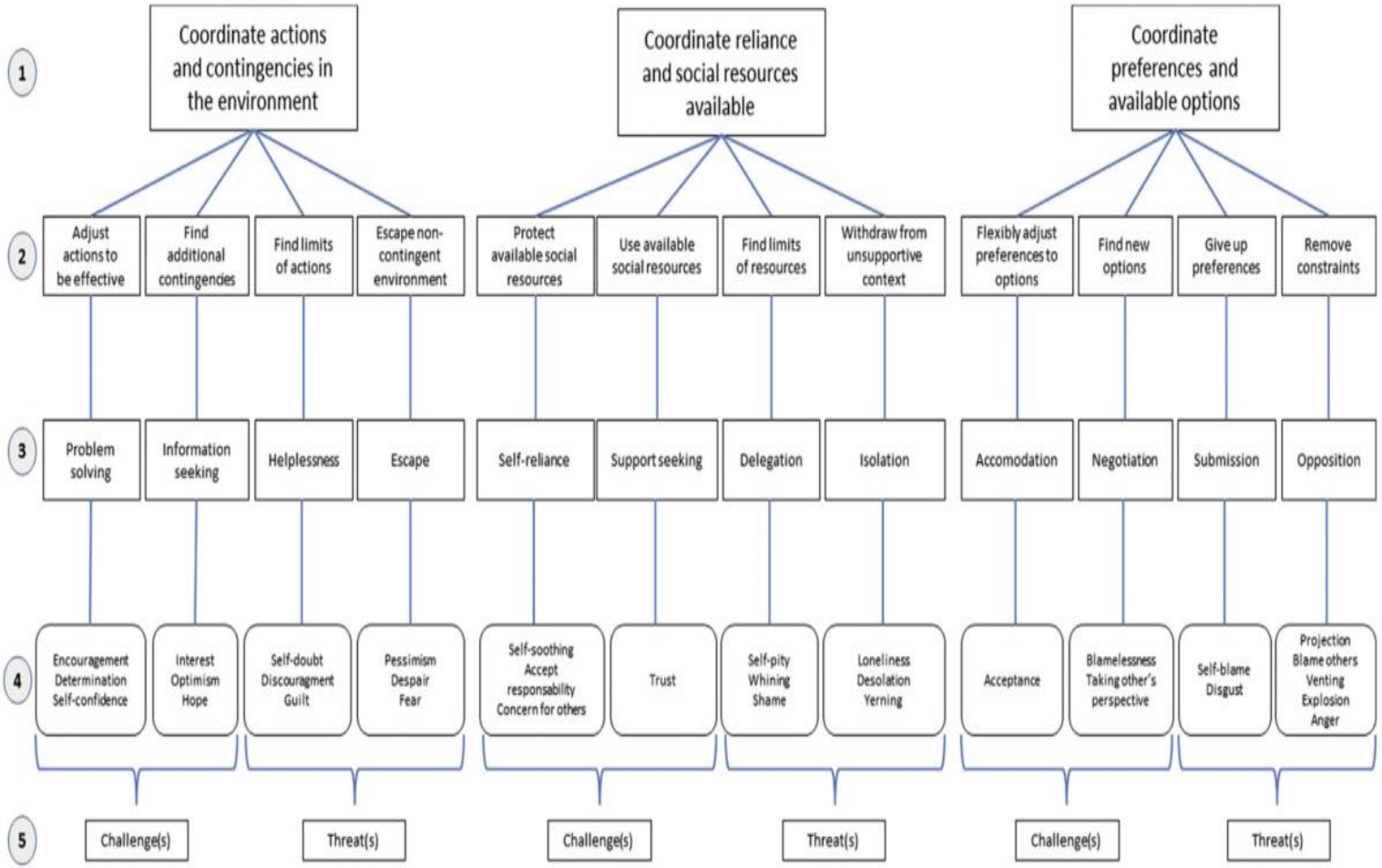
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APPENDIX A

ADAPTIVE FUNCTIONS AND CORRESPONDING AFFECTIVE EXPRESSIONS OF COPING


1
Coordinate actions and contingencies in the environment
Coordinate reliance and social resources available
Coordinate preferences and available options
2
Adjust actions to be effective
Find additional contingencies
Find limits of actions
Escape non-contingent environment
Protect available social resources
Use available social resources
Find limits of resources
Withdraw from unsupportive context
Flexibly adjust preferences to options
Find new options
Give up preferences
Remove constraints
3
Problem solving
Information seeking
Helplessness
Escape
Self-reliance
Support seeking
Delegation
Isolation
Accomodation
Negotiation
Submission
Opposition
4
Encouragement
Determination
Self-confidence
Interest
Optimism
Hope
Self-doubt
Discouragment
Guilt
Pessimism
Despair
Fear
Self-soothing
Accept responsability
Concern for others
Trust
Self-pity
Whining
Shame
Loneliness
Desolation
Yerning
Acceptance
Blamelessness
Taking other's perspective
Self-blame
Disgust
Projection
Blame others
Venting
Explosion
Anger
5
Challenge(s)
Threat(s)
Challenge(s)
Threat(s)
Challenge(s)
Threat(s)