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The Technological Factors of Reddit: Communication and Identity on Relational Networks

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THE TECHNOLOGICAL FACTORS OF REDDIT: COMMUNICATION AND

IDENTITY ON RELATIONAL NETWORKS

by

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THE TECHNOLOGICAL FACTORS OF REDDIT: COMMUNICATION AND

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The relational network *reddit* is one of the most popular and visited websites on a global and national (United States) level. Communication on reddit lends itself to intergroup communication in that reddit users engage with audiences from ingroup, outgroup, and mixed audience compositions. Reddit's voting system allows for negative and positive feedback to enhance or impede on one's message. I examine how these technological factors influence a number of communicative and identity processes: (a) identity salience, (b), identity gaps, (c) group and interpersonal evaluation, and (d) accommodative language. Drawn out of intergroup contact literature and theories about group processes and technology, I hypothesize and question how each technological factor maps onto each of the aforementioned outcomes. By analyzing each technological factor, I am able to understand how audience composition, valence of content, and nature of feedback have varying impacts on communication.

I created an online experimental interface that simulated reddit's user interface and technological affordances. A total of 316 participants entered into the online discussion board and contributed a comment to an ongoing discussion about their thoughts and beliefs on 4th of July. Two time segments were used in the study, revealing a 3 (audience composition: ingroup, outgroup, mixed) X 2 (valence of content: hostile, neutral) X 2 (feedback: negative, positive) between-groups design.

Results revealed that audience composition influenced the enacted-communal identity gap in that users had a lower enacted-identity gap with ingroup and mixed audiences compared to outgroup audiences. Similarly, the enacted-communal identity gap, interpersonal evaluation, and group evaluation measures were dependent on the valence of the conversation. However, identity salience and the personal-enacted identity gap did not fluctuate based on any of the technological factors. Accommodative language was higher in ingroup conditions and when the valence was neutral. Time 2 results revealed that negative feedback influenced a perception of change in the enacted-communal identity gap and in the group evaluation measures. These results add to existing knowledge on the influence of reddit's primary technological factors on group and identity processes and is informing of how social recommendations can change a user's perception of their message.

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Although the byline of a dissertation includes just on individual, the dissertation is a culmination of events that could not have happened without a myriad of other individuals

First, I could not have even started a dissertation without the support, patience, and selflessness of my husband, Johannes. Some people along this journey have said that I seem relaxed and in control. But what they don't know is that you were the one that endured all my frustrations, triumphs, and the "I'll never finish this thing" conversations. My doctoral degree would not be a reality without you.

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On February 8th, 1996 John Perry Barlow wrote "A Declaration of Independence of Cyberspace" in light of the Communications Decency Act. The manifesto presented some of the most matter-of-fact perspectives of technology and its future reach on the world:

> We are creating a world that all may enter without privilege or prejudice accorded by race, economic power, military force, or station of birth. We are creating a world where anyone, anywhere may express his or her beliefs, no matter how singular, without fear of being coerced into silence or conformity.

Barlow's statements on the developing state of cyberspace in 1996 have become a foundation for many developed and popular social networks in 2016 such as Facebook's mission to make the world more connected, Twitter's mission to give everyone the power to share ideas without barriers, and reddit's mission to have open and authentic discussions. The overarching clause of these missions is to create opportunities to maintain new and existing types of relationships through the use of technology.

However, Barlow's declaration implies that cyberspace is one large homogenous group: "Where there are real conflicts, where there are wrongs, we will identify them and address them by our means. We are forming our own Social Contract." Although social networks have thrived in number of users and activity, cyberspace is arguably comprised of various groups rather than one large group of users engaging in the same mission. With each platform come different sets of technological capabilities (e.g., 'likes',

comments, friends lists) and social constructions around them (e.g., friends lists do not include just friends but also coworkers, acquaintances, and family). In other words, each platform is not created equally and users create their own social collectives or social contracts according to shared identity, shared purpose, and the affordances of the platform.

Although most communication platforms subscribe to open and authentic dialogue, the ways in which dialogue is sparked, organized, and perceived are driven by the technological capabilities (i.e., affordances). Communication technology enables malleable and unique self-presentations (Hogan, 2010; Walther, 1996) and with the increasingly changing digital world, scholars need to take into account its influence on how various identities are impacted when individuals are communicating with those from different groups and cultural backgrounds. Further, understanding how identity and communication between social groups functions in a digital age is an important movement forward for scholars interested in identifying processes that contribute to or hinder constructive dialogue and interactions between social collectives.

In my study, I seek to understand changes in the perception of the self and one's communication in relation to a group, attitudes about groups and individuals, and language adjustments that are made within online dialogue. I approach this by building on several intergroup perspectives and identification dynamics. More specifically, addressing these aspects would add insight into how identity shifts based on audience configuration, valence (i.e. positive vs. negative) of the content, and the nature of online feedback. In this chapter, I introduce and define intergroup communication and detail some research using intergroup theory in a digital context. I also introduce the online

platform reddit and argue that reddit's affordances and participatory culture concern intergroup processes as well as fits within the idea of relational technologies and networks. The chapter concludes with an introduction to the specific technological factors and communicative outcomes pertinent to this study.

Identity and Intergroup Communication

Intergroup communication is concerned with how our affiliation with social collectives (e.g., cultural, racial-ethnic, national, gender) and corresponding attitudes toward self and others (e.g., stereotypes, prejudiced worldviews) shapes our interactions within groups for which belong and those for which we do not; referred to as *ingroups* and *outgroups*, respectively (Giles 2012; Tajfel & Turner, 1986). As such an individual enactment of various identities (e.g., ethnic-racial, cultural, national identity) in both face-to-face and mediated environments is an integral part to understanding research on intergroup relations. The foundational research on intergroup relations (and current work today) focused on intercultural and interethnic relations spanning a myriad of contexts and metatheoretical and disciplinary perspectives (Cheong, Martin, & Macfadyen, 2012; Martin & Nakayama, 2013). At the core of all these various perspectives are goals of better understanding how individuals with different ethnic and cultural identifications interact in different environments, integrate cultural practices from micro and macro levels, and develop and manage stereotyping and prejudicial views from a cognitive and linguistic perspective (e.g., Allport, 1954). In addition to understanding group-based dimensions, intergroup research also takes into account the individual or personal dimensions to human relations. Overall, intergroup theorizing helps scholars unpack the ideas, values, and language associated with different social collectives or groups and how

varying perceptions of the "other" influence interaction and vice-versa. Digital spaces differ from face-to-face contexts and provide new capabilities and opportunities for relations to be strengthened, weakened, and perceived differently.

Intergroup Communication in the Digital Age

Although large amounts of research exist on intergroup relations from various metatheoretical perspectives, research looking at new media and the digital environment have just begun to uncover the effects that mediated environments have on identity and the communication between individuals representing different social groups (Cheong, Martin, & Macfadyen, 2012). For instance, one cannot ignore social media's role in organizing the collective actions during the Iranian 2009 presidential elections or the uprisings of the Arab Spring in 2011. Pfister and Soliz (2011) maintained that the Twitter revolution to be a product of Twitter's capabilities to transcend a traditional one-to-many model of communication into a many-to-many scale where individuals can meet "publically" and in shared "spaces." The spread and increase in social media such as Twitter, reddit, and Facebook reveals the presence of multiple audiences, both public and private (boyd, 2011). As Paul Jones, a professor at University of North Carolina puts it, "Television lets us see the global village, but the internet lets us be actual villagers" (Anderson & Rainie, n.p., 2014). If the landscape of the internet affords individuals to be global villagers, then research should attend to how these individuals navigate these diverse audiences in order to understand how the presence of others paired with the architecture of communication technology can affect communication and identity.

Several scholars posit that intergroup relations can be improved through the use of technology as a mediator between minority and majority group members (Amichai-

Hamburger & Furnham, 2007; Amichai-Hamburger & McKenna, 2006; White, Harvey, & Abu-Rayya, 2015). Furthermore, research on the richness of the outgroup and involvement of self has been thoroughly analyzed and understood through Harwood's (2010) contact space framework, where individuals usually have a higher involvement and outgroup experience when the channel of communication espouses more visual and immediate cues.

Research on reducing prejudicial attitudes toward hostile or outgroup members has generally been successful, especially when contact was continued for longer durations (e.g., Walther, Hoter, Ganayem, & Shonfeld, 2015). Amichai-Hamburger, Haslar, and Shani-Sherman (2015) presented seven technological factors that can promote positive intergroup contact (e.g., anonymity, equality, fun) and argued that these factors could have more impact and feasibility than offline contact. Further, they deciphered between two types of online contact: structured and unstructured meetings. Structured meetings involve careful planning and integration of online meetings between group members, whereas unstructured meetings involve members freely entering into contact situations and leaving without restrictions. Few research studies have investigated unstructured meetings because of the lack of control within those environments.

The current study uses an unstructured meeting approach to understanding how group members in intergroup (i.e., between group members) and intragroup situations perceive others, their own messages, as well as other facets of the technological landscape. In doing this, I utilize the architecture of a popular online network that promotes the potential for intergroup interactions. I argue that the technological affordances and communal characteristics of the website *reddit* invite not only highly

salient group identities through the advent of subreddits, but also bolsters opportunities for *inter*group interactions. Online platforms share similar capabilities (e.g., visual anonymity, comment responses), yet promote different ways to use those capabilities and different cultures that emerge from them. Thus, it is important for researchers to analyze specific platforms to understand how, if at all, these platforms promote varying communicative outcomes. In the following section I present a brief history of reddit and its significance along with how reddit emulates a relational technology optimal for intergroup communication research.

Reddit as an Intergroup Platform

The social news aggregator *reddit*, "The Front Page of the internet", thrives itself on sharing and generating content that is voted popular by the community (Brudno, 2012). A recent Pew Research Internet Project report revealed that six percent of total internet users are on reddit (Duggan & Smith, 2013) and Alexa, a data analytics company, ranked reddit the 28th top global website and 9th United States website based on page views and global reach ("Alexa", 2016), yet little research in communication and identity has used reddit as a platform for research. Reddit was founded by Alexis Ohanian in June 2005 and later sold by Steven Huffman. The initial purpose of reddit was to serve as an aggregation platform, which provides links to content from other websites. However, reddit's surge in popularity has sprouted several groups creating their own content on reddit's platform.

Perhaps the most popular and high traffic event for reddit was in August 2012 when Barack Obama used reddit to perform an "AMA" or "Ask Me Anything" thread as a campaign strategy. Obama confirmed his identity on reddit through his official Twitter

page and proceeded to answer select questions from the reddit community. Although reddit gained positive traction from this event, a number of reddit users wrongly accused an individual for the Boston Marathon bombings that took place in 2013. In summer 2015, a mass of reddit users also formed a collective against the former reddit CEO, Ellen Pao, and demanded her resignation. The reddit community was also at the forefront of SOPA and PIPA protests in order to promote a free internet. Reddit is skilled at creating large massive groups of users to attend to a particular cause, person of interest, or even just a picture of a cat. A redditor (i.e., reddit user) from Massanari's (2015) ethnographic account of reddit quoted, "Redditors know what the comment stereotypical redditor likes, so they'll intentionally write comments that will appeal to the masses, eventually leading to garnering of upvotes" (p. 115).

Upvotes and downvotes are what make content more visible on reddit's front page. Each submitted link or question is subject to voting. Each thread contains a score, which is the difference between the upvotes and downvotes (e.g., five upvotes and two downvotes would equal to a score of three). The higher scored threads are pushed up for other users to see, while heavily downvoted items may be deleted or just not seen by most users. Figure 1.1 displays the highest scored items on the front page of reddit on February 14, 2016 for a nonregistered user of reddit. Each thread title includes the content within the thread and the number on the left of each thread is its score. Figure 1.1 also serves as an example of the diverse content and groups that use reddit.
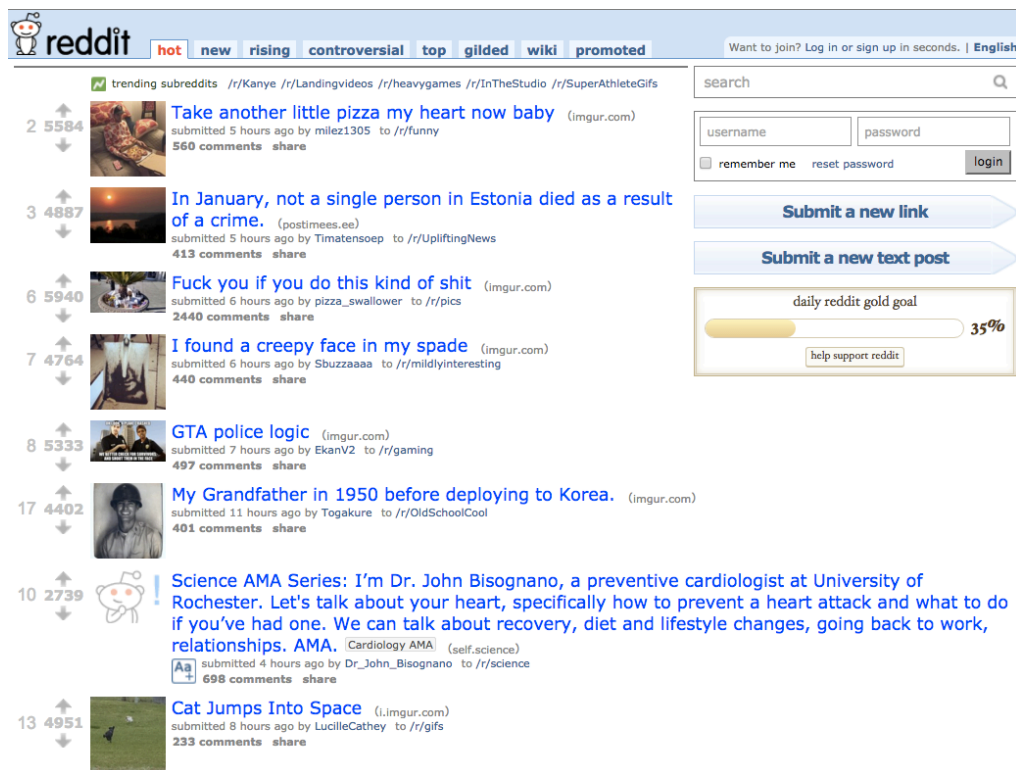
Figure 1.1.1. Front page of reddit on February 15, 2016. No login or subscribed subreddits are included.

Comments on each thread are also subject to the upvote and downvote feature, where the top comment is usually placed at the top of the thread (users can also choose to change the comment organization to most recent, best, or controversial). Research on the influence of reddit voting has revealed that users are highly influenced by the score of each thread in that users are more likely to upvote popular items and downvote non-popular items (Priestly & Mesoudi, 2015). This research suggests that reddit's scoring cues influence how individuals perceive and judge content. Priestly and Mesoudi (2015) also found that popular reddit comments from their qualitative analysis conformed to what reddit calls "Redditquette". One aspect of Redditquette is to not downvote

comments just because of disagreement, rather to rationally discuss differences with other users. Although every reddit community differs in its own understanding of Redditquette, the prevailing custom is to learn from difference rather than to shun and hate difference, a goal of facilitating positive intergroup contact.

In addition to voting content, reddit also affords and promotes the creation of *subreddits*, or sub-communities based on common interests or shared identity. These subreddits alert the audience to who is in the forum and who is in the audience frame (i.e., the salient context is primed by the subreddits). Reddit bolsters 796,965 subreddits as of February 2016 ("reddit metrics", 2016). On the topic of subreddits and the culture around them, Massanari (2015) stated that, "…reddit benefits from moving beyond the social networking model based on singular identities that other Web 2.0 sites employ…to ensure that members serendipitously stumble on new content when browsing the site" (p. 27). Users are encouraged to subscribe and follow several subreddits with the front page of reddit housing content from the most popular threads regardless of subscribed subreddits. Interestingly, the most popular subreddit in size of subscribers is r/AskReddit. This subreddit is dedicated toward asking questions to other redditors about anything, thus making the content about conversations rather than links to news articles or videos. Other subreddits range from national and cultural identity (e.g., r/UnitedStates, r/France), common interests (e.g., r/soccer, r/gaming), news (e.g., r/news, r/worldnews), and obscure subreddits that emerge in popularity because of humor and entertainment (e.g., r/wildavocadoes, r/showerthoughts). See Figure 1.2 for an example of the comments section of an r/AskReddit thread.

Figure 1.2. AskReddit thread created on February 14, 2016. Comments are ordered based on best or highest score. Scores are located to the right of each username with "points" as its value.

The affordance of voting on content coupled with subreddits make reddit arguably an optimal platform for unstructured intergroup contact. Relaying Amichai-Hamburger et al.'s (2015) seven technological factors for optimal intergroup contact, reddit's culture and technological affordances allow for these factors to flourish. For example, Amichai-Hamburger et al. position anonymity and control over physical exposure to be important factors in managing online intergroup interactions. Reddit utilizes pseudoanonymity where users are not allowed to use their real name or use avatars; rather, they should communicate according to the salient subreddit identity or topic of the thread. The temporal structure of reddit also allows for control over the interaction itself. Reddit

allows users to preview their posts before submitting, edit after submission, and delete

posts if desired. The organization of subreddits also allows users to easily find similar

others and form ties with several individuals from different subreddits. Lastly, reddit is

known for being an entertainment platform where users can playfully use images, memes,

and gifs to respond to each other. Massanari (2015) argued reddit as a place with a

"magical circle" where users create a, "…liminal, permeable boundary surrounding play

and gaming spaces where interactions are deemed somehow special or different from

interactions in 'non-play' areas of life" (p. 22).

Research on reddit in other areas has promoted the effects of voting content on

human cognition (see Priestly & Mesoudi, 2015), comment writing strategies in multiple

audience frames (see Gallagher, 2015), and an ethnographic look at reddit's participatory

culture and community (see Massanari, 2015). Unfortunately, no intergroup

communication research to date has utilized reddit's platform or features in empirical

research. This is unfortunate because reddit is a very popular platform that has a high

global reach ("Alexa", 2016). By researching the capabilities and characteristics of

communication on reddit, intergroup communication researchers can potentially use

reddit or build similar tools like reddit to facilitate contact between rivaling group

members. Interpersonal communication scholars analyzing the link between technology

and relational outcomes can also benefit from understanding the potential value of

reddit's capabilities. Facebook has long been seen as the prevailing platform for research

on relational communication and technology; yet, Facebook's capabilities and

affordances are starkly different than reddit. Massanari (2015) argued that reddit's

distinction from popular social network sites like Facebook or Google+ is the goal of

reddit being more about conversations between users within subreddits. Self-presentation in the form of pictures, adding friends, and managing relationships are not reddit's core. However, reddit does facilitate meaningful and personal interactions. My study seeks to understand both identification dynamics and intergroup processes at play when users are communicating in a reddit-type discussion thread and to further recognize which technological factors (e.g., audience, feedback) influence message processes.

   Reddit as a relational network. Although reddit has been described as an aggregation platform and social news-sharing website, two terms I use throughout this study to describe reddit is *relational technology* and *relational networks*. The term relational technology (i.e., R technology) was first introduced by Jeremy Rifkin (2001) to describe the shift between a production-based economy to a network economy through the commodification of personal relationships on social network sites. Fittingly, Facebook has become the giant of social network sites and positions its mission and core around sharing between family and friends. Stiegler (2014) adopted the term relational technology and relational networks and described them as, "…a space of positive and negative externalities that are known by its inhabitants – forming an irreplaceable knowledge" (p. 26). Thus, relational technology and networks focuses on the building and maintaining of relationships through the sharing of content. The term, networks, is used to hone in on how groups of individuals are connected in networks based on relational contexts (e.g., individuals will access a Japanese subreddit to socially maintain a network of individuals with a similar membership). Content sharing can erupt into positive and negative environments dependent on the nature of the content and conversations at hand.

The culture and nature of reddit fits well within relational technology despite its lack of friend lists, selfies, and status updates. As noted, reddit's conversations *about* content are more indicative of reddit than the actual linked content itself. Conversations are organized through subreddits, which are networks of members tied to shared interests and identities. It isn't the subreddit itself that draws subscribers, but the conversations, intellect, and social support that are garnered from the community (Massanari, 2015). These examples serve to illustrate relational networks, which serve to connect individuals through conversations and shared interests rather than traditional social networks which are more comprise of individuals in geographic and professional contexts. I use the terms relational technology and relational networks to describe the factors and features of reddit that are pertinent to the current study.

Technological Factors of Relational Networks

In order to better understand intergroup and individual relations on relational networks, I closely examine how three technological factors of relational networks like reddit potentially impact interpersonal and intergroup outcomes. Before introducing the factors themselves, I will explain what makes up a technological factor and briefly discuss its part in technological affordances and the social shaping of technology. First, I discuss the concept of technological affordances and its relevance in understanding technology and communication.

The concept of technological affordances hinges on the idea that technology provides individuals with specific materiality and is often coupled with technological determinism (Gibson, 1979). Technology is thus conceptualized as an independent variable causing particular outcomes on individuals (e.g., violent video games will cause

more violent offline behavior). A well-known technological determinist is Marshall McLuhan, who coined the term *the medium is the message*, giving credence to the technology itself as the driving force in how messages are perceived. A large body of research has rejected the determinist standpoint, namely sociologists and communication scholars. The argument that people socially construct their usage of technology is housed in the social constructivism viewpoint. A social constructivist would claim that technology is created and used for social purposes. Thus, society drives technology and not technology guiding society. Thus, my study examines the social shaping of technology, which positions technology and social factors as relevant to understanding the inherent link between technology and communication.

A social shaping view of technology borrows from both technological determinism and social constructivism. Baym (2015) explained social shaping as the middle ground between technological determinism and social constructivism. For example, reddit users socially construct their interpretation of karma (i.e., point score for each comment) and create their own validation for how much karma is good or appropriate karma. Karma is a special term that is used by reddit users to explain the scoring system of threads and comments. Reddit affords the easy computation of karma (i.e., the sum of upvotes and downvotes) and allows users to easily click up or down on each comment and thread. Thus, although karma has special social value to it (Massanari, 2015), it is also a product of the technological affordance itself. In fact, karma scores became such a huge influence on how comments were seen that reddit introduced hidden comment scores. This blocks users from seeing a comment score for a pre-determined amount of time, but allows the original comment writer to see the score. This example

clearly demonstrates how technology can enable and constrain the socially constructed aspects of technological affordances.

The materiality of technology partially contributes to how technology is used and perceived in everyday life. Hutchby (2001) argued that social constructions of technology could only really thrive within the specific affordances of the technology. This study explores the outcomes and impacts of socially constructed technological affordances. I call these *technological factors*, similar to how Amichai-Hamburger et al. (2015) described the digital landscape of optimal intergroup contact. These factors can facilitate particular types of interactions; yet, there are social constructionist aspects of each factor. I will briefly introduce each of these factors below and expand more on them in chapter two.

The first technological factor is called *audience composition*, which refers to the diversity of audiences that an individual can encounter on relational networks. Reddit affords users to browse between various subreddits (i.e., different groups) and the "all" front page of reddit includes content that is from any subreddit, not just a subscribed subreddit. Users can engage in conversations with ingroup members (i.e., members of the same group) or with outgroup members (i.e., members of a different group). Likewise, the audience could also be mixed with different outgroup and ingroup members. The technological affordance of audience composition is reddit's ability to parcel groups into subreddits and each subreddit usually creates its own banner to represent the salient group identity. However, the socially constructed aspect of audience composition is the messages themselves. Messages that are directed towards a particular group will influence other posters to preface their identity association within that topic (e.g., "As an

American, I don't understand the problem with guns"). Technology guides group affiliation (e.g., subreddits), but the group members create meaning and an understanding of the group.

The second technological factor is *valence of the message* or in other words the tone or degree of hostility in the conversation. Because many websites allow users to create their own groups or pages, almost any type of community or group is available to individuals (e.g., audience composition). The ubiquity of these communities and groups can consummate diverse viewpoints, which can potentially lead to hostile or extremist views. Since relational technology can afford visual anonymity, much more attention is geared at the content or valence of the message rather than user profile pictures or other social cues. When visual anonymity is activated, it has been known to promote more hostile and polarized messages (Duggan et al., 2014). Hostile messages versus neutral messages are likely to have varying impacts on identity and communicative outcomes. Anonymity serves as the technological affordance guiding the potential for hostile or extremist views. When individuals enter into conversations that are ridden with an extremist viewpoint, that social aspect should impact how they choose to enter or proceed with the conversation. In short, relational technology enables more concentration on the message itself, and this process is funneled by the visual anonymity allowed by the platform.

Finally, the third technological factor is the *nature of feedback* in online interactions. Relational technology affords new ways of interacting with others through the use of feedback. In today's digital landscape, feedback is largely in the form of what is called social recommendation systems (Kim, 2014). Social recommendations are

convenient ways of providing valence (e.g., like or dislike) toward online content. Facebook's like button is an omnipresent example of a social recommendation system. For reddit, the upvote and downvote affordance represents the audience's support or opposition toward a thread or comment. The process of receiving social recommendations has yet to be empirically investigated in an intergroup context, yet social recommendations represent a corpus of group opinion and therefore should influence group and individual attitudes. Since identities such as cultural and ethnicity are largely maintained and created through the process of self-identification against the presence of others (Belay, 1996), the presence of social recommendations is appropriate for the study of intergroup and interpersonal processes in a digital context. Feedback also plays a significant role in bolstering the impact and relational quality of online interactions in verbal form (Walther, 1996; Walther et al., 2011). Research on online feedback also suggests that its presence can bolster one's own identity commitment where verbal feedback is compared to no feedback (see Gonzales & Hancock, 2008).

Altogether, these three technological factors serve to drive much of the participatory culture of websites like reddit. It is important to note that other websites also emulate similar factors such as the discussion board SomethingAwful and 4chan. By analyzing the socially constructed aspects of technological affordances, research can extend knowledge on both deterministic and social constructive values of such platforms. My study seeks to understand how the technological factors of audience composition, content valence, and nature of feedback can influence a myriad of communicative outcomes such as identity salience, accommodative language, and group evaluation.

Identity and Communicative Outcomes

There are several established and pervasive ways to investigate and measure a social identity such as a cultural, ethnic or national identity (see Kim, 2007). I present three specific areas to investigate: (a) identity outcomes, (b) group and individual evaluation, and (c) accommodative language. First, identity outcomes deal with two main facets, the first looking at whether the social category or group (i.e., national identification) is a salient part of an individual's identity. The second identity outcome addresses how the message itself reflects different layers of social identity such as personal self-worth and communal attachment. Collectively, the degree of self-worth and perception of group messages should impact communication. The theories guiding these identity outcomes are social identity theory (Tajfel & Turner, 1986) and communication theory of identity (CTI) (Hecht, Warren, Jung, & Krieger, 2004).

The second area is concerned with group and interpersonal evaluation. When measuring for the presence and effectiveness of intergroup communication, the perception of the group versus the individual can inform what technological factors (e.g., the valence, the audience) influence communication, as well as inform social relations from the individual and group level. A theory guiding these evaluations is the social identity model of deindividuation effects (SIDE) (Reicher, Spears, & Postmes, 1995; Spears & Lea, 1994). The SIDE model is appropriate for the current study because of its proposition that visual anonymity lessens the impact of individual characteristics and instead increases group attraction and conformity. Research investigating both individual and group evaluation points to the importance of interpersonal behavior in tandem to group identification (Wang, Walther, & Hancock, 2009; Walther, 1997). Thus, the

current study seeks to understand the interplay of group and interpersonal evaluation and how audience composition, feedback, and valence of the content impacts evaluation.

Finally, the third area deals with the type of language that is influenced by technological factors. Since the current study adopts an intergroup perspective to understanding social relations on a reddit type platform, I adopt communication accommodation theory (CAT) (Giles, Coupland, & Coupland, 1991) in order to examine the language that individuals use when responding to hostile or neutral comments (i.e., valence of content) and while at the same time communicating under different audience compositions (i.e., ingroup, outgroup, or mixed audiences). CAT seeks to understand the verbal and nonverbal communicative strategies that individuals use to accommodate to others (Giles, Coupland, & Coupland, 1991). The degree of accommodative language is comprised of convergent and divergent strategies where convergence aims at reducing social distance and divergence representing behaviors meant to amplify or create social distance. Although CAT research initially and primarily focuses on face-to-face interactions, more research is beginning to look at accommodative language under computer-mediated conditions (see Fullwood, Orchard, & Floyd, 2013; Tamburrini, Cinnierlla, Jansen, & Bryden, 2015; Welbers & de Nooy, 2014). The current study examines the level of convergent language (i.e., accommodative language) in discussion board posts in order to understand how communicating with different audiences in addition to how valence of the content can influence the level of accommodative language. Figure 1.3 displays a conceptual model of my study with the technological factors acting as *influential agents* to the identity and communicative outcomes.

Chapter Summary

The current chapter has broadly introduced intergroup communication and how reddit serves to promote intergroup interactions as a relational technology. Specific technological factors of reddit's platform should have varying impacts on intergroup and interpersonal processes. In the second chapter, I go into more depth of each of the three technological factors by discussing research and theory of each factor. The third chapter details each of the communicative and identity outcomes that this study is concerned with by delving into each theoretical framework associated with each outcome. The fourth chapter includes the methodological design, platform creation, sample population, measures, and data analysis. Chapter five includes a presentation of results from hypotheses and research question testing. The last chapter discusses the significance of the results and how specific technological factors can potentially improve intergroup relations in the digital age.
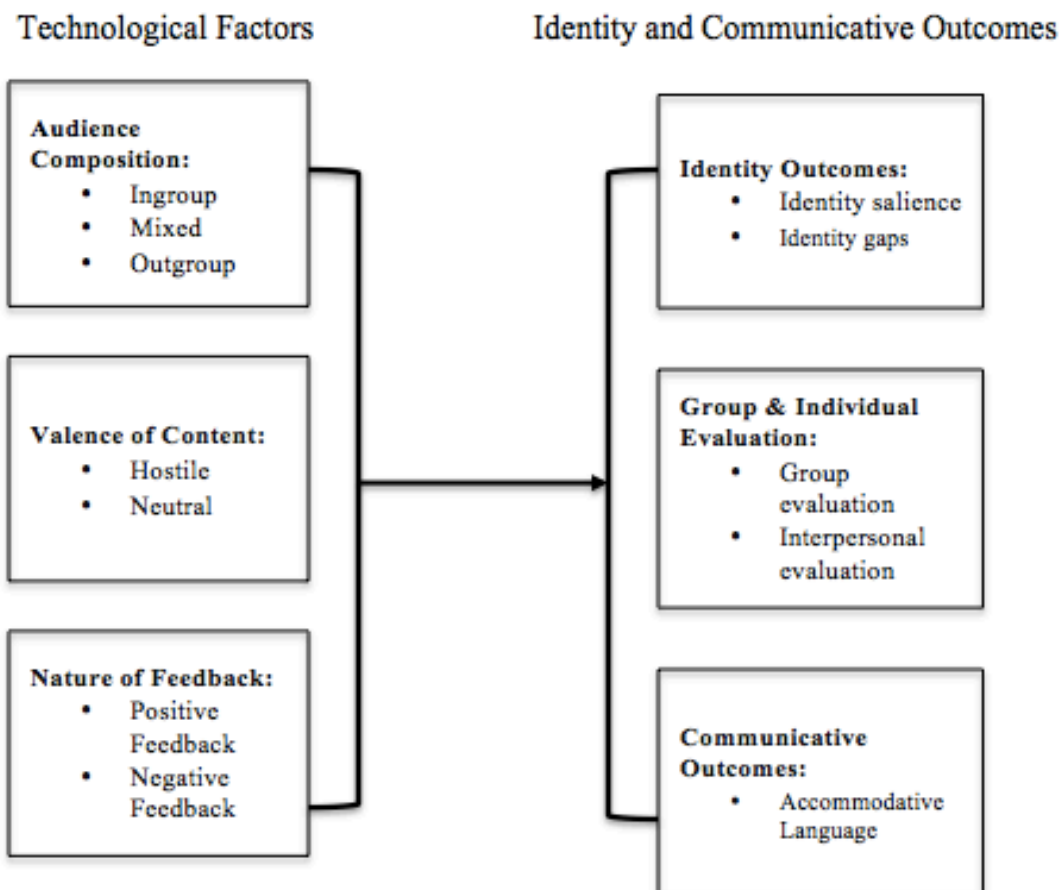
Figure 1.3. *Conceptual research model.*

CHAPTER TWO: TECHNOLOGICAL FACTORS OF RELATIONAL NETWORKS

The advent of relational technology centers on how individuals use technology to create and maintain networks through the sharing and consumption of information. These networks are primarily corralled by shared interests, which result in multiple groups and identities. In Chapter 1, I introduced the prevalence of relational networks, why they are important to examine and research, and how reddit serves as an optimal platform to investigate how relational networks invite intergroup communication. I also briefly introduced each technological factor and communicative and identity outcome and aligned them with how individuals use relational technology. In this chapter, I go into more depth with each technological factor and provide a theoretical lens to understand each.

My study investigates the intergroup nature of relational technology by presenting three specific technological factors of reddit that I argue can have varying effects on communication and identity processes. The three technological factors are: (a) composition of audience, (b) valence of content, and (b) nature of feedback. As previewed in Chapter 1, reddit affords subreddits to control how content is parceled by topic, yet the organization of content is controlled by the upvote and downvote capability. Users stumble upon new content from new subreddits based on the structure of the site, thus the composition of audience can vary greatly. This creates a prime space to study the potential promise of relational technologies for intergroup contact. When a user enters into a thread, the valence of the conversation is already set by previously started conversations. Consequently, most users who choose to enter into conversations may be impacted by the valence that has already been established. This refers to the factor called

valence of content. Finally, because reddit functions based on how the users vote on content and comments, the nature of feedback has a large impact on whether content is seen and the value of the content itself. Each of these factors is central to the hypotheses and research questions that are presented in Chapter 3.

Composition of Audience

The notion of increased contact with various "others" or living in a diverse world is not a new or novel idea. It has been well established and argued that our contact with others has increased and that we encounter many different individuals on a daily basis. In fact, much of the research on intergroup communication focuses on the antecedents and outcomes-consequences of positive or negative contact between members of different social groups (Pettigrew, 1998). Yet, scholars are just now beginning to turn to contact in digital spaces. These spaces are ripe for understanding intergroup relations, namely because of technology's ability to reduce social cues (e.g., physical appearance, voice, language) and bolster one's attention to the social identity or group. Relational technology provides new spaces and ways (e.g., new forms of communication) to manage attitudes toward other groups (e.g., Harwood, 2010; Wertley, 2014) and relations between outgroup and ingroup members.

This section presents the technological factor *composition of audience* and explains how digital landscapes such as reddit promote new audience compositions. I also present prominent terms associated with digital audiences, propose some theoretical explanations for communicating with such audiences, and position intergroup communication theory as prominent for studying composition of audience.

On reddit, the composition of audience is dependent on the subreddit, the content of the thread, and the discussion within the thread itself. Massanari (2015) explained how individuals organize themselves into their favorite subreddits, but then stumble into new subreddits and topics based on popularity and interest. Reddit promotes both ingroup and outgroup interactions through their front page and subreddit features. A user can enter into any public subreddit without being a reddit user and participate in any thread without being a subscriber. By comparison, a relational network like Facebook is largely comprised of 'friends' that the user knows to a certain extent, usually in an offline context. The composition of audience on Facebook is debatably less diverse than the audiences on reddit despite the fact that Facebook boasts a a billion of worldwide users whereas reddit has around 36 million users. Figure 2.1 displays a screenshot of the /all front page of reddit and shows the diversity of topics and groups that one might encounter on any given day (note that content shifts rapidly).

Although there is a scarcity of research on reddit's composition of audiences, many scholars have presented terms to explain how digital affordances lend us new audience configurations. Perhaps the most notable term is the "global village," which describes how technology enables individuals to access multiple groups and interests with physicals spaces becoming obsolete (McLuhan, 1962). The idea behind the global village has curated into terms such as the Twitter revolution, lending some evidence that our communication on such platforms like Twitter transcend our physical space and into different kinds of public spaces with others (see Pfister & Soliz, 2011). Some scholars position technology's ability to connect with audiences through a network(ed), perspective, where individuals create unique networks that are tied to various platforms
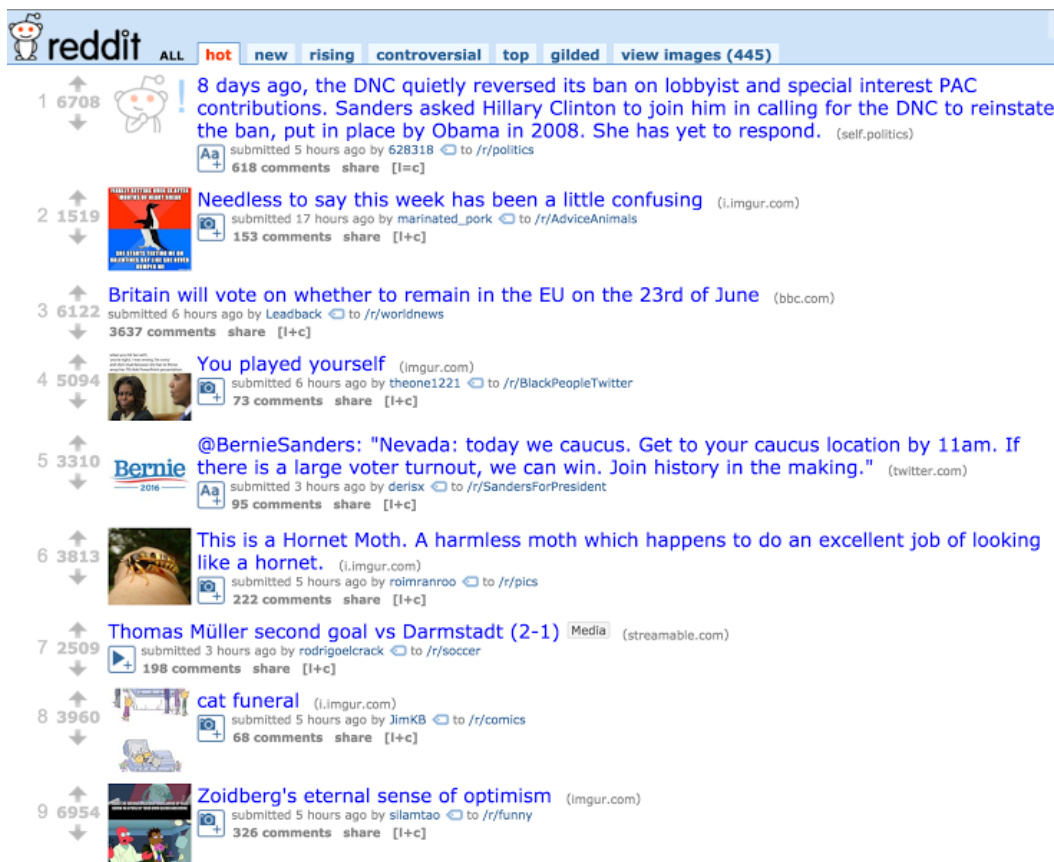
Figure 2.0.1. *Front page of reddit on March 26, 2016.*

and devices (Rainie & Wellman, 2012). Castells (2009) promotes the idea of mass

self-communication, where communication in the digital age is communicated by the self

but to the public masses. On public platforms like Twitter, YouTube, or reddit, users are

presenting the self to an audience that is not completely known to them. The temporal

structure of these platforms (e.g., asynchrony) also leads to future unknown audiences.

Baym (2015) explained this phenomenon as disembodied audiences. There are many

communication strategies for managing disembodied audiences and these strategies help

to explain how users on public platforms manage multiple identities.

Disembodied Audiences

Embodied audiences (i.e., offline interactions) are more known than online audiences, thus rendering a disembodied audience in online spaces (Baym & boyd, 2012). The disembodied audience varies on the type of platform and their technological factors, network size, and individual agency (Litt, 2012). For example, a text message between two best friends includes a clear sense of audience. But when looking at a public tweet or YouTube video, the audience ranges from not only the followers of the user, but also to audiences that may search for that content or accidentally stagger upon it. The impacts of disembodied audiences are argued to have varying impacts on communication strategies.

Litt (2012) argued that users imagine an audience and frame their message around that particular audience, even if other audience members are present. boyd (2007) presented the lowest common denominator when analyzing audience composition in digital spaces. The lowest common denominator includes creating a message for the intended and unintended audience so that audience members from both ends of the spectrum (e.g., best friend and employer) are included. Another disembodied audience communication strategy is to look at online posts through a private-public dichotomy (Marwick and boyd, 2014). A user can manage their posts by deleting ones they don't feel are relevant to other audiences and/or manage multiple accounts to manage each audience.

Many of these strategies fall on Goffman's (1959) prominent work on presentation of everyday self, yet these current strategies emphasize the unknown factor

that comes with disembodied audiences. In short, individuals enter into online environments having an idea of their audience but still may have no idea who might view, read, or respond to their message. How does an individual's communication vary when communicating with different types of disembodied audiences? Intergroup theorizing can help unpack the different types of audiences that individuals communicate with on relational networks.

Disembodied Audiences as Ingroups, Outgroups and Mixed Groups

The conception of audiences as ingroups and outgroups comes out of social identity theory (SIT), which posits that individuals see the world through social collectives and, in doing so, interpret ingroup and outgroup distinctions (Tajfel & Turner, 1986). An ingroup is defined as the group that an individual has demonstrated some affiliation with and would likely be termed as a member of that group by the self or others. An outgroup is a group that an individual has no association with and usually sees as different to oneself. There are many markers that signal ingroup and outgroup membership such as physical features and language (e.g., individuals using a minority language versus a majority language to mark ingroup/outgroup membership).

A great deal of research on intergroup relations emphasizes the ingroup favoritism and outgroup discrimination emerging from contact with others (Pettigrew, 1998). Whereas this is certainly an important aspect of intergroup relations to consider, not all of these interactions are tainted with overt prejudice and antagonism. If language and communication is a fundamental aspect of human relations, it is just as important to understand the nature of our communication and how it may shift in a variety of ingroup-outgroup contexts. Physical features are just one way to mark contrast between ingroups

and outgroups (e.g., White, Black, Asian). An online environment magnifies the ingroup and outgroup distinction and in unique ways.

Outgroup and ingroup markers online can be attributed to the platform itself, the type of networks on the platform, and the type of interactions that take place on the platform. Papacharrassi (2011) explained how audiences change with each social network site (SNS) such as Facebook or Twitter. The architecture of the technology determines the network, which in turn impacts communication. For example, Facebook lends itself to more interpersonal communication and relational maintenance among individuals who already have contact in a face-to-face realm (Krämer & Haferkamp, 2011; Hampton, Goutlet, Rainie, & Purcell, 2011). On the other hand, Twitter's networks comprise much more of public figures such as politicians and celebrities. Ultimately, the platform can greatly determine the network, which triggers a variety of ingroup and outgroup compositions.

As discussed in Chapter 1, reddit serves as an optimal platform for unstructured intergroup contact. The r/AskReddit subreddit is a fitting example of individuals encountering several compositions of audiences. Depending on the framing of the thread question along with how users choose to disclose their identity membership, users on r/AskReddit can encounter threads of just outgroup members, only ingroup members, or a mix of both outgroup and ingroup members. Furthermore, the outgroup members do not necessarily equal to just one outgroup (e.g., the outgroup is Japanese users), but can equal to multiple outgroups (e.g., Japanese users and Indian users). Reddit is unique in that it doesn't parcel users into a 'friends' or 'followers' list or a username/avatar, which can usually point to ingroup/outgroup distinctions. Members distinguish themselves through

discussions (e.g., As a scientist, I believe…). It is also worth noting most subreddits do not allow posting of user pictures or any sort of identifying information unless it is necessary. This leads to more visual anonymity, which also promotes more ingroup/outgroup configurations (Spears & Lea, 1994).

One question propelling the current study is, "How does interacting with ingroup and outgroup audiences on public platforms like reddit influence self-presentation and identity?" This question has only been partly addressed through research on Facebook (see Bazarova, Taft, Choi, & Cosley. 2012; Rui & Stefanone, 2013) and also self-presentations in light of different friend networks (Wolf & Pierson, 2013). Few research studies have explored unknown or disembodied audiences on public platforms. Because these public platforms have become so popular in user activity as well as its potential to help facilitate positive intergroup contact, it is critical that research attend to platforms outside of close relational ties like Facebook and into platforms that promote discussion with both ingroup and outgroup members.

In summary, the composition of audiences on relational networks is afforded through the computation of networks (i.e., audiences or groups) through interests, topics, and interpersonal ties. The current study is concerned with disembodied audiences on public platforms to better understand how ingroup, outgroup, and mixed audiences can impact communication and identity processes. Thus, composition of audience serves as a main construct in the current study with three levels or groupings (outgroup, mixed, ingroup). In addition to audience composition, users of public platforms enter into conversations that are already in progress. The next section presents the next construct in this study called valence of content. The valence is guided by both technological and

social factors and can also impact how individuals choose to self-present and identify with others.

Valence of Content

The internet has been argued to be a mass medium that alleviates conflict and disagreements between different groups (e.g., Amichai-Hamburger & McKenna, 2006; Marcoccia, 2012), yet the valence of messages on many platforms depicts polarized discussions that can be viewed as hostile and negative from an outsider's perspective (e.g., Kulik, Pepper, Shapiro, & Cregan, 2012) or be viewed as extremely positive. A recent Pew Internet Research Report found that hostile communication was more present on asynchronous platforms such as comment sections of news articles and discussion boards such as reddit (Duggan et al., 2014). Furthermore, these discussions are usually anchored in a cultural issue related to interracial relations (e.g., Ferguson), political issues, (e.g., "Thanks, Obama"), and social rights.

Reddit users have also been a target of promoting highly extremist views about social issues and prominent figures. One notable example is when a mass of reddit users posted hateful threads about the former reddit CEO Ellen Pao. These threads were so highly upvoted that many of them appeared on the front page of reddit where most users go to for new content. Thus, the valence of content in this situation was highly negative and hostile. How does an individual's self-presentation and overall communication vary when communicating under hostile environments versus neutral or positive environments? This section introduces valence of content as an important construct to consider in the investigation of communication and identity on relational networks. First, I will present a theoretical explanation for why certain online environments tend to have

highly extremist views compared to other online environments. Second, I will explain in more detail the valence of reddit conversations and how communication is influenced by different valences.

The shifting valence of online messages between various groups can be attributed to several factors such as different types of content (e.g., fandom versus political discussion) as well as different types of groups (e.g., common bond versus common identity groups) (Sassenberg, 2002). However, one prevailing characteristic that is often the blame of extremist views is technology's ability to filter out cues and provide visual anonymity. Reduced cues refer to less emphasis on an individual's physical appearance, but also include less information about the individual such as with the use of a username or pseudonym (Morio & Buchholz, 2009). The main argument is that visual anonymity leads into a process of deindividuation, generating less attention on individual characteristics and personal identity (Zimbardo, 1969). Traditional (i.e., face-to-face) deindividuation research has generally found support for deindividuation under anonymous settings (see Postmes & Spears, 1998 for review). Drawing out of deindividuation research, the social identity model of deindividuation effects (SIDE) (Spears & Lea, 1994; Reicher, Spears, & Postmes, 1995), proposes that anonymity in online groups also leads to reduced personal identity and provides a reinforcement of a social identity.

A prevailing outcome of research on SIDE is a heightened social identity and higher group attraction (Lea, Spears, & De Groot, 2002; Lee, 2008). Removing visual cues and personalized information about group members leads individuals to feel more part of their assigned group, thus increasing their group conformity (Reicher, Spears, &

Postmes, 1995). Furthermore, the presence of an outgroup will heighten social identity salience even more, which can result in less favorable attitudes toward outgroup members. However, research on the valence (e.g., hostile, neural or positive) of deindividuated interactions has yet to be fully explored in empirical research, as most research does not analyze conversational data. I will briefly explain some research that suggests other aspects that might influence aggressive or hostile environments.

Research utilizing SIDE's reduced cues approach to intergroup communication suggests that the valence of messages is highly contingent on the context (i.e., topic of discussion), identifiability to ingroup members, and the temporal structure of the platform itself. First, the context or topic of conversation should have an influence on whether a reduced cues conversation promotes a hostile or neural conversation. For example, Hughes and Louw (2013) researched aggressive behavior between online gamers and found that the contextual cues of the gaming environment promoted a heightened gamer identity (i.e., SIDE's proposition was supported). The heightened gamer identity led to more perceptions of aggressive behavior between individuals in multiplayer situations. Thus, technology's ability to filter out personal attributes and focus on the gameplay itself promoted individuals to act more aggressive toward each other. An online environment's ability to penetrate out personal attributes and focus on contexts that inherently have aggressive qualities should be considered when looking at valence. Another aspect to consider is how identifiable ingroup members are to each other.

A series of studies by Douglas and McGarty (2001) investigated hostile and flaming comments within competing groups by comparing identifiable groups to nonidentifiable groups. Results from three separate studies revealed that when ingroup

members were identifiable to each other, they were more likely to use abstract or group based language toward the outgroup. This means that when ingroup members are known to each other, they are more careful about their self-presentations to outgroup audiences, which lessens the likeliness of hostile behavior among the groups. The presence of anonymity in both the ingroup and outgroup should heighten more possibility of hostile behavior between groups.

Finally, the temporal structure of the platform also leverages the valence of messages in anonymous group settings. Taylor and MacDonald (2002) researched how geographically dispersed groups took part in small group communication over email. They found that although individuals identified as part of their assigned group, individuals did not report or communicate group polarization and group cohesion. The authors explained that this could be because of the asynchrony of emails, in that individuals might only experience group polarization during the first few minutes of conversation or during the first interaction. Another explanation could be that individuals started to see each other as individuals rather than as group members. On the other hand, Kulik et al., (2012) found that ingroup communication on asynchronous discussion boards regarding organizational challenges contained a high number of hostile messages. The valence of content is promoted through anonymity but also through the type of platform such that emails may lead to lower group identity and discussion boards lead to heightened group identity.

Overall, the valence of content in online environments is dependent on the temporal structure of the platform, context or topic, as well as the degree of anonymity of individuals within and across groups. The SIDE model is useful in explaining how a

reduced cues environment leads to higher ingroup salience, which in turn may produce different types of messages (e.g., hostile or neutral). However, most research in this area has looked at the initial conversations within groups rather than looking at how new group members enter into existing groups and ongoing conversations. Hostility or positivity is analyzed as an outcome of conversations, rather than a guiding factor in interactions. This facet is important when looking at the nature of conversations on asynchronous platforms. The following arguments position how valence of content has become a technological factor that scholars should consider as a construct and not only as an outcome.

Valence as a Technological Factor

The valence of content is usually positioned as an outcome or characteristic of a conversation. The current study identifies valence as a primary construct in guiding communicative and identity processes. Hostility is a markedly important type of valence because of its high presence in many deindividuated environments. Reddit serves as a highly deindividuated environment that functions on the management of social identities through subreddits. Most content that is seen on reddit is content that has already been voted and discussed by the community. Thus, many threads that users enter into are already in progress and have a particular valence (i.e., hostile, neutral, positive). Referring back to Figure 2.2 on Ellen Pao, the user looking at this front page will recognize the hostility toward Ellen Pao and this hostility should have impacts on how this user views the community and in turn communicates back to the community.

Some research has positioned hostility as a guiding factor and potential influence on attitudes toward other group members. Walther, DeAndrea, Kim, and Anthony (2010)

investigated attitudinal changes of Public Service Announcements on YouTube when users viewed hostile comments versus positive comments. Users reported greater identification (higher social identity) with the users who posted positive comments versus with users who posted negative comments. Walther et al. (2010) positioned the powerful influence that comment valence can have on an individual's identification with a group, regardless of what the comments are promoting. Comments that have particular point score values may also have a further influence on how individuals judge users and content.

The current study utilizes valence of content as a guiding construct parceled into neutral and hostile valences. Hostile comments can influence attitudes about social issues (see Walther, DeAndrea, Kim, and Anthony, 2010), yet little research has investigated how the presence of hostile messages in an intergroup context influences one's identity, self-presentation, and language choice (i.e., Does hostility promote more hostility?). Seeing that many online platforms are promoting less anonymity of users because of aggressive communication (Gross, 2014; MacKinnon & Lim, 2014), it is important for research to better understand how valence shifts in current relational networks that still promote visual anonymity (e.g., reddit). Furthermore, research attending to hostile and neutral content in a salient intergroup environment can also attend to the question of whether identity salience is associated with more hostile language (i.e., Does one's identification with a group in an anonymous environment promote hostile or neutral language and is valence of content and possible interaction?). Answers to these questions can add to SIDE's large body of literature and to the overall literature on intergroup contact and identity in a digital context.

The following technological factor piggybacks off of valence of content by delving into different types of feedback that are afforded by relational technologies. These types of feedback can also be viewed in regards to valence (i.e., positive or negative feedback) as well as the type of feedback that is provided (open or closed feedback).

Nature of Feedback

Feedback within an intergroup interaction takes on different forms when accounting for both the richness and temporal aspects of contact. In offline intergroup contact, the nature of feedback and reciprocity of views are argued to be contingent on synchronous communication where individuals receive feedback in rich (i.e., face-to-face) environments. However, in digital spaces feedback is largely asynchronous and can appear with varying degrees of anonymity and through lean channels. Research on intergroup contact suggests that the richness of the medium or channel should influence involvement of the self (Harwood, 2010), such that the individual will feel more involved in an interaction with an outgroup member when the richness of the channel is high (Wertley, 2014). Yet, positive intergroup contact regarding the involvement of the self and outgroup member is not always contingent on rich contact (Harwood, 2010). The perception of ingroup or outgroup attitudes in the digital age have largely been rooted in communication that is low in richness. Feedback on less rich channels can appear from singular individuals (e.g., "User123 likes this") or as an aggregate of group views (e.g., 254 users like this).

Online feedback can vary in several ways such as its valence (e.g., positive versus negative), public perception (public versus private feedback), and the source of the

feedback (e.g., feedback from close ties versus nonclose ties). Although all of these aspects of feedback exist in offline settings, relational technology magnifies these traits and makes feedback a more prominent feature of communication (Walther, 1996). This section goes into a discussion of different types of feedback as well as some theoretical underpinnings of how feedback influences self-presentation and identity commitment. First, I attend to the importance of feedback as a component of relational technology.

Today's current digital landscape is filtered with feedback such as 'likes', 'shares', and comments. These components of online communication contribute to the participatory nature of relational networks. The nature of feedback in the digital age is an important and critical facet to analyze when investigating how individuals traverse diverse audiences and groups. Walther's (1996) hyperpersonal model proposes that the presence of online feedback actually promotes higher quality interactions that can lead to closer relationships than offline comparisons. Several studies using the hyperpersonal approach confirmed that online feedback promotes more personal interactions (see Carr & Foreman, 2016; Walther, 1997; Walther et al., 2011). This is called the hyperpersonal effect and has primarily been tested in interpersonal contexts (e.g., friendships). In addition to the importance of feedback itself, there are different forms of feedback in regards to the nature of the platform itself. Researchers often refer to this as the public versus private dichotomy of online feedback.

Public vs. Private Feedback

When individuals anticipate and receive feedback from an interlocutor they demonstrate more positive aspects of the self (Gergen, 1965) and they tend to believe or commit more to their identity presentations (Schlenker,Dlugolecki, & Coherty, 1994).

Researchers explained this phenomenon as public commitment or identity shifts (Gonzales & Hancock, 2008). Public commitment predicts how individuals commit to messages of self through the comparison between public and private environments. Identity commitment (i.e., the degree to which an individual identifies with a group, trait, or any sense of self) should be higher in public environments compared to when communicating in private environments. This is called an identity shift because identity changes based off of perception of publicness. Early research on public commitment focused on the presence of feedback itself in face-to-face interactions. However, more research on public commitment is focusing on how the architecture of online environments as well as relational ties impact identity shifts.

The perception of receiving feedback in online settings can be triggered by the type of platform and degree of openness to other users (Boniel-Nissim & Barak, 2011). Gonzales and Hancock (2008) looked at how the awareness of posting on a public blog versus through email would influence one's commitment to being introverted or extroverted. Results revealed that individuals who thought they were posting in a public blog (when in reality were not) tended to commit to their assigned trait more so than individuals using email. Walther et al. (2011) replicated Gonzales and Hancock's blog vs. email experiment, but added a feedback condition to see if actually *receiving* verbal feedback would impact one's identity commitment and found that feedback magnified the identity shift. Carr and Foreman (2016) further elaborated on identity shifts by examining how tie strength influenced one's identity commitment in both public and private environments. Individuals who received public or private feedback from

relationally close ties compared to nonclose ties demonstrated higher identity commitment and more so when they communicated in public environments.

Altogether, these studies demonstrate the importance that publicness can have on identity presentations and points to the important role that feedback plays in any type of interaction. However, these studies have focused more on the presence of feedback and tie strength rather than the actual type of feedback that is received. Online feedback comes in several different forms (e.g., 'likes', 'upvotes', and comments) and public commitment research can benefit from including the types of feedback that elucidate identity shifts. The next subsection presents a very popular and ubiquitous form of online feedback: social recommendations.

Social Recommendations

One form of online feedback that has potential impact on how individuals perceive and judge content is called the *social recommendation system*. It is becoming increasingly popular for websites to relay content based on popularity of the content as determined by users. The usage of a social recommendation system is used in order to sift through the 'good' content from the 'bad' content (Kim, 2014; Messing & Westwood, 2012). An example of a social recommendation system is the ability for users to upvote or downvote a particular message, video, or any form of online content. Many websites such as Facebook, YouTube, Twitter, and reddit rely on social recommendations in order to demonstrate popularity. For example, Facebook now displays items that are "trending" on one's home page. Facebook's 'Like' button is also a form of social recommendations as well as sharing a post. Research on social recommendation systems reveals the heavy

influence they have on an individual's likeliness to consume content in addition to affording a unique way to express an opinion.

Messing and Westwood (2012) found that individuals would click on online news articles based on the amount of endorsements (i.e., social recommendations) it received and not necessarily on the content of the article. Xu (2013) experimentally tested how the number of "diggs" (i.e., upvotes or likes) on a news article influences the likeliness of clicking and behavioral intentions toward the article. Users were more likely to consume and act toward articles with higher diggs than articles with less diggs. These results are critical as they point to the weight that social recommendations have on what information individuals choose to consume. Messing and Westwood further argued that social recommendations could be a way for individuals to be exposed to content that contain opposite beliefs. This argument suggests that individuals can consume content from an outgroup perspective, pointing to more evidence that conversations dedicated to one group do not necessarily mean only that group is sharing, discussing, and recommending it. Furthermore, individuals claim to feel more expressive and connected when using social recommendation systems to 'like', 'share', or 'upvote' as it points to a new form of self-expression.

The act of 'liking' or 'upvoting' online content can be linked with unique self-presentations. Kim (2014) employed uses and gratifications to understand why individuals used social recommendation systems and how using recommendations influenced emotional expression. Interpretive findings revealed that individuals used "likes" on Facebook as a way of expressing their opinion and allowed them to feel more connected to the content. The "liking" of a post was a non-committal way of lending

support. Despite its indirect manner, a social recommendation can be seen as a way to give valence to online content. A message's amount of dislikes and likes might have further implications on how individuals view the content's source (i.e., the creator of the message). In addition to lending credibility to the source, the presence of receiving social recommendations is likely to provide the sender with confirmation of the message.

One angle of social recommendations that has yet to be given much attention in research is how receiving social recommendations on one's message can potentially influence identity outcomes and perception of others relating to group and interpersonal dynamics. For example, discussion boards like reddit rely so much on the community to generate and maintain content, it is likely that social recommendations have an influence on how a person takes credit of his or her own post. How does the presence of social recommendations influence one's perception of his or her post? How does receiving social recommendations influence perception of the larger group? It is likely that receiving a positive number of social recommendations would lead to higher self-worth and that a negative amount of social recommendations lead to feeling negative or regretful about the message?

Positive vs. Negative Feedback

The valence of feedback on several relational media is more positive than negative because of the absence of a dislike, downvote, or disagreement capability. Many platforms boast a positive atmosphere by promoting positive social recommendations such as on Facebook, Instagram, and Periscope. Yet some prominent platforms invoke both positive and negative recommendation features. YouTube includes both a 'thumbs up' and a 'thumbs down' meter for each video, which allows viewers to gauge the

audience's perception. On reddit, users can upvote and downvote content and these votes are calculated into a point score. Although little research has been done on the impacts of negative versus positive recommendations, empirical studies point to the prevailing influence that negative feedback can have over positive reinforcements.

Cheng, Danescu-Niculescu-Mizil, and Leskovec (2014) used big data to analyze how negative versus positive feedback in the form of upvotes and downvotes influenced future post quality. They pulled comments from a variety of platforms (e.g., CNN, IGN, Allkpop) that had the same technological affordance of the upvote and downvote feature. Results revealed that posters who received negative feedback would produce lower quality posts in the future when compared to posters who received positive feedback. They also concluded that the type of feedback suggested how the posters evaluated the community as a whole. For example, a poster who was negatively evaluated would react negatively and thus evaluate the community in a negative stance.

The current study is interested in testing positive versus negative feedback in the form of social recommendations to see if group evaluation is altered after receiving feedback and the degree to which the user would commit or believe in their own message after feedback is received. In other words, how does negative and positive feedback impact one's evaluation of the audience and the evaluation of their own post? Feedback is an important aspect in measuring the quality of online interactions (Walther, 1996), and more relational media are utilizing different types of feedback to elicit more variety in the interaction itself (e.g., Facebook's Reactions). Understanding the potential impacts of these types can inform how technological affordances impact communication and identity processes.

Chapter Summary

In summary, there are three technological factors of interest in the current study: (a) composition of audience, (b) valence of content, and (c) nature of feedback. These factors are common features and characteristics of several relational networks. Reddit, being a focal platform for this study, promotes all of these factors as part of its participatory culture (Massanari, 2015). Subreddits promote the membership of multiple groups and some subreddits subscribe to an intergroup context dependent on the nature of the thread. These groups or audiences can be mapped onto how individuals see each other as part of an ingroup versus an outgroup. Since discussions are happening in an asynchronous environment, users enter into threads that have already been in progress and thus have established some sort of valence. Furthermore, the type of feedback received can also inform one's identification with the audience and with their own self-identification. Research on each of these technological factors will provide insight into how these relational media impact our everyday communication and identity. The following chapter will discuss the potential outcomes and areas of communication and identity that are pertinent to this study.

CHAPTER THREE: IDENTITY AND COMMUNICATIVE OUTCOMES

My primary purpose in this study is to examine how communication and identity are influenced by specific technological factors that are prominent in many relational networks. These relational networks involve a myriad of individuals and social identities that are projected by each technological factor. In the previous chapter, I presented three technological factors that impact communication and identity processes. These factors are influential in how many relational networks thrive and continue to become part of everyday communication. My research is intended to understand the links between technological factors and communication processes by utilizing established ways of measuring communication and identity to add empirical research in this area (see Figure 1.3 for reference). In this chapter, I present three areas of communication and identity that allow my study to empirically analyze each technological factor by presenting potential statistical associations between composition of audience, valence of content, and nature of feedback to the following areas: (a) identity outcomes (b) group and individual evaluation, and (c) accommodative language.

In each area I use intergroup theorizing and perspectives to allow each construct to reflect my primary purpose of gaining insight into how relational technology influences communication and identity. The first section, *identity outcomes*, delves into two constructs of identity: (a) identity salience and (b) identity gaps. I describe how social identity theory and communication theory of identity are useful frameworks to unpack how identity commitment and enactment of identity can potentially change when communicating against different technological factors (e.g., composition of audience, valence of content, and nature of feedback). The second section, *group and interpersonal*

evaluation, includes intergroup and individual insight into how group members see each other and see the group as a whole. It is likely that technological factors can inhibit and change the levels of group and individual evaluation. The last section, *accommodative language*, describes how language functions as a gauge to understand how individuals react to ingroup and outgroup communicative situations. Communication accommodation theory allows language to be analyzed as a strategy for social distance between group members, including ingroup and outgroup scenarios.

In the last section of the chapter, I present the research questions and hypotheses in the current study. In doing this, I merge the technological factors from Chapter 2 with the communicative and identity outcomes from the current chapter (see Figure 1.3 for conceptual research model). Each technological factor makes up its own subsection of research questions and hypotheses so that each factor can be mapped onto each communicative outcome (e.g., composition of audience predicts group evaluation). First, I present identity outcomes by introducing the importance of social identities through social identity theory, self-categorization theory, and communication theory of identity.

Identity Outcomes

Intergroup communication involves a dynamic process where a salient social identity prompts communication surrounding a collective in society (Tajfel & Turner, 1986). Communication and identity play a large role throughout this process such that, "The communicative practices and boundaries that differentiate social groups can, themselves, dynamically redefine or change the prevailing nature of intergroup relations" (Giles, 2012, p. 13). Relational networks such as reddit create new ways for individuals to differentiate from each other and to form new collectives.

Social identities such as ethnic, cultural, and national identity are extremely important to an individual. Feeling a sense of belonging to a group can promote psychological benefits such as positive sense of self (Jaspal & Cinnierlla, 2011) and psychological well-being (Usborne & Taylor, 2010). When analyzing identity in an online space, the effects of self-worth and psychological well-being are amplified, revealing the power that online communication has on social identity enactment and construction (Usborne & Taylor, 2012). Reduced social cues (e.g., lack of physical appearance) afforded by relational technology can increase social identity salience and as a result increase and alter awareness of different groups and audiences. I analyze identity through two main constructs: (a) identity salience and (b) identity gaps.

Social identity theory and self-categorization theory elucidate how a social identity becomes realized in communication and in turn becomes the salient identity. I also position social identity as constitutive of communication, that is, communication and identity are intertwined and are constantly in flux (Gergen, 2000). Identity is emergent through several communication practices and is continually being reconstructed because of societal messages and everyday relationships. Because identity and communication are not separate entities (Hecht et al., 2004), I propose to analyze social identity within communication theory of identity, which proposes that identity can be located through the interpenetration of identity layers. First, I will explain what makes up identity salience and why this is an important concept to investigate against the backdrop of relational technology.

Identity Salience

Identity salience is the degree to which a social identity is dominant within an interaction and as a result prompts individuals to feel part of a social group (i.e., ingroup members). Social identity theory (SIT) unpacks the process through which an identity becomes salient (Tajfel, 1982). SIT posits that when individuals communicate at the intergroup level, they alert the shared group norms related to that identity. One avenue in achieving identity salience is through intergroup competition, where individuals tend to favor their ingroup because of pressure to 'beat' or overcome the outgroup. Individuals will favor the group they belong to and discriminate against the outgroup in order to achieve a positive social identity (Tajfel & Turner, 1986). This proposition is based on an individual's self-concept in that individuals desire to achieve positive ingroup distinctiveness (i.e., higher sense of belonging to a group). During this process a bias is formed toward the ingroup and negative perceptions of the outgroup can form. This process is what Tajfel called categorization, allowing individuals to navigate their social identities. SIT posits that individuals have multiple social identities and seek to achieve positive self-concepts within those groups. Self-categorization theory further elaborates on the social identity theory by addressing context as a critical aspect to consider in intergroup communication.

Self-categorization theory (SCT) extends social identity theory by incorporating the importance of cognition in categorization. SIT explains that individuals seek to achieve positive social identities, whereas SCT piggybacks off SIT by presenting the degree to which the identity is salient to the individual through the attributes of fit and accessibility. Fit refers to how relevant a social identity is within a given context, whereas

accessibility is how meaningful that social identity is to the individual (Turner et al., 1987). For example, an African American and White American conversing about the events in Ferguson, Missouri will likely spark some intergroup differences regarding racial differences, yet when conversing about who is going to win the Super Bowl, racial differences attenuate in conversation. In the same example, accessibility would reflect the level of attachment the individuals have toward their racial category and the events in Ferguson. The African American individual might not identify strongly with the Black community on the overall valence of the messages surrounding Ferguson, while the White American individual shares similar sentiments. The degree of identity salience can vary greatly depending on the technological factors that are present in the interaction itself. This is highly important in communication on relational networks.

Relational networks afford unique aspects of identity salience through various technological factors. As previously mentioned, visual anonymity is often associated with hostile communication through the bolstering of social identities in interaction. Visual anonymity lessens reliance on physical characteristics and more focus on the textual and visual features of the online environment. Individuals can upload avatars that match their social identity such as a national flag. When seeing an online user with an American flag as their avatar, they will likely be grouped within an American social identity. If the platform lends itself to American ideologies, then identity salience is heightened even more. Furthermore, the focus on text can also elicit more influence from the valence of the conversations or message.

Identity salience is an important identity outcome to consider under the umbrella of intergroup communication and relational networks. Identity salience explains the

degree to which an individual communicates as a group member and also points to how an individual relates to others within that group. In a digital context, identity salience can become magnified because of technology's ability to filter out cues and promote unique self-presentations (Hogan, 2010). This is especially evident when social issues are trending or being discussed on numerous relational networks. For example, the social movement #BlackLivesMatter appeared on several relational networks during the acquittal of George Zimmerman. The presence of the hashtag and posts sparked identity salience around race and culture in the United States. Social identity is also contingent and created through the communication that is present and anticipated on these platforms. The next section explains how a social identity can be located through self-concept, enactments of self, and an understanding of societal and group messages.

Identity Gaps

Communication theory of identity (CTI) is situated in social identity theory (Tajfel & Turner, 1986) and identity theory (Cooley, 1902; Mead, 1934) by postulating that social identity is realized and formed through communication at four levels of identity (Hecht et al., 2004). CTI proposes that one's identity is a complex entity that is contingent on communication relating to one's perception of the self, relationships, and community at large. Individuals use various labels (e.g., African American, Black, White, European American) to describe their identity with identity shifting because of social context and communication (Phinney, 1992). Therefore, CTI centers on social construction of identity (e.g., Cooley, 1902; Mead, 1934) and relies heavily on how the salient context and group (i.e., salient identity) influences multiple layers of identity. These layers of identity represent the corpus of how communication envelops social

identities and can also interpenetrate to create identity gaps between various layers. I will describe each layer of identity and then present how these layers shift to form identity gaps in communication.

Hecht et al. (2004) proposed to investigate identity through four levels or frames: (a) personal, (b) enacted, (c) relational and (d) communal. The personal frame is one's own self-concept or self-feelings about a particular social identity. For an individual's cultural and national identity, the personal frame refers to the individual's sense of feeling part of a specific cultural group. An individual's sense of feeling like an American refers to the personal frame of identity. The enacted frame is the actual message or self-presentation that is related to that social identity. An American can enact their identity through a variety of ways, verbal and nonverbal, such as hanging an American flag during 4th of July events or even saying the pledge of allegiance. These examples serve as enactment of a social identity. The relational frame of identity refers to how social identity is co-created through one's relationships with others (Wadsworth, Hecht, & Jung, 2008). An individual's American identity is influenced by how others within that individual's social network also enact and perform their identity. Finally, the communal frame of identity attributes social identity as reflective of the larger societal messages such that, "Group members usually share common characteristics and have collective memories" (Hecht et al., 2004, p. 263). Although these four frames of identity can be analyzed as separate attributes of identity, they are usually investigated in tandem to one another. The relationship between each frame of identity makes up an identity gap and is a focal point of my study.

In many cases, two or more layers of identity can conflict, resulting in what Hecht et al. (2004) call an *identity gap*. These gaps of identity can be located within any of the four frames of identity and with any combination (e.g., personal-relational identity gap, personal-communal identity gap). I will concentrate on the identity gaps pertinent to the current study and explain them as separate conceptions of social identity. The identity gaps of interest are personal-enacted identity gap and enacted-communal identity gap.

The personal-enacted identity gap occurs when the personal and enacted frames of identity conflict, forming a chasm between self-concept (i.e., personal) and self-presentation (i.e., enacted). Wadsworth, Hecht, and Jung (2008) relayed the personal-enacted identity gap as situations where individuals are not able or comfortable communicating their 'real' or personal level of identity. This can occur for many reasons such as in marginalized identities (e.g., Nuru, 2014) and in interracial-intercultural encounters (e.g., Drummond & Orbe, 2009; Wadsworth, Hecht, & Jung, 2008). The personal-enacted identity gap is usually researched by looking at messages (i.e., enactments) relating to a particular identity but has also been investigated through specific messages such as self-presentation in an online video or text (see Nuru, 2014). Relational technology allows for messages to be stored or archived, and this capability allows for messages to be (re)seen by authors and viewers (Baym, 2015). Additionally, technology allows the enacted layer to be static unless otherwise edited or deleted. Because the current study looks at online messages bounded in a discussion board environment where groups thrive, I also turn to how enactment of identity can conflict with the communal frame.

The enacted-communal identity gap refers to the chasm between one's self-presentation and the communal messages particularizing that social identity. The communal layer of identity has rarely been studied within CTI because of research concentrating more on the relational aspects of how identity is constituted and positioned (Wadsworth, Hecht, & Jung, 2008). Seeing that relational networks such as reddit embrace communal characteristics with the presence of subreddits and user generated content, the communal layer of identity is appropriate for the current study. Murray and Kennedy-Lightsey (2013) researched undergraduate students' personal-communal identity gap by asking participants about how they felt about their identity (personal frame) against the university's messages (communal frame). I adopt a similar conception of communal messages but substitute the discussion board environment and messages as the communal element and then look at how enactment of one's message 'matches' the communal level. The enacted-communal identity gap is well suited for communication on various relational networks.

Hecht et al. (2004) suggested that online spaces provide a "fertile context" for applying CTI because individuals are warranted much more flexibility in regards to enactment of identity. For example, on a discussion board a user who has a Filipino background might identify more with an American culture because of his upbringing. This individual can better enact their identity online without the interference of their physical features. This user can also find new kinds of relationships in the discussion board, giving way to the relational level of identity, "Technology not only changes and challenges the geometry of identity enactment, it extends the reach of enactment and opens up possibilities for new relationships" (Hecht et al, 2004, p. 271). There may be

other users who also identify as American but have racial features that are prominent from other countries. A discussion board can communicate the communal level of identity through its rules and shared practices as well as overall philosophy or beliefs. In short, CTI's layers of identity are suited to relational networks.

In addition to identity outcomes related to salience and identity gaps, intergroup communication involves the dichotomy between group and individual behaviors such that contact between differing individuals can be accounted to the group or individual. The interpersonal and group dynamics of intergroup interactions points to how attitudinal changes related to intergroup communication can be attributed to individuals or to the group at large. The next section explains why interpersonal and group evaluations are important to consider when looking at intergroup communication in a digital context.

Group and Interpersonal Evaluation

Intergroup scholarship is concerned with how individual and group processes impact communication. As previously discussed, the visual anonymity of a platform can permit users to craft and display their social identity, which potentially increases identity salience and gives way to identity gaps. However, bounded within this process is also the presence of interpersonal dynamics, where group members may also be seen as unique and separate individuals (Wang, Walther, & Hancock, 2009). Understanding both the interpersonal and group dynamics of an intergroup interaction is important for understanding how individuals relate to one another (Wang & Shen, 2011) and choose to communicate in a particular fashion (Soliz & Giles, 2014). This section includes a discussion of the interpersonal and group dynamics of online intergroup interactions by way of group and interpersonal evaluation. I primarily utilize research on social identity

model of deindividuation effects (SIDE) and social identification in small groups to better understand these dynamics on relational networks. First, I describe SIDE's main tenets and its predictions toward favorable and unfavorable group evaluations in online settings.

Group Evaluation

SIDE's main tenet revolves around how deindividuated settings (e.g., visual anonymity) promote more group identification or identity salience in a group environment (Lea & Spears, 1994; Reicher, Spears, and Postmes, 1995). Research utilizing SIDE has been very successful in activating group identification in experimental settings (Walther, 2011) with many studies utilizing minimal group approaches to stimulating a group environment for participants (e.g., Postmes, Spears, and Lea, 1999). Thus, SIDE research focuses mainly on how individuals act as interchangeable or stereotypical group members, and less as individuals. The presence of deindividuation can predict the level of group evaluation.

In order to maximize favorable ingroup attitudes, a group member needs to develop an attachment to the group itself, or in other words, maximize group attraction and evaluation. SIDE predicts that anonymity leads to deindividuation (Reicher, Spears, & Postmes, 1995), which in turn prompts for higher group identification and positive affect toward the ingroup (Tajfel & Turner, 1987). Thus, if individuals perceive the presence of an ingroup, they should evaluate the group in positive terms relative to an outgroup. An important distinction to make though is the emphasis on group evaluation rather than individual or interpersonal evaluation. Hogg and Hains (1996) explained that ingroup distinction and group attraction (i.e., group evaluation) include positive intergroup attitude, which is not based on individual characteristics bur rather on group

characteristics. There are several reasons why investigating group evaluation is important on relational networks, especially on sites that prompt for group membership and identity.

Group evaluation on relational networks extends insight into the fundamental group characteristics of the platform. For example, discussion boards have long been equated with virtual communities (e.g., Rheingold, 1993), where members converge their communication based on shared identities and shared practices (Baym, 2015). Group evaluation should be positive for discussion board members that identify within the same social identity. However, SIDE research has primarily been conducted in small group settings where individuals communicate in synchronous channels (e.g., instant messaging, chat rooms). On reddit and other discussion board environments (e.g., SomethingAwful, 4chan) groups are organized in a different fashion than in chat rooms and in instant messaging applications.

Kulik, Pepper, Shapiro, and Cregan (2012) observed discussion board communication from organizational insiders (i.e., ingroup members) and organizational outsiders (i.e., outgroup members) and found stronger group conformity from organizational insiders than organizational outsiders. That is, members of the same ingroup demonstrated more group-based communication than members that were considered outsiders or outgroup members. The authors argued that discussion board environments promote group-based language through a contagion effect (i.e., members' posts influence future posts). The evaluation of the group should be contingent on the perceived audience composition (e.g., ingroup, outgroup) as well as the type of language (e.g., negative or positive) employed. However, seeing that relational networks also

include user-to-user communication, it is also important to include the evaluation of the individual in the analysis of intergroup communication.

Interpersonal Evaluation

Recent research utilizing SIDE has also attended to the importance of interpersonal behavior and evaluation (e.g., Wang, 2007; Wang, Walther, and Hancock, 2009). Whereas SIDE originally hinged on deindividuation, recent developments to the theory have turned to depersonalization (see Douglas & McGarty, 2001; Yao & Flanagin, 2006). The process of depersonalization attends to the reduced role of individual or personal identity (Carr, Vitak, & McLaughlin, 2011) where attraction to the individual should be lessened with the presence of visual anonymity. Interpersonal evaluation can be equated to other terms used in small group research such as interpersonal attraction (Wang, 2007) and group cohesiveness (Hogg & Hains, 2006). Both constructs aim at better understanding the perception of specific group members in regards to likability and ability to work or communicate with that individual. While group evaluation is concerned with how a group as a whole communicates, interpersonal evaluation is concerned with specific individuals in the group itself. SIDE research has pointed to the importance of including interpersonal measures in order to better determine how social and group relations are impacted by digital environments and different social contexts.

Some studies utilizing SIDE have incorporated both interpersonal and group evaluations from the same interaction. Research in this area points to the importance of including both interpersonal and group measures of evaluation. Wang, Walther, and Hancock (2009) supported the importance of interpersonal evaluation by having confederates act dislikable or likable to participants in an intergroup context. Results

revealed that when confederates acted unfriendly to participants of the same group, impressions of the confederate were not based on group status but rather on personal characteristics. Regardless of whether the unlikable confederate was an ingroup or outgroup member, the participant still perceived the unlikeable confederate with less interpersonal attraction (i.e., evaluation). Thus, one's perception of a group member's behavior should influence depersonalization, which may not necessarily extend to perception of the group at large. An individual might look highly on a group (i.e., have high group evaluation) but at the same time perceive a member of that group with low interpersonal evaluation. Consequently, group and interpersonal evaluation can conflict, which has impacts on how group relations in mediated spaces are judged and managed. Since relational networks envelop a sense of group identity as well as interpersonal connections, the current study borrows from Wang, Walther, and Hancock's (2009) approach of investigating both interpersonal and group evaluation within one online interaction.

Scholars have continually attempted to better understand the social relations in online and offline groups (Sassenberg, 2002). There is a need for understanding how individual and group evaluation function in different types of digital environments, particularly relational networks (Wang. Walther, & Hancock, 2009). My study investigates how group and individual evaluation are impacted by the technological factors of audience composition, valence, and feedback type. Relational networks invite strong ingroup identification with the potential to produce convergent and negative behavior among members (Kulik et al, 2012). Another communicative outcome that espouses positive group relations is accommodative language. The type of language that

individuals use against the composition of various audiences and within different types of interactions (e.g., hostile versus neutral) should also play an important role.

Accommodative Language

Relational technology is ripe for ingroup and outgroup audiences, yet interpersonal behavior also has an influence on how interactions are carried out and perceived (e.g., Wang, Walther, & Hancock, 2009). The language that individuals use with varying audiences (e.g., ingroup, outgroup) as well as under different types of messages (e.g., hostile versus neutral) can also inform the social and intergroup relations promoted from relational networks. In order to investigate an individual's language more succinctly and in intergroup and interpersonal contexts, I utilize communication accommodation theory as a guiding framework.

Communication accommodation theory (CAT) (Giles, Coupland, & Coupland, 1991) lends insight into how, why, and under what conditions individuals choose (consciously or subconsciously) to shift their language toward or away from other individuals. Originating primarily out of speech accommodation (Giles & Ogay, 2006), CAT proposes that individuals verbally and nonverbally orient their language in order to maximize effectiveness in an interaction and/or to increase or decrease social distance (Shephard, Giles, & Le Poire, 2001). CAT's theoretical assumptions and communicative contexts cover a myriad of sociopsychological perspectives and areas (for review see Soliz & Giles, 2014). One theoretical assumption of CAT that is pertinent to the current study is its emphasis on accommodative language in intergroup contexts.

CAT emerged out of an intergroup approach, positioning language choice as reflective of group membership and social identity. Relaying Tajfel and Turner's (1986)

argument that group members seek to increase ingroup distinctiveness and positive self-worth, CAT extends this tenet by explaining that ingroup/outgroup distinctiveness can be realized by way of accommodative language, both verbal and nonverbal (e.g., accent, pauses in conversation, politeness). In order to maximize ingroup/outgroup distinctiveness, group members will use nonaccommodative strategies to diverge from the outgroup. Thus, CAT utilizes a similarity-differences lens to understand how individuals communicate in an interaction. Perceived similarities should promote more accommodative language, whereas perceived differences (i.e., intergroup distinction) should promote less accommodative language. Both of these strategies within CAT have been aptly called convergence and divergence, where convergence falls under accommodation and divergence falls under nonaccommodation (Giles & Ogay, 2006). Since convergence is aimed at promoting effective communication where individuals attempt to be seen more positively, I turn to what constitutes convergence and how those facets can be realized in a digital context.

Convergence or accommodative language is the most studied area of CAT (Soliz & Giles, 2014) because of its emphasis on producing effective communication between individuals. CAT proposes that convergent language arises because of perceived or desired similarity and thus acts as a bridge between individuals. Convergent language is made up of various forms such as accent shifts, speech rate, message length, and self-disclosure (Shephard, Giles, & Le Poire, 2001). When language tends to "match" between individuals in areas such as speech rate, length, and self-disclosure, the individuals are said to be using convergent language (i.e., accommodative language). Research consistently suggests that accommodative language leads to interactants being

judged more positively (Colley et al., 2004; Hansen, Fabriz, & Stehle, 2015) and can also lead to communication satisfaction (Soliz, Thorson, & Rittenour, 2009). Although most research on accommodative and convergent language is positioned in face-to-face interactions, a growing body of literature has revealed the importance of analyzing convergent language in a digital context.

Relational networks provide users with the same tools for communication, maintaining an equal level playing field for convergent language. It has been argued that the internet fosters the same cultural codes (e.g., emoticons, acronyms, avatars) for its users so that effective and convergent intercultural contact can be achieved (Lévy, 1997; Marcoccia, 2012). Research utilizing CAT in digital contexts has utilized convergence as a frame for understanding how individuals bridge social distance in a variety of contexts and platforms.

One area of research with convergence in digital spaces surrounds style and content matching. Utilizing big data analyses on Twitter, Tamburrini, Cinnierlla, Jansen, and Bryden (2015) analyzed individuals' language in various networks (e.g., sports fans, animal lovers, Republicans) by looking for convergent language in their tweets to each other. Results revealed that individuals would match their language according to the social identity of the network. Convergent language has also been found in the context of chat room communication and emoticon use. Fullwood, Orchard, and Floyd (2013) investigated how individuals converged language with emoticons and found that individuals would present the same emoticons regardless of age or gender differences. Both these studies demonstrate varying conditions where style and content matching thrive.

In addition to style and content matching, CAT research has also analyzed accommodative and convergent language in the context of politeness and helpfulness in emails. Bunz and Campbell (2004) found that individuals would use more polite language when replying to an email that contained polite phrases (e.g., thank you). When adjusting for potential gender differences in email politeness, females tend to use more convergent language when looking at maintenance and rapport (Colley & Todd, 2002; Colley et al., 2004). However, in an intercultural context, accommodative language and perception of the conversational partner has been found to reflect divergent or nonaccommodative language (Hansen, Fabriz, & Stehle, 2015). The authors attributed nonaccommodative behavior to the context of the emails (willingness to help students) and the specific nationality primed in the study. Thus, the topic of conversation paired with the social identity should have a bearing on the presence of convergent language in a mediated setting. The current study seeks to further tease out the conditions and characteristics of convergent language by investigating accommodative communication on relational networks, more specifically, an asynchronous discussion board platform.

Discussion boards are appropriately configured for convergent and accommodative language because of their emphasis on community and social support (Baym, 2015). Individuals need to use convergent language in order to attenuate social distance and maintain their membership on the discussion board. Hordila and Pana (2010) positioned CAT as a an optimal framework for understanding how individuals position their online identity on internet forums (i.e.,. discussion boards). Welbers and de Nooy (2014) further elaborated on this notion through their empirical study on accommodative language on an ethnic minority discussion board. They found that when

individuals had a shared ethnic identity (e.g., Moroccan identity), that they used more convergent language in regards to word choice and emoticon usage. The cues filtered out by discussion boards allow for individuals to be seen more as group members (e.g., SIDE model), and in turn more convergent language is likely to surface. My study seeks to add research on online communication accommodation by analyzing convergent language through interpersonal control, discourse management, interpretability, and overall tone (Jones, Gallouis, Callan, & Barker, 1999).

To conclude this section, I have described the importance that accommodative language can have on intergroup communication and its presence on digital platforms. By investigating language style paired with identity outcomes such as salience and identity gaps, I can better grasp how individuals navigate relational networks. In order to also better grapple with intergroup relations and communication, I also described looking at both interpersonal and group evaluation in tandem to one another. Collectively, these outcomes of identity, group, individual, and language style can increase research on intergroup relations in the digital age. The following section proposes research questions and hypotheses by merging the technological factors from chapter two and aforementioned outcomes from the current chapter.

Research Questions and Hypotheses

Chapter one presented an introduction to the role that relational networks have in how individuals identify and form online collectives, particularly in websites that afford social identities to flourish. I argued in chapter two that these affordances can be seen as technological factors that are guided by both social and technological aspects. These technological factors are composition of audience, valence of content, and nature of

feedback. The current chapter examined three specific areas to investigate as potential

outcomes drawn out of the technological factors, which consist of identity outcomes,

individual and group evaluation, and accommodative language. Collectively, these

technological factors and identity and communicative outcomes form the research

questions and hypotheses for my study. I have organized these into sections according to

each technological factor. I will summarize each factor and then present arguments for

how the factor potentially impacts each communicative and identity outcome. Since my

study uses reddit's architecture as a guiding environment for studying each research

question and hypothesis, I will also attend more to how these relationships reflect the

reddit environment and its participatory culture. First, I will summarize and present the

research questions and hypotheses for composition of audience.

Composition of Audience

Our perception of who is "out there" has vastly changed with the integration of

relational networks in our everyday communication. Audiences vary based on several

facets such as platform (e.g., Facebook audiences vs. Twitter audiences) and

communication context or the topic and purpose of the conversation. Baym (2015)

argued that individuals interact with disembodied audiences, which can take on different

forms, perceptions, and can ultimately impact how a user presents their message to

others. This espouses the imagined audience framework (Litt, 2012) and the lowest

common denominator (boyd, 2007) where individuals craft their message against their

own understanding of the audience. However, research has yet to closely examine how an

ingroup and outgroup audience composition, more specifically the comparison of these

audiences, can impact communication and identity. There are many reasons why an

ingroup and outgroup audience composition can influence communication on relational networks.

Many relational networks focus on the presentation of self to an ingroup audience, such as Facebook and Instagram. Individuals have profiles and timelines to track their individual activity, which can be accessed and displayed to their chosen network and made private to only a select few. However, on reddit, users do not craft unique profiles or post pictures on a timeline to a specific audience nor is communication closed in private networks. Users communicate in subreddits in which users have varying memberships (e.g., subscriber, nonsubscriber). Reddit's participatory culture hones in on the conversations and community as the central feature, rather than on one individual (Massanari, 2015). I will present an example of how reddit promotes different audience compositions and how this impacts communication.

An r/Askreddit question asked Mormons to give their advice on the best bike to buy ("Mormons of Reddit, what is the best bike to buy?"). This question asks Mormons to be the audience and contributors to the thread; however, reddit displays this question to all individuals who view the r/Askreddit thread. Additionally, the thread had a reddit score of 3,817 with 90% of users upvoting the thread. This made the thread a lot more accessible to users outside of the r/Askreddit community. In turn, the discussions about Mormons and bikes involved a myriad of audiences, consisting of Mormons, non-Mormons, and individuals identifying with other (ir)religious affiliations. Users prompted their identity by prefacing their answers with phrases such as "Another Mormon here", "As a missionary", "A fellow non-Mormon living in…", and "As a dude who is not Mormon". In short, the composition of audience in this thread includes individuals from

multiple outgroups (e.g., non-Mormons, "dudes") as well as the ingroup (Mormons). These identifications and perception of multiple outgroups along with the ingroup promoted various messages of community and enlightenment: "As a Mormon, I can't stop laughing at this <thread>", "TIL there are actually a lot of Mormons on reddit", "Are Mormons allowed on reddit?", "Forget the bike, I want to know where those cats get those nice suits". The outgroup nature of this thread altered the language, identification, and overall tone of the thread.

Collectively, I organize composition of audience into the following categories: ingroup audience, outgroup audience, and mixed audience. An ingroup audience comprises of mostly ingroup members whereas an outgroup audience comprises of mostly outgroup members. A mixed audience is one that does not denote a specific social group and in this case situates its audience as both the ingroup and outgroup, respectively. When perceiving different configurations of ingroup and outgroup audiences, the following communicative dynamics and identity outcomes should be influenced.

Identity salience. Identity salience refers to the prominence of a social identity or group within an individual. Social identity theory (Tajfel & Turner, 1986) and self-categorization theory (Turner et al., 1987) explain how communication and cognition prompts for salient identities. In regards to identity salience on relational networks, it is likely that a topic related to a particular social group such as nationality would prompt identity salience within group members. Another aspect that prompts for identity salience is the presence of outgroup members. When an individual communicates with an

outgroup member, identity salience increases compared to communication with only

ingroup members. Thus the following hypothesis is proposed:

> H1: Identity salience is dependent on the composition of audience such that
>
> individuals communicating with an outgroup audience will have higher identity
>
> salience than individuals communicating with an ingroup audience.

When communicating with a mixed audience (i.e., a mix of ingroup and outgroup

members), identity salience could sway in varying directions when compared to

communicating with only ingroup audiences and only outgroup audiences. Thus, I posit

the following research question to address how identity salience functions as a result of

communicating with a mixed audience compared to ingroup or outgroup audiences:

> RQ1: Does identity salience change as a result of communication with a mixed
>
> audience when compared to communication with an outgroup or ingroup
>
> audience?

Identity gaps. An identity gap involves the discrepancy between various levels of

identity (Hecht et al., 2004). The current study is concerned with the personal-enacted

identity gap (i.e., the discrepancy between the personal and enacted layers of identity)

and the communal-enacted identity gap (i.e., the chasm between one's message and the

group's messages). These identity gaps might vary based off of who is perceived in the

audience frame.

Hecht et al. (2004) argued that technology is, "…multifaceted (the Internet,

instant messaging, gaming, etc.), and each facet has its unique place in identity

processes" (p. 271). Anonymity is just one facet that allows for changes in identity

enactment, and in turn individuals can also form new relationships and collectives with

others (Parks & Floyd, 1996). In short, online spaces provide fertile places for CTI research to be applied and extended (Hecht et al., p. 272). However, very few studies have applied CTI to online spaces, especially with attention on audience composition. Nuru (2014) examined transgender-identity enactments through online videos and found the videos to include several instances of identity gaps, particularly the personal-enactment identity gap. However, the audience or communal layer has yet to be analyzed on a relational network through CTI. The perceived audience on relational networks (i.e., communal layer) could also impact the personal, relational, and enacted layers of identity.

My study situates the personal-enacted and enacted-communal identity gaps as central to how individuals enact identity in reddit's environment. In summary, the personal-enacted identity gap is concerned with how one's self-concept matches the enacted or communicated message. On reddit, the discussion or comments on each thread denote the enactment of a particular identity or identities. Because reddit espouses strong group identities in subreddits, it is possible that audience configuration as ingroups, outgroups, or mixed could impact one's identification with the group and as a result impact one's enacted message. For example, an individual's personal layer of identity is likely to be more aligned with their enacted message in the presence of other ingroup members because of perceived similarities. The personal-enacted identity gap should be smaller among ingroup members when compared to communicating with primarily outgroup members. Thus, I propose the following hypothesis relating to how the personal-enacted identity gap changes in light of different audience compositions:

H2: The personal-enacted identity gap is dependent on the composition of

audience such that the personal-enacted identity gap is lower when

communicating with ingroup audiences compared to communicating with

outgroup audiences.

Since mixed audiences have both ingroup and outgroup members, I question how the

personal enacted-identity gap functions as a result of communicating in a mixed audience

compared to an ingroup or outgroup component:

RQ2: Does the personal-enacted identity gap change as a result of communicating

with a mixed audience when compared to communicating with an ingroup or

outgroup audience?

Similar to the personal-enacted identity gap, the enacted-communal identity gap is

the difference between the enacted messages of identity and one's identification with the

larger group or community. On a relational network like reddit and other discussion

boards, the group of users on a discussion thread represent the communal layer of

identity. Since ingroup members are likely to identify with other ingroup members, the

enacted-communal identity gap is likely to be lower when communicating with ingroup

audiences as opposed to communicating with outgroup audiences. I propose that the

enacted-communal identity gap will alter based on the type of audience composition:

H3: The enacted-communal identity gap is dependent on the composition of

audience such that the enacted-communal identity gap is lower when

communicating with ingroup audiences compared to communicating with

outgroup audiences.

Piggybacking off of RQ2, the enacted-communal identity gap can vary in divergent

directions when communicating with a mixed audience and so I speculate that the

enacted-communal identity gap can alter based on a mixed audience composition:

> RQ3: Does the enacted-communal identity gap change as a result of
>
> communicating with a mixed audience when compared to communicating with an
>
> ingroup or outgroup audience?

Group and interpersonal evaluation. Group evaluation refers to the degree to

which an individual relates to and judges the group, whereas interpersonal evaluation is

the level of attraction an individual has toward a specific member of the group. Usually,

interpersonal evaluation is measured when an individual is directly communicating with

another individual, whereas group evaluation is measured when a group is assigned a task

to perform or complete. Reddit's environment is unique in that users communicate in

threads that involve both individual and group levels of communication. Users can

branch off into more interpersonal or one-on-one conversations on a larger thread, which

can also contain messages that reflect the larger group's attitudes and beliefs. Audience

perception is likely to have a role in this process since individuals are likely to feel more

attracted to a group that they identify with versus a group that they identify as an

outgroup member. Both interpersonal and group evaluation should function in the same

manner when accounting for communication with ingroup and outgroup audiences.

> H4: Group evaluation is dependent on audience composition such that individuals
>
> communicating with an ingroup audience evaluate the group higher than
>
> individuals communicating with an outgroup audience.

H5: Interpersonal evaluation is dependent on audience composition such that individuals   evaluate their conversational partner higher when communicating with an ingroup   audience than communicating with an outgroup audience.

Since the mixed audience composition involves both the ingroup and outgroup frame, I present a research question relating to group and interpersonal evaluation and mixed audiences:

RQ4: Does communicating with a mixed audience influence the evaluation of the group such that it differs when compared to an ingroup or outgroup audience?

RQ5: Does communicating with a mixed audience influence interpersonal evaluation such that it differs when compared to an ingroup or outgroup audience?

Accommodative language. Accommodative language refers to the degree of convergence that an individual communicates to another individual. One tenet of convergent or accommodative language is that an ingroup member is likely to use convergent language with another ingroup member because of perceived similarity (Shepard, Giles, & Le Poire, 2001). Thus, the following hypothesis denotes that individuals in an ingroup audience will communicate with more accommodative language when compared to communicating with an outgroup audience:

H6: Individuals communicate with more accommodative language when communicating with ingroup audiences as opposed to communicating with outgroup audiences.

Relaying that mixed audiences do not emphasize an ingroup or outgroup composition, the following research question asked whether accommodative language will differ in a mixed audience when comparing to the outgroup audience:

> RQ6: Does accommodative language differ when communicating in a mixed audience when compared to communicating with an outgroup audience?

Interacting with different types of ingroup and outgroup audiences is likely to have varying impacts on several outcomes such as identity salience and identity gaps. Because I argue that audiences can be both ingroup or outgroup, the evaluation of the group and individual is also likely to change based on the composition of the audience. Lastly, the audience composition should influence accommodative language such that individuals who view ingroup audience members will converge language based on similarity. Table 3.1 summarizes the hypotheses and research questions for this composition of audience.

Table 3.1 Hypotheses and Research Questions: Composition of Audience

Identity Salience
H1: Identity salience is dependent on the composition of audience such that individuals communicating with an outgroup audience will have higher identity salience than individuals communicating with an ingroup audience.
RQ1: Does identity salience vary when communicating with an ingroup audience, outgroup audience, or mixed audience?
Identity Gaps
H2: The personal-enacted identity gap is dependent on the composition of audience such that the personal-enacted identity gap is lower when communicating with ingroup audiences compared to communicating with outgroup audiences.
RQ2: Does the personal-enacted identity gap change as a result of communicating with a mixed audience when compared to communicating with an ingroup or outgroup audience?
H3: The enacted-communal identity gap is dependent on the composition of

audience such that the enacted-communal identity gap is lower when communicating with ingroup audiences compared to communicating with outgroup audiences.

RQ3: Does the enacted-communal identity gap change as a result of communicating with a mixed audience when compared to communicating with an ingroup or outgroup audience?

Group and Interpersonal Evaluation

H4: Group evaluation is dependent on audience composition such that individuals communicating with an ingroup audience evaluate the group higher than individuals communicating with an outgroup audience.

H5: Interpersonal evaluation is dependent on audience composition such that individuals evaluate their conversational partner higher when communicating with an ingroup audience than communicating with an outgroup audience.

RQ4: Does communicating with a mixed audience influence the evaluation of the group such that it differs when compared to an ingroup or outgroup audience?

RQ5: Does communicating with a mixed audience influence interpersonal evaluation (i.e., evaluation of the conversational partner) such that it differs when compared to an ingroup or outgroup audience?

Accommodative Language

H6: Individuals communicate with more accommodative language when communicating with ingroup audiences as opposed to communicating with outgroup audiences.

RQ6: Does accommodative language differ when communicating in a mixed audience when compared to communicating with an outgroup audience?

Valence of Content

When entering into online discussions relating to race, ethnicity, politics, and culture, it is likely that some conversations will have hostile, extreme, or polarized characteristics (Duggan et. al., 2014). The valence of content or a message can determine how someone responds, reacts, and perceives that message (Wang, Walther, and

Hancock, 2009; Walther et al., 2010). Individuals responding to a hostile message versus a neutral message might have different responses to such messages and more specifically in the realm of identity enactments, evaluation, and language usage. For example, an ongoing discussion thread about the use of religious doctrine in public schools can espouse various viewpoints. When a user enters into this discussion thread, especially if it already has a lot of activity, their communication is influenced largely by the conversations that are already occurring. Because of the nature of the topic, conversations can lean toward highly polarized views that can be tainted by a positive or negative valence.

As previously mentioned, hostility and polarization have been argued to be products of anonymity, particularly visual anonymity. The social identity model of deindividuation effects (SIDE) (Reicher, Spears, and Postmes, 1995) proposes that because of visual anonymity, individuals act more as group members and less as unique individuals. I propose to analyze valence of content by investigating how valence (hostile versus neutral) can influence identity salience, identity gaps, evaluation of the group and individual, and accommodative language.

Identity salience. The salience of a social group in an online interaction is procured through the topic as well as any identifying factors of the communicators (e.g., skin color, accent). Additionally, the valence of the message can potentially influence the degree of group identification in the interaction for two reasons. One, individuals may feel threatened by a hostile message, which in turn increases the salience of group membership so long the message pertains to that social group. However, social identity salience might also decrease since some hostile messages may not be taken seriously

(Bergstrom, 2011). For example, individuals might perceive hostility as trolling, or the act of deliberately using offensive language in order to elicit angry conversations for the sake of entertainment (Hardaker, 2015). As a result, individuals might not be influenced by the valence of content and as a result are not identifying as part of the salient group. Thus, social identity salience might be influenced by the valence of the message in divergent directions.

RQ7: Does identity salience depend on the valence of the message?

Identity gaps. An individual's identity gap regarding an online interaction might be influenced by whether the interaction is hostile or neutral. The personal-enacted identity gap reflects the extent to which one's self-worth reflects their communication. Research on the personal-enacted identity gap suggests that individuals describing a personal-enacted identity gap to be in consistent negotiation with the struggle between who they are and how they should communicate that aspect of self? (Nuru, 2014; Urban & Orbe, 2010). However, the nature or valence of the message itself should also have some bearing on the struggle between the personal and enacted layers of identity. For example, if an individual feels very strongly about their national identity (personal layer), but is feeling apprehensive of communicating their national identity in a positive way (identity gap), may communicate their nationality more neutrally. On the other hand, when an individual views positive or negative messages about their national identity, their reaction might be in defense of their personal layer of identity or might feel threatened because of hostility. Thus, it is not known whether the personal-enacted layer of identity would decrease or increase based on the valence of a message. The following research question is posed:

RQ8: Does the personal-enacted identity gap depend on the valence of the message?

The enacted-communal identity gap refers to the extent to which an individual's message reflects the community or group's message. In my study, the community will refer to the other users on the discussion board environment. Since research on the communal layer of identity is limited, and also because communal is usually tied with an individual's perception of the group, it is unknown whether the valence of messages from a discussion board group would alter the enacted-communal identity gap.

RQ9: Does the enacted-communal identity gap depend on the valence of the message?

Group and interpersonal evaluation. Recalling Wang et al.'s (2009) experiment on likeable and dislikable behavior in small group communication, they found that individuals who acted dislikable were seen as less attractive regardless of whether they were an ingroup or outgroup member. Interpersonal behavior potentially overrides any attachments to a particular group in that individuals will view negative or dislikable behavior as less favorable and not attribute that to group standing. The valence of the message, particularly when it is hostile, has an impact on how an individual perceives the individual and the group.

H7: The evaluation of the group will depend on whether the group's communication is hostile or neutral such that groups who communicate with hostility are viewed as less attractive than groups who communicate neutrally.

H8: The evaluation of an individual will depend on whether their communication is hostile or neutral such that individuals who communicate with hostility are viewed as less attractive than individuals who communicate neutrally.

Accommodative language. The valence of a message should also influence the type of language used in the response. The current study manipulates two different forms of valence: hostile and neutral messages. The degree of accommodative language (i.e., convergence) is predicated on whether the individuals perceive each other as part of the same group (i.e., group evaluation should predict accommodation). Whether the valence of the message influences accommodative language absent of group evaluation has yet to be investigated.

RQ10: Does accommodative language vary as a result of responding to a hostile message versus a neutral message?

In summary, the valence of content potentially alters identity processes relating to salience and identity gaps. When looking at interpersonal and group evaluation, valence should influence how individuals perceive a conversational partner as well as the group at large. Accommodative language may also digress based on whether the message is hostile or neutral. Table 3.2 summarizes the hypotheses and research questions.

Table 3.2 Hypotheses and Research Questions for Valence of Content

Identity Salience

RQ7: Does identity salience depend on the valence of the message?

Identity Gaps

RQ8: Does the personal-enacted identity gap depend on the valence of the message?

RQ9: Does the enacted-communal identity gap depend on the valence of the message?

Group and Interpersonal Evaluation

H7: The evaluation of the group will depend on whether the group's communication is hostile or neutral such that groups who communicate with hostility are viewed as less attractive than groups who communicate neutrally.

H8: The evaluation of an individual will depend on whether their communication is hostile or neutral such that individuals who communicate with hostility are viewed as less attractive than individuals who communicate neutrally.

Accommodative Language

RQ10: Does accommodative language vary as a result of responding to a hostile message versus a neutral message?

Nature of Feedback

The presence of online feedback can heighten the awareness and confirmation of identity and communication (Boniel-Nissim & Barak, 2011; Walther, 1996; Walther et al., 2011). Even the anticipation of feedback can alter self-presentation and identity commitment (Kelly & Rodriguez, 2006; Gonzales & Hancock, 2008). On relational networks, feedback comes in unique forms. Social recommendation systems (e.g., 'like', 'upvote') abound in several relational networks such as Facebook, reddit, Twitter, and Instagram. These social recommendations have unique impacts on how people communicate and express their opinion and in turn should impact how an individual

views their own content. My study is concerned with how social recommendations as a feedback mechanism can alter identity gaps and the evaluation of the group and individual (i.e., conversational partner). Little research has looked at how receiving social recommendations can potentially heighten interaction in these areas.

It is important to discuss the reasons why I included group evaluation and identity gaps, but excluded identity salience, interpersonal evaluation, and accommodative language from this section. First, identity salience is usually measured during ongoing interactions with outgroup members or a reflection of interactions with others. The nature of my study does not have the participants communicate with the audience or users after receiving feedback and therefore the identity salience variable is not included. Because of the absence of communication after receiving feedback, accommodative language is also not a necessary outcome to measure. Finally, interpersonal evaluation is concerned with one single group member. The nature of social recommendations for my experiment will be a group aggregate score and so the participants will not know any one user and no names or user names are used in the feedback score.

Identity gaps. CTI positions identity as a flexible and evolving entity that is altered through communication and life experiences (Hecht et al., 2004). When individuals receive feedback on their message, this will contribute to identity maintenance and construction in that feedback allows for individuals to see if their enactment of identity is confirmed by others. This is especially important when individuals are conversing across and within groups. If a particular type of feedback can alleviate or enlarge an identity gap, we can better understand how identity gap negotiations fluctuate based on particular types of communication. In my study, I am

concerned with social aggregations of feedback to see how both positive and negative recommendations influence one's identity gap in the personal-enacted and enacted-communal layers. When individuals view a positive feedback score, they should view their message as supported or confirmed by others; whereas, negative feedback might produce different results.

H9: Individuals exhibit a lower personal-enacted identity gap after viewing positive feedback.

H10: Individuals exhibit a lower enacted-communal identity gap after viewing positive feedback.

As noted, my study also introduces negative feedback in the form of social recommendations. Walther et al. (2011) researched positive confirmation as feedback and proposed that future research attend to different forms of feedback to see if identity shifts based off of the nature of feedback itself.

RQ11: Does viewing negative feedback in the form of social recommendations alter the personal-enacted identity gap?

RQ12: Does viewing negative feedback in the form of social recommendations alter the enacted-communal identity gap?

Group evaluation. Similar to identity gaps, the evaluation of the group should vary based off of feedback. Social recommendations are aggregated together to represent a collection of individuals who recommend that content or message. Thus, social recommendations are a good indicator of group perception rather than interpersonal or individually based feedback. On anonymous networks such as reddit, social recommendations are aggregated into a score, which usually represents the combination

of negative and positive votes (e.g., 2 upvotes and 1 downvote would equal to a score of

1). The social recommenders (i.e., the individuals who upvote or downvote the content)

are unidentifiable in that their names or associations are hidden. Thus, the feedback score

denotes the overall group perception of that message. Positive feedback in the form of

social recommendations should influence the evaluation of the group:

> H11: The evaluation of the group will depend on the type of received feedback
>
> such that positive feedback increases group evaluation and negative feedback
>
> decreases group evaluation.

Research concerning online feedback suggests that feedback is important for an

individual's self-presentation and should have an influence on how individuals

communicate within and across groups. By imposing a feedback mechanism in the

current study, I can analyze how feedback alters identity enactment through identity gaps

and also see if evaluation of the group is maneuvered by social recommendations. Table

3.3 summarizes the hypotheses and research questions relating to feedback.

Table 3.3 Hypotheses and Research Questions for Nature of Feedback

Identity Gaps

H9: Individuals exhibit a lower personal-enacted identity gap after viewing positive feedback.

H10: Individuals exhibit a lower enacted-communal identity gap after viewing positive feedback.

RQ11: Does viewing negative feedback in the form of social recommendations alter the personal-enacted identity gap?

RQ12: Does viewing negative feedback in the form of social recommendations alter the enacted-communal identity gap?

Group Evaluation

H11: The evaluation of the group will depend on the type of received feedback such that positive feedback increases group evaluation and negative feedback decreases group evaluation.

Technological Factors   Identity and Communicative Outcomes

Audience Composition:
- Ingroup
- Mixed
- Outgroup

Identity Outcomes:
- Identity salience
- Identity gaps

Valence of Content:
- Hostile
- Neutral

Group & Individual Evaluation:
- Group evaluation
- Interpersonal evaluation

Nature of Feedback:
- Positive Feedback
- Negative Feedback

Communicative Outcomes:
- Accommodative Language
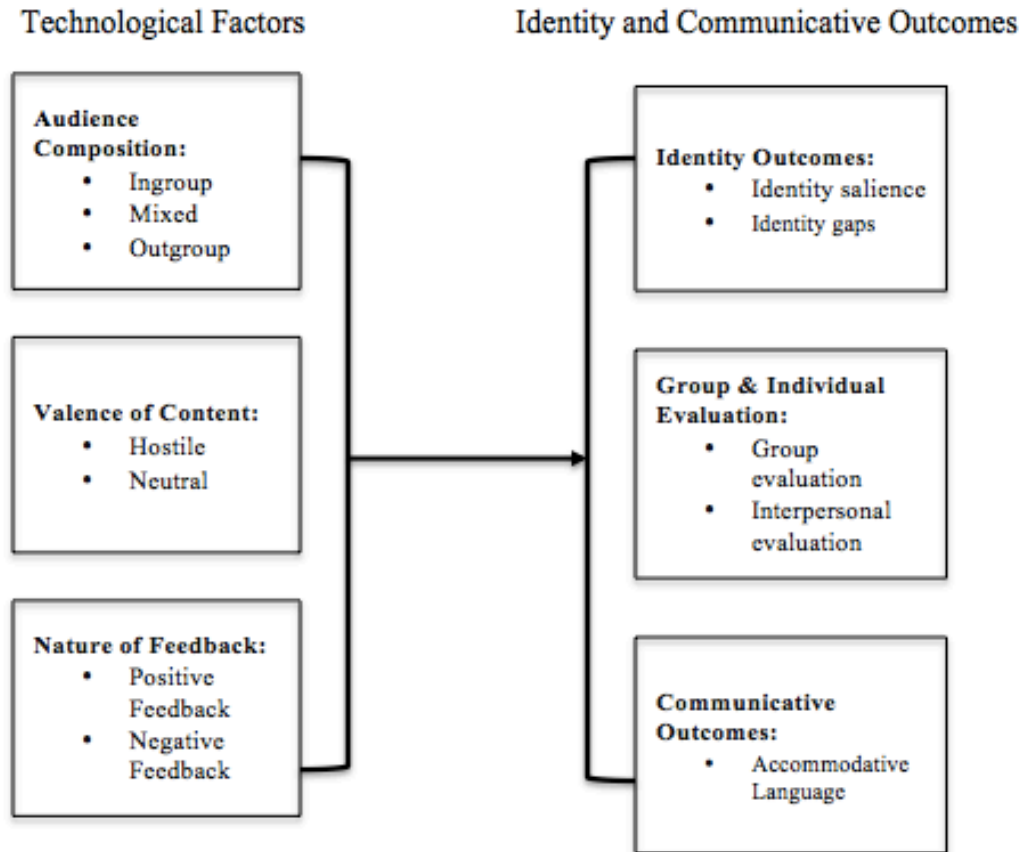
Figure 3.1. *Conceptual research model from Chapter 1.*

Chapter Summary

Relational technology plays an important role in everyday communication of several individuals and groups. Each relational network has related yet unique technological factors that alter the culture of its users. Reddit's participatory culture is largely constructed by how subreddits are organized and embedded within the upvote and downvote capability. The intergroup nature of reddit has yet to be empirically investigated in light of identity and communication. By mapping technological factors onto outcomes of identity, evaluation, and communication, I can augment research on

how relational technology impacts relations between individuals, both within and between social groups. It is also my hope that this research informs the importance of using intergroup theorizing to better understand the implications that communication on relational networks has on societal relations and to give some insight into the influence that specific platforms like reddit have on everyday communication.

The purpose of this study is to examine how relational networks impact identity and communication and more specifically to gauge how anonymous and group based platforms like reddit can elicit, maintain, and mitigate identity enactments, language, and evaluations of the group and members. I presented three communicative and identity outcomes: (a) identity salience and identity gaps, (b) group and individual evaluation, and (c) accommodative language. These outcomes provide insight into how various cognitions of identity and group processes influence intergroup relations and the self. The evaluation of ingroup and outgroup members depends on how identity is prompted and presented in digital spaces, with anonymity playing a large role in how individual identify with others and how environments become hostile. In turn, language type and usage also plays an important role in how group members respond to and evaluate ingroup or outgroup others. Collectively, these outcomes serve as constructs to better understand the technological factors presented in Chapter 2. Figure 3.1 (from Chapter 1) provides a visual component of how each technological factor, identity, and communicative outcomes are organized and related.

The technological factors of composition of audience, valence of content, and nature of feedback function as guiding factors to explain how identity and communicative processes vary in relational networks. I presented the hypotheses and research questions

for my study and organized them according to each technological factor. My study experimentally studies how each factor impacts each identity and communicative outcome. Tables 3.1, 3.2, and 3.3 summarize each set of hypotheses and research questions.

In the following chapter, I discuss the participants of my study, including recruitment, participant procedures, and measures. I also include a description of the reddit interface that is used as the experiment for the current study.

CHAPTER FOUR: METHOD

In this chapter, I describe the research design, procedures, and measures in order to examine and test the research questions and hypotheses presented in chapter three. First, I will describe the sample population and present the participants' knowledge and usage of reddit. Second, I delve into the research design by detailing the reddit interface used in the experiment and also explain each condition. I conclude the chapter with a description of the measures used in each condition.

Participants

In this section, I will describe recruitment procedures, general demographics of the participants, and the participants' knowledge and usage of reddit.

Recruitment

After Institutional Review Board (IRB) approval was obtained, participants were recruited through three population frames: (a) university students at a large Midwestern university, (b) university students at a small West Coast university, and (c) reddit users from the r/SampleSize subreddit (current subscriber count as of March 2016: 32,388). At the Midwestern university, a recruitment script was posted on the Communication Studies website. Extra credit was given to Communication Studies students who participated in the study. At the West Coast university, a recruitment script was posted on an online course website and distributed through email to all Communication Studies students. Both recruitment scripts can be located in Appendix A. Participants were given extra credit for their participation. On the r/SampleSize subreddit, a recruitment script was posted through the guidelines of the subreddit. Researchers are allowed to repost

their recruitment script once a day, if desired. Participants from the subreddit were not

awarded any incentives for completing the study. In all recruitment areas, participants

must have been 18 years of age or older and have some knowledge of using an online

discussion board. See Appendix B for the informed consent form.

I removed participants that did not complete the experimental portion of the study

or did not complete the measures after the experiment. A total of 316 participants

completed the study. Out of the 316 participants, 68.3% of participants came from the

large Midwestern university (n = 216), 15.8% came from the small West Coast university

(n = 50), and 15.8% came from r/SampleSize (n = 50). Next, I will present some general

demographics of the sample population.

Demographics

Out of the 316 participants, 132 identified as male (41.8%) and 184 identified as

female (58.2%). Participants ranged in age from 18 – 49 ($M = 20.39$, $SD = 2.33$). The

entire sample identified as an American citizen. Participants were asked to self-identify

their race in an open-ended question. Racial categories were distributed as 76.2% White

(n = 241), 13.3% Asian (n = 42), 3.9% African American (n = 12), 2.2% Hispanic (n =

8), 1.7% Mutiracial (n = 6), 0.5% Middle Eastern (n = 2), and 0.3% Native American (n

= 1).

Reddit Questions

Since this study uses reddit as a guiding platform to understand how technological

factors impact communication and identity, a series of questions asked participants about

their knowledge and usage of reddit. A total of 209 participants (66.1% of the total

sample) reported having knowledge or familiarity of reddit and 107 participants reported

not having any familiarity of reddit (33.9%). Out of the 201 participants who were familiar with reddit, 33 participants identified as redditors, 168 did not identify as a redditor and 8 individuals were not sure. A redditor is a common name for individuals who are registered with reddit (Note: An individual can still view reddit without registering). A nonuser can still access links and view conversations. I also asked participants if they had a reddit user name in addition to asking if they are a redditor. A total of 37 participants reported having a reddit user name.

The same 201 participants answered a series of questions about their usage of reddit and how often they access reddit. The reddit frequency or the frequency of accessing reddit is as follows: 26.9% Never, 20.3% Less than once a month, 4.4% Once a month, 2.8% Two to three times a month, 1.3% Once a week, 3.6% Two to three times a week, and 13.9% Daily. Another way to frame this is that approximately 60% of participants knowledgeable about reddit also accessed reddit to a certain degree, ranging from less than once a month to daily.

The 37 participants who claimed to have user names were asked about their voting and posting frequency on reddit. For voting frequency (i.e., upvoting and downvoting content), 8 participants reported never voting on reddit, while 16 reported voting on a daily basis. Nine of the participants claimed to only vote about once a month with the remaining participants reporting two to three times a month, once a week, and two to three times a week.

Research Design

This study used a 2 (valence: hostile vs. neutral) X 3 (composition of audience: ingroup vs. outgroup vs. mixed) experiment design across two time segments to account

for the nature of feedback manipulation (positive vs. negative). Participants read and posted a comment response relating to a specific topic as part of this design. In this section, I will first explain the interface used in the experiment followed by a discussion of the context of contact. Next, each experimental condition is discussed as well as the procedures for the participants. An integral aspect of the experimental design was the reddit interface used in Qualtrics. First, I explain how the interface was integrated into Qualtrics.

Reddit Interface on Qualtrics

My study seeks to understand how technological factors (e.g., composition of audience, valence of content, nature of feedback) impact communicative and identity outcomes. I primarily draw these technological factors out of reddit's participatory platform. As described in chapter one, reddit is a relational network that allows users to engage in intergroup contact as well as manage self-presentations through the use of upvoting and downvoting. It was essential that the interface in this study emulated the technological factors from reddit. I went through multiple channels and resources to obtain and alter the code to integrate these capabilities safely into Qualtrics.

First, I contacted reddit's staff to inquire on the use reddit's code (i.e., CSS and JavaScript) and logo for research purposes. From email conversations, the reddit logo is not allowed for use in experimental research since it may make participants feel that they are on a real reddit page when in reality they are not (V. Taylor, personal communication, February, 2015). Therefore, I utilized a different logo in place of the reddit alien logo. The image used was a free for use image. I was also not allowed to call the interface *reddit* and thus I introduced participants to the interface as a discussion board with

capabilities that are similar to reddit. The CSS (cascading style sheet) and reddit's

JavaScript are classified as open source and were obtained at github.com/reddit. Reddit

developers maintain this repository of code.

After the code and CSS were obtained, I input the JavaScript code into Qualtrics,

which allows for JavaScript integration. I utilized the advanced option in Qualtrics' Look

and Feel section in order to alter the CSS. The free for use image was hosted through a

private and secure server. Figure 4.1 displays the final look and feel for one of the

experimental conditions. Note that each experimental condition used the same exact code

and only the text and feedback features were altered.
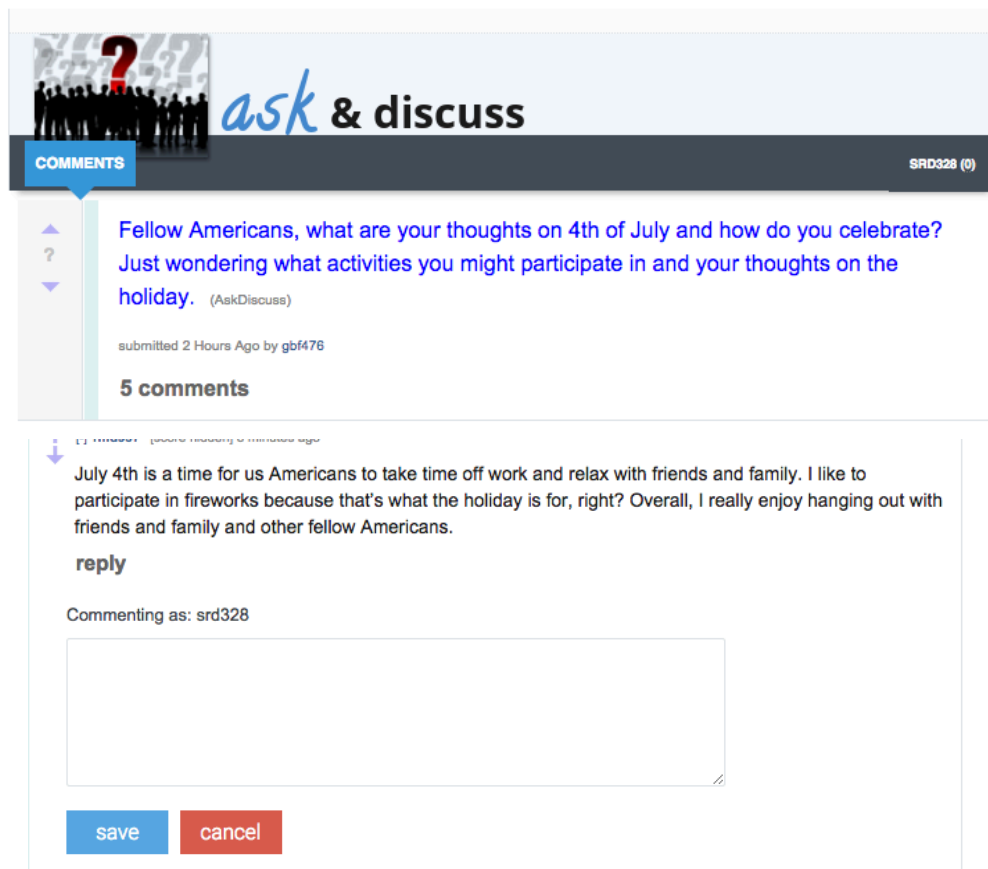
Figure 4.1. *Look and Feel.*

Since reddit's code affords users to click on various items (e.g., usernames, upvote/downvote button), I went through each technological feature and altered it to make sure the experiment could be properly controlled. As displayed in Figure 4.1, the subreddit banner or image is titled with "Ask and Discuss", which emulates r/AskReddit and promotes conversation around a single question. The usernames were created to reflect anonymous users with no direct tie to a particular group. Participants are automatically given a username that is also not tied to a particular group. In line with r/AskReddit's rule of blocking comment scores for the first hour after posting, all comments on the Ask and Discuss thread are hidden and the time posted is under an hour. This allows participants to focus solely on the content instead of the comment score. Finally, the reply box is automatically opened so participants can find the response box easily. The save and cancel buttons allow the participant to send the message or clear out the message and start over. These features are similar to many of the subreddits. Once saved, participants are not allowed to edit their response.

The last step in implementing reddit's interface and capabilities into Qualtrics was applying Qualtrics' piped text feature. One goal of my study is to gain insight into how feedback in the form of social recommendations (i.e., upvotes and downvotes) impacts one's identity and perception of the group. Qualtrics allows for a participant's response to be displayed at a later portion of the survey. I was also able to integrate social recommendations into the participant's response so that they would see feedback for their response. Figure 4.2 displays a test response of how the participant would see their response and feedback score. Next, I will explain what participants discussed in the reddit-type discussion board.
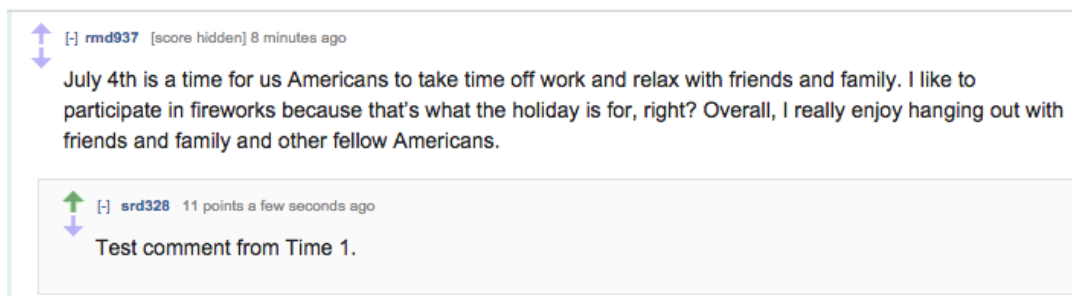
Figure 4.2. Social recommendation feedback feature. Feedback score is located to the right of the username srd328.

Context of Contact and Experimental Conditions

The current study utilizes national identity in the primary context of American identity in order to prime for a specific social identity. Participants were prompted to discuss the 4th of July (i.e., Independence Day) related to their own views of the holiday. They responded to either a hostile or neutral comment related to the practices of 4th of July in the United States.

There are three reasons why I chose to use this context and topic. First, Duggan et al., (2014) described that hostile communication is usually attached to topics of race, politics, and culture. Nationalism is embedded in all of those facets. Since this study employs a hostile condition where participants will respond to a potentially identity threatening comment relating to their national identification, it is likely that one's national identity will surface in the interaction. Second, participants should be able to easily talk about practices and beliefs relating to the 4th of July. The 4th of July is a federal holiday in the United States where many institutions and workplaces close. Thus, it is a holiday that individuals should be able to talk about regardless of their attachment to American identity (i.e., An individual who does not strongly identify as an American versus and individual who has a strong identification should both be able to talk about

this topic). Lastly, research has demonstrated that national identity can be made more salient when visual anonymity is controlled (see Lea, Spears, & Watt, 2007). Next, I will explain each of the experimental conditions and how they were controlled and manipulated.

Audience Composition Manipulation

Each participant was assigned to one of three audience compositions. The discussion topic varied with each audience composition such that the discussion of 4th of July was geared toward Americans (ingroup audience), non-Americans (outgroup audience), and both a mix of Americans and non-Americans (mixed audience). For each audience composition, the discussion board topic prompted the audience frame. Table 4.1 displays each discussion topic prompt for each audience condition. Furthermore, the comments on each discussion board thread reflected the assigned audience composition (see Table 4.2).

Table 4.1 Discussion Board Comments

Audience	Script
Ingroup	Fellow Americans, what are your thoughts on 4th of July and how do you celebrate?
Mixed	Americans and non-Americans living in the United States, what are your thoughts on 4th of July and how do you celebrate?
Outgroup	Non-Americans in the United States, what do you think Americans do on 4th of July and what are your thoughts on it?

Valence Manipulation

In addition to being placed into one of three audience compositions, each participant viewed either hostile or neutral comments and was instructed to respond to one comment predetermined by the researcher as part of the experimental design. Each condition contained a total of five comments, which were intended to represent a group of users. These five comments were manipulated to represent various users in the discussion thread (i.e., The participant saw five separate user comments upon entering into the discussion board). To control for valence, all five comments in each condition reflected either hostile or neutral content on the discussion board. Comments were pilot tested to ensure the degree of hostility was appropriate. Appendix C includes all comments for each audience and valence condition whereas Table 4.2 includes the original comment participants responded to during Time 1.

Feedback Manipulation

In between Time 1 and Time 2, individuals completed a series of measures and where automatically transferred to start Time 2 of the study. Since participants completed both Time 1 and Time 2 in the same Qualtrics form, it cannot be exactly determined how much time passed between Time 1 and Time 2. However, based on the number of questionnaire items to read and complete in Time 1, it is estimated that approximately 15-20 minutes passed before starting Time 2. During Time 2 of the experiment, the Qualtrics system automatically showed the participant their comment response from Time 1. Feedback was manipulated in a feedback score and represented as either positive or negative feedback, generating two groups for Time 2. Each participant in the positive feedback group received a score of 11 and each participant in the negative feedback

group received a score of -11. The number 11 and -11 represented the addition of upvotes and downvotes. It is important to note that the number 11 was used because of the limited amount of time between Time 1 and Time 2. Also, my study is much more concerned with the nature of the feedback itself (i.e., negative vs. positive feedback) and thus the number is not a focal point of the study. In addition to the 11 and -11 score, I also integrated the upvote button to be green if the participant earned 11 and made the downvote button to be red if their score was -11. This visual was intended to reinforce the valence of the feedback as positive versus negative.

Table 4.2 Original Comments

Audience	Valence	Script
Ingroup	Hostile	"I honestly feel like us Americans just use 4th of July to skip work, be lazy, drink a bunch of booze, and eat fattening foods. Most of us probably have no idea the historical significance of the holiday and just use it as an excuse to be lazy. I know this because I witness this every year!" User rmd937
Ingroup	Neutral	"July 4th is a time for us Americans to take time off work and relax with friends and family. I like to participate in fireworks and drink a lot of alcohol because that is what the holiday is for, right? Overall, I really enjoy hanging out with friends and family and other fellow Americans." User rmd937
Mixed	Hostile	"I honestly feel like everyone in the United States just use 4th of July to skip work, be lazy, drink a bunch of booze, and eat fattening foods. Most of them probably have no idea the historical significance of the holiday and just use it as an excuse to be lazy. I know this because I've witness this every year!" User rmd937
Mixed	Neutral	"July 4th is a time for everyone to take time off work and relax with friends and family. I like to participate in fireworks and drink a lot of alcohol because that is what the holiday is for, right? Overall, I really enjoy hanging out with friends and family." User rmd937

Outgroup	Hostile	"I honestly feel like Americans just use 4th of July to skip work, be lazy, drink a bunch of booze, and eat fattening foods. Most of them probably have no idea the historical significance of the holiday and just use it as an excuse to be lazy. I know this because I witness this every year!" User rmd937
Outgroup	Neutral	"July 4th is a time for non-Americans in the United States to take time off work and relax with friends and family. I like to participate in fireworks and drink a lot of alcohol because that is what the holiday is for, right? Overall, I really enjoy hanging out with friends and family and other fellow non-Americans." User rmd937

Overall, each participant entered into one condition that was manipulated through audience composition, valence of content, and nature of feedback. Next, I will explain the procedures and sequential time segments of the experiment.

Procedures

Participants completed both Time 1 and Time 2 during the same sitting. After reading and providing consent on the approved IRB consent page, participants read directions for how to participate in the discussion board environment. This activated Time 1 (see Figure 4.3 for research design).

Time 1

After reading the directions, participants were automatically placed into one of six possible conditions. Participants were asked to read the discussion board topic and read each comment on the thread. A comment response box was displayed for the participant to type their response. The participant was asked to respond to that comment only. After the comment was saved, the participant was transferred to complete a series of measures and items about their experience on the discussion board. Information on the measures is provided below.

Time 2

After measures were completed in Time 1, Time 2 of the study was automatically activated. During Time 2, participants were shown their original comment response from Time 1 of the study along with the other comments on the discussion board. Instructions prior to viewing their comment response informed participants that the score next to their comment is the combination of upvotes and downvotes. A negative number should be interpreted as more downvotes than upvotes, whereas a positive number indicated more upvotes than downvotes. After the participant reread their comment, they completed a series of measures, some of which were already completed during Time 1. In addition to measures, participants completed a series of demographic questions and questions about their usage and knowledge of reddit. After all measures and items were completed, participants were thanked for their time and transferred to an external survey for extra credit purposes (Note: This was only for participants at the recruitment universities).

Debrief

After the study and extra credit forms (if applicable) were completed, participants were informed the true nature of the study and that comments on the discussion board were not from other users. The debrief script can be found in Appendix E.

Measures

The following measures are assessed using continuous and interval level measurements where higher scores denote higher valence on that particular measure. All scales used a 1-7, strongly disagree-strongly agree response option unless otherwise noted. Appendix D includes a list of all questionnaire items. Figure 4.3 includes the full

research design with tasks and measures for Time 1 and Time 2. Descriptive statistics for each measure are presented in results Chapters 5 and 6.
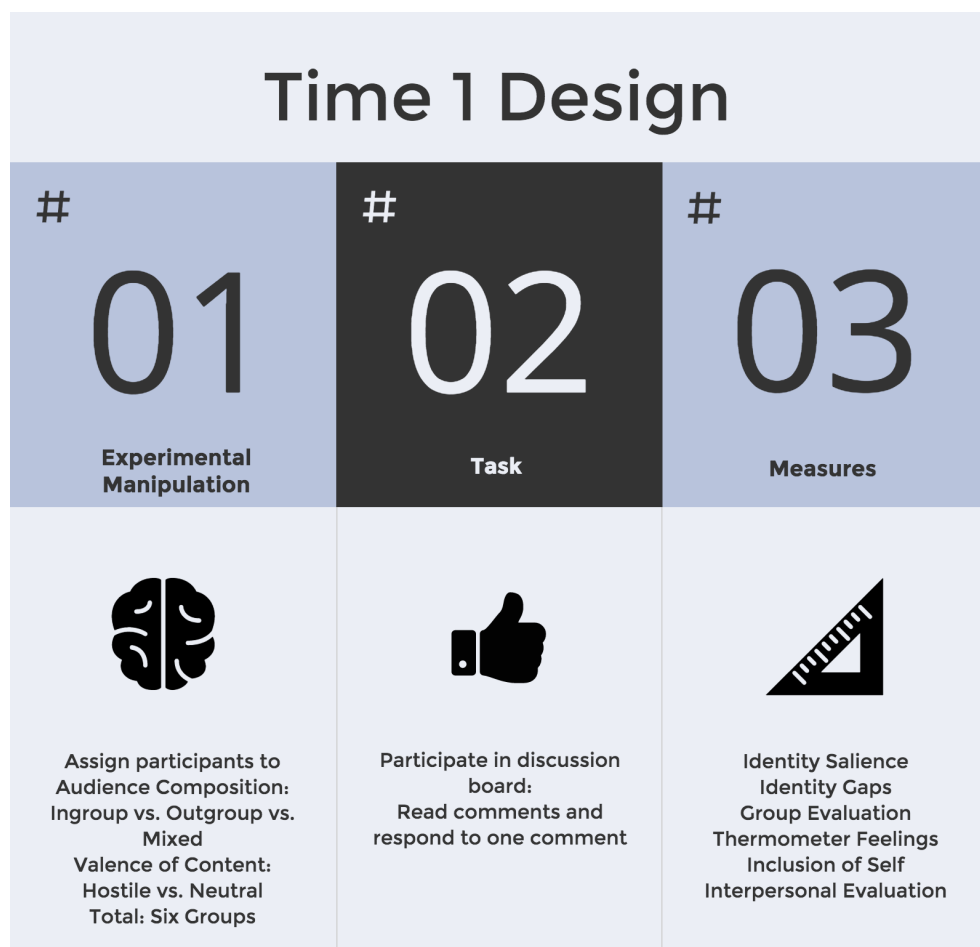
Figure 4.3. *Research design for Time 1.*

Identity Salience

The identity salience scale was partially adapted from Lea, Spears, and De Groot's (2001) *British Self-Categorization Scale* and from Postmes et al.'s conception of social identification, but instead utilized American national identity. A total of seven items were used to measure identity salience such as, "I feel a connection with other individuals from my nation", "I see myself as American", and "I understand the values of

being a member of my nation" (α = .87). Identity salience items were answered in Time 1 of the study.

Time 2 Design

#	#	#
01	02	03
Experiment Manipulation	**Task**	**Complete Measures**
Assign participants to feedback condition: Positive vs. Negative Total: Two groups	Participants view feedback	Identity Gaps Group Evaluation Thermometer Feelings Inclusion of Self
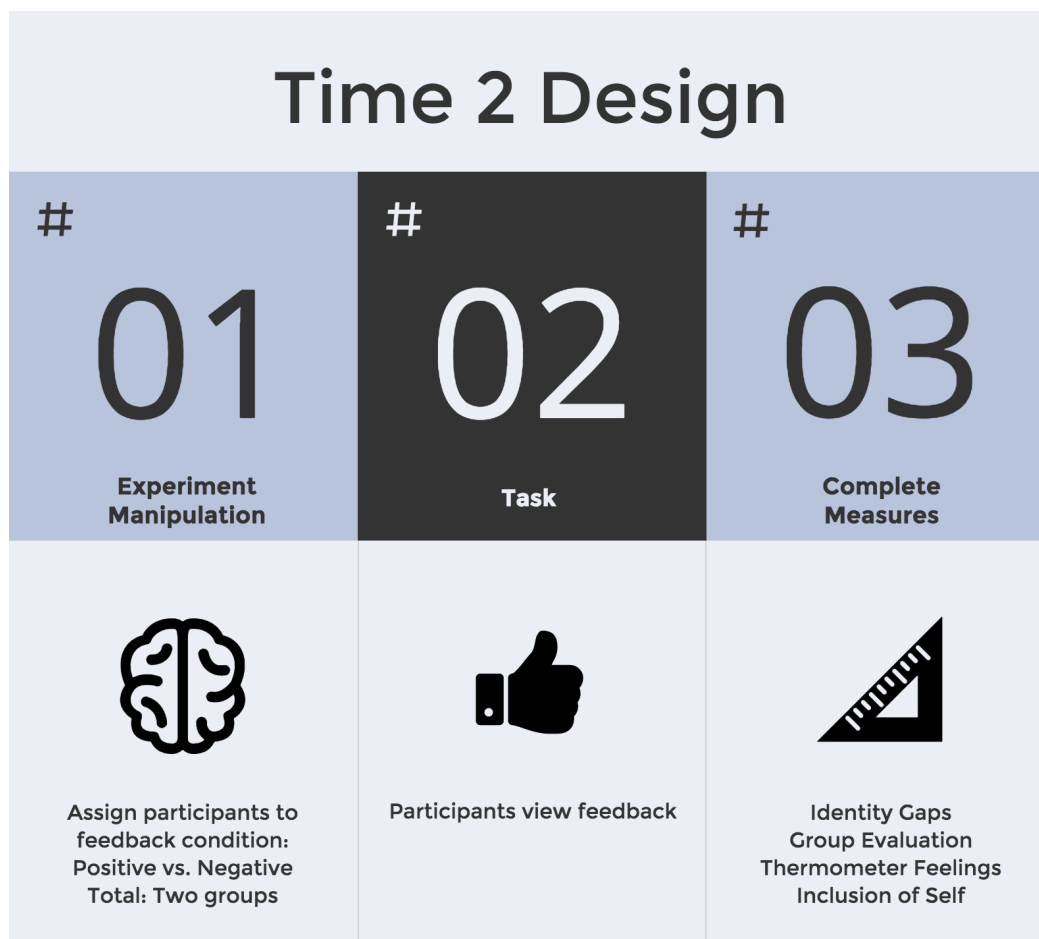
Figure 4.4. *Research design for Time 2.*

Personal-Enacted Identity Gap

The personal-enacted identity gap scale was adapted from Hecht and Jung's (2004) exploratory study on CTI measurements. Their *Personal-Enacted Identity Gap* scale comprises of 11 items regarding the sense of self-worth and its relation to enactment of identity. Since my study is concerned with how committed an individual is to a written comment, items were modified to reflect the communication that the participant completed in the study. Sample items included: "I spoke truthfully in my

comment", "I freely expressed the real me in my comment", and "There was a difference between the real me and the impression I gave to the audience in my comment". The personal-enacted identity gap items were answered in Time 1 and Time 2 of the study. The Cronbach's Alphas are .88 and .91.

Enacted-Communal Identity Gap

The enacted-communal identity gap measured the extent to which an individual's personal sense of their social identity conflict with the larger or communal messages being communicated. The scale is partially adapted from Murray and Kennedy-Lightsey's (2013) *Personal-Communal Identity Gap* scale measuring the identity gap students have between their own views of the university and their university's communal messages. I used six items to measure the enacted-communal identity gap: such as: "I feel that this group of users match well with how I communicated my message", "I feel proud to have communicated with this group of users", "My message is very different than the other messages" and "There is a drastic difference between how I see this group of users and how I communicated my message." Participants completed these items during Time 1 and Time 2 and resulted in Cronbach's Alphas of .88 and .81, respectively.

Group Evaluation

Group evaluation denotes an individual's identification and perception of the users on the discussion board thread. I used three separate measures to gauge group evaluation: (a) *Group Evaluation Scale*, (b) *Thermometer Feelings*, and (c) *Inclusion of Self*. All items were completed during Time 1 and Time 2. I used Brown, Mathews, Wade, and Williams (1986) and Hogg and Hains' (1996) *Group Evaluation Scales* and modified it to reflect the audiences or users in discussion board environment. The scale is

comprised of nine items and includes items such as, "I felt annoyed to interact with that group", "I highly identified with the users on the discussion board", "I felt strong ties with the group", and "I see myself as belonging to the group" (Time 1, α = .93; Time 2, α = .92).

Both the *Thermometer Feelings* and *Inclusion of the Other in the Self* measures are single item measures completed in both Time 1 and Time 2. With the *Thermometer Feelings* item, participants saw a picture of a thermometer which was labeled 0 – 100 and were asked to enter a number between 0 – 100 that represented how warm they felt toward the users in the discussion board (0 = cold, 100 = warm). This scale has been used in several intergroup communication studies attempting to assess general feelings about a group (Haddock, Zanna, and Esses, 1993). The *Inclusion of the Other in the Self* item uses a pictorial representation of how one's attitudes and overall self overlapped with the "other" (Gätcher, Starmer, & Tufano, 2015). The other was described as the other users in the discussion board. A total of seven pictorial depictions of the self and other were used as potential response options. Participants clicked on one image that represented their perception of their self in accordance with the other.

Interpersonal Evaluation

The interpersonal attraction scale was adapted from McCroskey and McCain (1974) and McCroskey, McCroskey, and Richmond (2006) to assess how the participant perceived their conversational partner (i.e., the user in the comment response). The scale is comprised of 11 items such as, "I feel like I could be friends with this person", "I felt like I could get along with this person", and "This person was easy to talk to" (α = .91). Interpersonal evaluation items were completed during Time 1 of the study.

Accommodative Language

Communication accommodation is the degree to which an individual's language matches and converges toward another individual's language. My study is interested in the accommodative nature of the language used in comment responses. A coding and rating system was developed in order to derive communication accommodation scores on a variety of categories. I utilized coding categories from Jones, Gallois, Callan, and Barker (1999) and also developed new categories that are suited for a discussion board environment. In turn, the communicative strategies and message characteristics used in the analysis of accommodative language were: (a) convergence, (b) valence, (c) interpersonal control, (d) discourse management, and (e) interpretability.

All rating scales ranged from 1-4 (1 = Low or Least, 4 = High or Most) whereas coding denoted the presence of absence of a particular behavior (1 = No, 2 = Yes). First, each comment response was rated for positive and negative valence or the degree of positive and negative characteristics in the comment response. Koenig Kellas, Willer, and Trees (2013) utilized a similar coding scheme in a study about perspective-taking behaviors in husband-wife conversations. The strategy, *interpersonal control*, is an individual's attendance to role relations in a conversation. Two behaviors made up interpersonal control and were both coded. The first interpersonal control behavior is collective language, which refers to the extent to which the use of "we" or "us" language is used in the comment response. The second interpersonal control behavior was self-disclosure, which comprises of information about the self in the comment response.

Discourse management refers to how the speaker judges and responds to the conversational needs of their partner. Shared viewpoint and politeness were rated and

coded to gauge discourse management. Politeness referred to the presence and degree of polite language in the comment response, whereas shared viewpoint included instances where the participant agreed or shared a viewpoint with the original commenter. Interpretability was coded and rated in light of topic content, or the degree to which the participant's response contained content that was relevant to the original comment, and the degree of convergence, or overall matching between the original comment and comment response.

Three undergraduate students were trained to code and rate comment responses based on the aforementioned CAT behaviors. First, intercoder reliability was obtained after 20% of the data was jointly coded and rated (ICCs .76 - .95). After reliability was assessed, the remaining comment responses were independently coded and rated. See Table 4.3 for a description of each coding category and interclass correlations for each.

After coding and rating of all comment responses were completed, a series of confirmatory factors analyses (CFA) were performed to assess whether the CAT behaviors mapped onto the single factor, *accommodation*. A factor called *convergent language* emerged with the following CAT behaviors: (a) shared viewpoint, (b) politeness, (c) topic content, and (d) convergence. The two CAT behaviors, collective language and self-disclosure, did not map onto a factor and as a result, were used as separate dependent variables for hypothesis and research question testing.

The reliability and dimensionality of the *convergent language* factor was assessed using confirmatory factory analysis using robust maximum likelihood estimation (MLR) in Mplus v. 7.0 (Muthén & Muthén, 2012**).** The model was identified with the latent factor mean at zero and all factor variances to one in order to estimate all item intercepts,

item factor loadings, and item residual variances. A one-factor model was run to estimate the obtained $\chi2$, its scaling factor (values greater than 1.000 indicate deviations from normality), the degrees of freedom, and its p-value, Comparative Fit Index (CFI) (in which values higher than .95 are desirable for good fit), and the Root Mean Square Error of Approximation (RMSEA), point estimate with a 90% confidence interval where values lower than .08 are desirable for good fit (Kline, 2011). The convergent language model resulted in good model fit, $\chi2$ (3) = 1.12, RMSEA = 0.00 [90% CI = .00: .07], CFI = 1.00.

In summary, communication accommodation includes three dependent variables for analysis: (a) convergent language, (b) collective language, and (c) self-disclosure. Although positive and negative valence were also coded in the analysis, these variables were not used to measure accommodation.

Table 4.3 Communication Accommodation Strategies and Behaviors

CAT Strategies	CAT Behaviors	Description of Behavior	ICC
Interpersonal Control	Collective language	The extent to which the use of "we" or "us" language is used in the comment response.	.92
Speakers attend to their role relations, higher in shared identity situations.	Self-disclosure	Level of self-disclosure or information about the self by the participant.	.88
Discourse Management	Shared viewpoint	Level or degree to which the participant agrees or shares a viewpoint with the original commenter.	.92
Speakers judge and respond to the conversational needs of their partner.	Politeness	Level or degree to which the participant uses polite language, words, or phrases to the original commenter and/or about the overall topic.	.76
Interpretability	Topic content	Level or degree to which the participant's response contained content that was relevant to the original comment.	.86
Speaker attends to the other person's interpretive competence			.90
	Convergence	Degree to which the participant's comment response "matches" or corresponds with the original comment.	
Valence	Positive	Degree of positive valence in the comment response.	.93
	Negative	Degree of negative valence in the comment response.	.95

Chapter Summary

This chapter included a summary of the participants, research design, participant procedures, and measures used in the study. In order to appropriately present the results for each set of hypotheses and research questions from chapter 3, there are two results chapters that correspond to each time segment of the study Chapter 5: Time 1 Results and Chapter 6: Time 2 Results. Each results chapter will present data analysis steps and a presentation of results addressing the hypotheses and research questions.

CHAPTER FIVE: RESULTS: TIME 1

The experimental manipulation in Time 1 of my study examines the extent to which a variety of identity and communicative outcomes are associated with audience composition (see Chapter 2) and valence of content (see Chapter 3). As outlined in the Chapter Four, participants entered into an online discussion board and responded to one comment on the board. The discussion board reflected many of reddit's primary technological factors such as visual anonymity, hidden comment scores, and text-based communication. As a result of this, users on the discussion board represented one specific audience composition: (a) ingroup, (b) outgroup, or (c) mixed. In addition to audience composition, the valence of conversations varied based on hostile or neutral content. Therefore, participants entered into one of six possible conditions (audience composition X valence of content). This chapter includes data analysis and presentation of the results from the Time 1 manipulation of the study. Figure 5.1 includes a reference to the Time 1 task and Time 1 measures.

First, I describe the data analyses used to test each set of hypotheses and research questions. These are organized by identity outcomes, group and interpersonal evaluation, and accommodative language. Then I present the results for each hypothesis and research question from the Time 1 portion of the study. Overall, these results lend insight into how varying audiences and valence of content influence identity processes such as identity enactment, evaluation of the group and individual, and language.
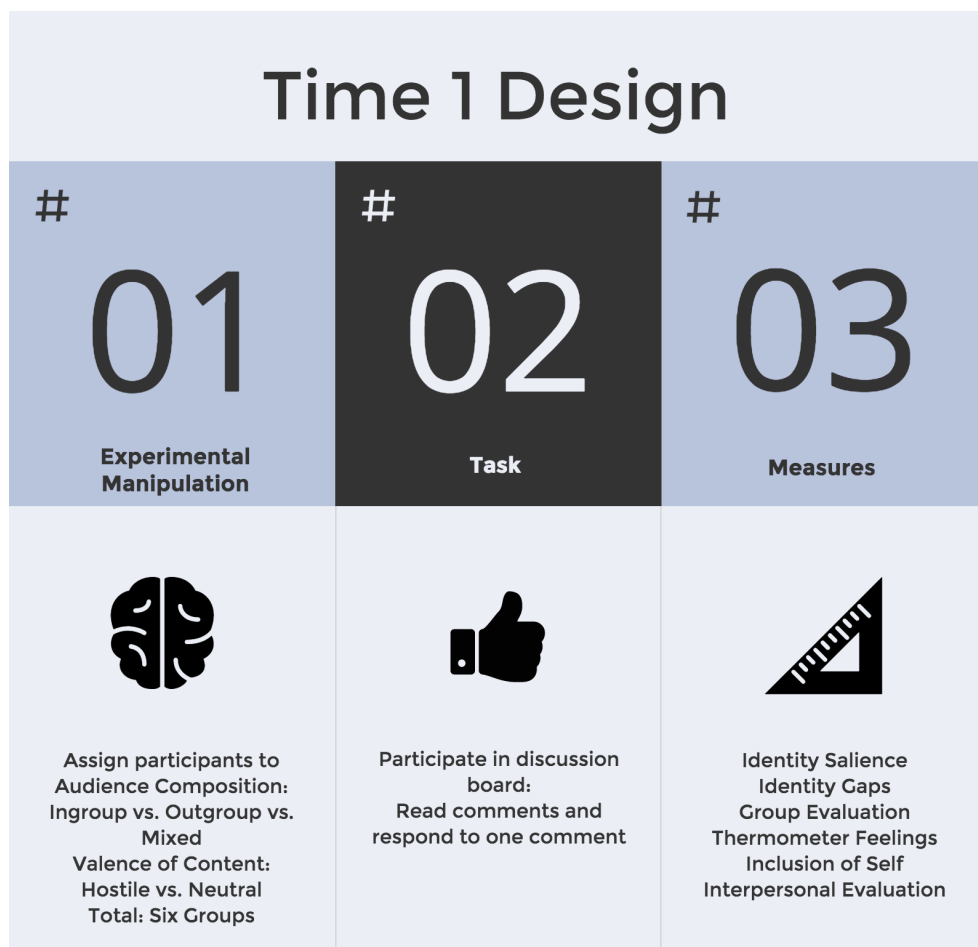
Figure 5.1. *Research design for Time 1.*

Data Analysis

I used SPSS version 22 to test each hypothesis and research question. First, I cleaned my data by reverse coding relevant items, computing scores for each dependent variable, and labeling each independent factor. In total, there were ten dependent variables and two independent factors for Time 1 data. A total of three dependent variables denoted identity outcomes: identity salience, personal-enacted identity gap, and enacted-communal identity gap. Four dependent variables made up group and interpersonal evaluation: group evaluation, thermometer feelings, inclusion of self, and

interpersonal evaluation. Finally, a total of three variables represented accommodative language (list these).

In order to test hypotheses and research questions, I conducted separate factorial ANOVAs for each of the ten dependent variables. The two independent factors were audience of composition and valence of content. Separate factorial ANOVAs were conducted instead of multivariate ANOVAs (MANOVAs) because of desire to look at isolated effects for the dependent variables. For instance, the two identity gaps in my study measure identity discrepancies, albeit different types of discrepancies that warrant individual assessment based on corresponding theoretical foundations. Given the complexity of the design, a multivariate test may hinder ability to find specific differences if the effect sizes are minimal. In short, I am not focusing on multivariate response patterns. As significant MONOVAs necessitate univariate tests (i.e., multiple ANOVAs) for each dependent variable, the decision was to initially approach the hypotheses and research questions via the univariate route.

Although I did not hypothesize an interaction effect, standard procedures for factorial analysis warrant first investigating potential interaction effects between the independent factors followed by examination of main effects. If warranted, I conducted LSD post hoc tests on the audience of composition factor since it contains three separate groups. My results section will briefly summarize each dependent variable, present ANOVA results in way of interaction and main effects, and finally explain whether the results support and address hypotheses and research questions.

Results

Results are organized by each set of dependent variables: (a) identity outcomes,

(b) group and interpersonal evaluation, and (c) accommodative language. I will present

each set of hypotheses and research questions pertaining to each section and present

results for each.

Identity Outcomes

The three identity outcomes in this section are identity salience, personal-enacted

identity gap, and enacted-communal identity gap. Each of these variables measures

outcomes related to one's identity and how a personal sense of self as well as the group's

values and messages can impact one's identity enactment.

Identity salience. Identity salience is the degree to which national identity is

important to the individual. The following table provides a review of the hypothesis and

research questions associated with identity salience:

Table 5.1 Hypotheses and Research Questions for Identity Salience

H1: Identity salience is dependent on the composition of audience such that individuals communicating with an outgroup audience will have higher identity salience than individuals communicating with an ingroup audience.
RQ1: Does identity salience change as a result of communication with a mixed audience when compared to communication with an outgroup or ingroup audience?
RQ7: Does identity salience depend on the valence of the message?

ANOVA results revealed no significant interaction between audience composition

and valence of content, $F(5, 310) = 0.67$, $p = 0.51$. There was no significant main effect

of audience composition on identity salience, $F(2, 310) = 0.25$, $p = 0.78$. Examination of

valence of content on identity salience also revealed no significant main effects, $F(1, 310)= 0.07, p = 0.78)$.

Hypothesis one, which predicts that identity salience is higher in outgroup audience conditions, is not supported. Since there are no significant main effects, there is no difference in identity salience scores when comparing scores between mixed, ingroup, and outgroup audience compositions (RQ1). Similarly, results for research question seven reveal no significant main effect of valence (hostile vs. neutral) on identity salience. In other words, a participant's sense of national identity was not influenced by the hostility of the conversations.

In summary, these results suggest that identity salience in the context of national identity (e.g., American identity) does not vary based on perception of the audience or the valence of content. Table 5.2 include a summary of descriptive statistics for each condition and Table 5.3 presents a summary of the hypotheses and research questions.

Table 5.2 Descriptive Statistics for Identity Salience by Audience Composition and Valence

	Hostile			Neutral			**Total**		
	M	*SD*	n	*M*	*SD*	n	*M*	*SD*	n
Ingroup	5.34	0.92	53	5.33	1.13	61	**5.33**	**1.03**	**114**
Outgroup	5.46	0.83	57	5.36	1.02	44	**5.42**	**0.93**	**101**
Mixed	5.21	1.03	51	5.42	1.02	50	**5.31**	**1.02**	**101**
Total	**5.34**	**0.92**	**161**	**5.36**	**1.07**	**155**	**5.36**	**1.00**	**316**

Note: Higher scores denote higher identity salience

Table 5.3 Summary of Hypotheses and Research Questions for Identity Salience: Audience Composition and Valence

Hypothesis or Research Question	Results
H1: Identity salience is dependent on the composition of audience such that individuals communicating with an outgroup audience will have higher identity salience than individuals communicating with an ingroup audience.	Not supported
RQ1: Does identity salience change as a result of communication with a mixed audience when compared to communication with an outgroup or ingroup audience?	No difference in identity salience between mixed and ingroup or outgroup audience compositions
RQ7: Does identity salience depend on the valence of the message?	No difference in identity salience between hostile and neutral conditions.

Personal-enacted identity gap. The personal-enacted identity gap is the discrepancy between how an enacted message (i.e., communication) differs from one's own sense of self. Table 5.4 includes hypotheses and research questions revolve around the personal-enacted identity gap:

Table 5.4 Hypotheses and Research Questions for Personal - Enacted Identity

H2: The personal-enacted identity gap is dependent on the composition of audience such that the personal-enacted identity gap is lower when communicating with ingroup audiences compared to communicating with outgroup audiences.

RQ2: Does the personal-enacted identity gap change as a result of communicating with a mixed audience when compared to communicating with an ingroup or outgroup audience?

RQ8: Does the personal-enacted identity gap depend on the valence of the message?

There was no significant interaction effect between audience composition and valence of content on the personal-enacted identity gap, $F(2, 310) = 1.10$, $p = 0.28$. Similarly, there were no main effects of audience composition, $F(2, 310) = 1.17$, $p = 0.31$, or valence of content, $F(1, 310) = 0.32$, $p = 0.57$, on the personal-enacted identity gap.

Hypothesis two predicts that the personal-enacted identity gap is lower in communication with ingroup audiences compared to outgroup audiences. No significant main effects emerged with the personal-enacted identity gap between the ingroup or outgroup audience compositions; therefore hypothesis two was not supported. When examining the main effect of personal-enacted identity gap on mixed audience compositions and outgroup and ingroup audiences, there were no significant differences and means were steadily the same across the ingroup, outgroup, and mixed conditions (see Table 5.5). Finally, research question eight deals with the impact of valence on the personal-enacted identity gap. Results from the factorial ANOVA revealed no significant difference of scores between the ingroup, outgroup, or mixed audience compositions.

Table 5.5 Descriptive Statistics for Personal-Enacted Identity Gap Scores by Audience Composition and Valence

	Hostile			Neutral			Total		
	M	*SD*	n	*M*	*SD*	n	*M*	*SD*	n
Ingroup	2.69	1.04	53	2.67	0.92	61	**2.68**	**0.98**	**114**
Outgroup	3.01	1.10	57	2.72	0.79	44	**2.88**	**0.98**	**101**
Mixed	2.61	0.89	51	2.72	0.98	50	**2.67**	**0.93**	**101**
Total	**2.78**	**1.03**	**161**	**2.70**	**0.90**	**155**	**2.74**	**0.96**	**316**

Note: Higher scores denote a higher identity gap

Table 5.6 Summary of Hypotheses and Research Questions for Personal - Enacted
Identity Gap: Audience Composition and Valence

Hypothesis or Research Question	Results
H2: The personal-enacted identity gap is dependent on the composition of audience such that the personal-enacted identity gap is lower when communicating with ingroup audiences compared to communicating with outgroup audiences.	Not supported
RQ2: Does the personal-enacted identity gap change as a result of communicating with a mixed audience when compared to communicating with an ingroup or outgroup audience?	No difference in personal-enacted identity gap between mixed and ingroup or outgroup audience compositions.
RQ8: Does the personal-enacted identity gap depend on the valence of the message?	No difference in personal-enacted identity gap between hostile and neutral conditions.

Enacted-communal identity gap. The second identity gap examined in this

study is the enacted-communal identity gap. This identity gap incorporates one's

identification with the group's message (communal) and the enacted message. The

discrepancy between enactment and communal messages represents the enacted-

communal identity gap. My study is interested in understanding how this identity gap

functions as a result of communicating with various audience compositions and under

difference hostility or neutral content. Hypothesis three, research question three, and

research question nine deal with the enacted – communal identity gap:

Table 5.7 Hypotheses and Research Questions for Enacted-Communal Identity Gap

H3: The enacted-communal identity gap is dependent on the composition of audience such that the enacted-communal identity gap is lower when communicating with ingroup audiences compared to communicating with outgroup audiences.

RQ3: Does the enacted-communal identity gap change as a result of communicating with a mixed audience when compared to communicating with an ingroup or outgroup audience?

RQ9: Does the enacted-communal identity gap depend on the valence of the message?

A factorial ANOVA for the enacted-communal identity gap resulted in no significant interaction effect between audience composition and valence, $F(2, 310) = 0.87$, $p = 0.42$. However, a significant main effect of audience composition emerged, $F(2, 310) = 3.67$, $p = .02$. Post hoc analyses revealed that participants in the outgroup audience condition exhibited a higher discrepancy between the identity gap frames ($M = 4.13$, $SD = 1.33$) compared to the ingroup audience condition ($M = 3.56$, $SD = 1.37$) and the mixed audience condition ($M = 3.67$, $SD = 1.46$). There was no significant difference between the ingroup and mixed audience condition, $p = 0.71$.

Table 5.8 Descriptive Statistics for Enacted-Communal Identity Gap Scores by Audience Composition and Valence

	Hostile			Neutral			Total		
	M	*SD*	n	*M*	*SD*	n	*M*	*SD*	n
Ingroup	4.27	1.27	53	2.94	1.14	61	3.56$_a$	1.37	114
Outgroup	4.88	1.02	57	3.16	1.03	44	4.13$_b$	1.33	101
Mixed	4.34	1.47	51	3.00	1.11	50	3.67$_a$	1.46	101
Total	**4.51$_a$**	**1.28**	**161**	**3.02$_b$**	**1.10**	**155**	**3.78**	**1.40**	**316**

Note: Higher scores denote a higher identity gap.
For each effect, cells with different subscripts significant differ at p <.05

Hypothesis three, which posits the enacted-communal identity gap is lower when communicating in ingroup audiences compared to outgroup audiences, is supported. This suggests that individuals exhibited more discrepancy between their communication (i.e., their comment response) and the communal messages (i.e., group's messages) when communicating with outgroup members. Participants communicating with ingroup members exhibited a lower enacted-communal identity gap (see Table 5.8). To answer research question three, results revealed no significant mean difference in the enacted-communal identity gap scores between the mixed and ingroup audiences. Also, scores of the enacted – communal identity gap were significantly higher for individuals in the outgroup audience compared to those in the mixed audience.

There was also a main effect of valence on the enacted-communal identity gap, $F(2, 310) = 120.00, p < .001$. Participants in the hostile condition reported a significantly higher enacted-communal identity gap ($M = 4.51, SD = 1.28$) compared to the participants in the neutral condition ($M = 3.02, SD = 1.10$). Research question nine asked whether the valence of content influenced the enacted-communal identity gap. Participants in the hostile condition reported higher levels of the enacted-communal identity gap compared to individuals in the neutral condition. This means that individuals' communication or comment responses tended to "match" or correspond more with the comments in the neutral condition.

Table 5.9 Summary of Hypotheses and Research Questions for Enacted-Communal
Identity Gap: Audience Composition and Valence

Hypothesis or Research Question	Results
H3: The enacted-communal identity gap is dependent on the composition of audience such that the enacted-communal identity gap is lower when communicating with ingroup audiences compared to communicating with outgroup audiences.	Supported, the enacted-communal identity gap is significantly lower in ingroup audience compositions compared to outgroup audience compositions
RQ3: Does the enacted-communal identity gap change as a result of communicating with a mixed audience when compared to communicating with an ingroup or outgroup audience?	There is a significant difference in the enacted - communal identity gap between the mixed and ingroup audience conditions. There is no significant difference between the mixed and outgroup audience conditions
RQ9: Does the enacted-communal identity gap depend on the valence of the message?	Yes. The enacted-identity gap is significantly higher in hostile conditions comapared to neutral conditions

In summary, the two identity gaps examined in my study revealed varying results.
Based on these results, the personal-enacted identity gap did not change as a result of
communicating with different audience compositions, nor did the valence of content
impact one's personal-enacted identity gap. On the other hand, individuals reported lower
scores of the enacted-communal identity gap when communicating in ingroup audiences
compared to outgroup audiences. Also, the enacted-communal identity gap scores were
higher in hostile conditions compared to neutral conditions. This suggests that the overall
type of group (i.e., ingroup, outgroup, mixed) as well as the valence of the group's
messages (i.e., hostile, neutral) has an impact on how individuals communicate or enact a
message. However, one's own sense of self (i.e., the personal layer of identity) and its

relation to communication does not seem to change as a result of audience composition or valence.

Group and Interpersonal Evaluation

Evaluation of the group and individuals is an important facet to understand when investigating intergroup relations. In this section, I present the results pertaining to group and interpersonal evaluation. First, I will present a section on group evaluation and then conclude this section with results from interpersonal evaluation.

Group evaluation. To measure group evaluation, I used three separate scales to gauge each participant's view and perception of the group of users on the discussion board. The three measures are: (a) *Group Evaluation Scale,* (b) *Thermometer Feelings*, and (c) *Inclusion of Self.* Table 5.10 includes all hypotheses and research questions for group evaluation:

Table 5.10 Hypotheses and Research Questions for Group Evaluation

H4: Group evaluation is dependent on audience composition such that individuals communicating with an ingroup audience evaluate the group higher than individuals communicating with an outgroup audience.
RQ4: Does communicating with a mixed audience influence the evaluation of the group such that it differs when compared to an ingroup or outgroup audience?
H7: The evaluation of the group will depend on whether the group's communication is hostile or neutral such that groups who communicate with hostility are viewed as less attractive than groups who communicate neutrally.

Group evaluation scale. For group evaluation as the dependent variable, no significant interaction emerged between audience composition and valence of content, $F(2, 310) = 0.97, p = .37$. Results revealed main effects of both audience composition,

$F(2, 310) = 7.98$, $p < .001$, and valence of content, $F(1, 310) = 117.34$, $p < .001$, on group

evaluation. A posthoc examination of audience composition revealed a significant mean

difference between the ingroup audience condition ($M = 4.62$, $SD = 1.34$) and the

outgroup audience condition ($M = 3.86$, $SD = 1.31$) at $p < .001$. Hypothesis four, which

predicts that group evaluation is higher in ingroup audiences, is supported on the group

evaluation variable. Group evaluation scores also significantly varied when comparing

the mixed audience condition ($M = 4.42$, $SD = 1.45$) and the outgroup audience

condition, $p < .001$. There was no meaningful difference in group evaluation scores

between the mixed audience and ingroup audience conditions. Therefore, for research

question four, the mixed and ingroup conditions function vary similarly on the group

evaluation variable; significantly differing from the outgroup condition. Hypothesis seven

is also supported from the main effect results in that individuals rated users in the hostile

condition less attractive ($M = 3.59$, $SD = 1.27$), than users in the neutral condition ($M = 5.06$, $SD = 1.10$). Table 5.11 includes a summary of descriptive statistics for group

evaluation scores.

Table 5.11 Descriptive Statistics for Group Evaluation by Audience Composition and
Valence

	Hostile			Neutral			Total		
	M	SD	n	M	SD	n	M	SD	n
Ingroup	4.00	1.23	53	5.17	1.18	61	**4.62$_a$**	**1.34**	**114**
Outgroup	3.17	1.09	57	4.74	1.02	44	**3.86$_b$**	**1.31**	**101**
Mixed	3.65	1.38	51	5.21	1.03	50	**4.42$_a$**	**1.45**	**101**
Total	**3.59$_a$**	**1.27**	**161**	**5.06$_b$**	**1.10**	**155**	**4.31**	**1.40**	**316**

Note: Higher scores denote a higher group evaluation.
For each effect, cells with different subscripts significant differ at p <.05

Thermometer feelings. The second factorial ANOVA used *thermometer feelings* as an alternative way to gauge evaluation of the group. A significant interaction effect emerged between audience composition and valence of content, $F(2, 309) = 3.43$, $p < .05$. I examined the simple main effects between audience composition and valence of content in order to closely examine the interaction effect. Results revealed that individuals tended to rate the outgroup in the hostile condition significantly lower than the outgroup in the neutral condition (LSD mmd = 13.44, $p < .001$). There were no significant differences in thermometer ratings between the ingroup and outgroup condition when in the neutral condition. Furthermore, the thermometer ratings in the hostile condition while communicating with a mixed audience was approaching significance when compared to outgroup condition (LSD mmd = 7.52, $p = .058$). Although I did no hypothesize how or whether valence and audience composition would interact, this result lends insight into the combined effect of hostility and outgroup audience compositions.

I also examined the main effects of audience composition and valence of content on the thermometer feelings scale. First, a significant main effect of audience composition, $F(2,309) = 2.90$, $p = .005$, revealed that individuals in the ingroup audience condition rated the group higher ($M = 68.20$, $SD = 23.70$) when compared to the outgroup audience condition ($M = 60.73$, $SD = 27.59$). These results are in line with hypothesis four. However, post hoc analyses did not reveal any significant difference in thermometer ratings between the ingroup and mixed audience conditions or the mixed and outgroup conditions (RQ4). Examination of the main effect of valence revealed a significant difference between the hostile and neutral conditions, $F(1,309) = 165.02$, $p < .001$, which supports hypothesis seven. Participants rated the neutral condition of users

much higher ($M = 78.40$, $SD =14.92$) than the hostile condition of users ($M = 48.24$, SD

$=25.30$). Descriptive statistics are displayed in Table 5.12.

Table 5.12 Descriptive Statistics for Thermometer Feelings by Audience Composition and Valence

	Hostile			Neutral			**Total**		
	M	*SD*	n	*M*	*SD*	n	*M*	*SD*	n
Ingroup	54.92ₐ	25.41	52	79.52	14.72	61	**68.20**	**23.70**	**113**
Outgroup	41.47ᵦ	23.86	57	80.00	13.11	44	**60.73**ᵃ	**27.59**	**101**
Mixed	49.00ₐ	25.29	51	75.62	16.50	50	**62.18**ᵇ	**25.14**	**101**
Total	**48.24ₐ**	**25.30**	**160**	**78.40ᵦ**	**14.92**	**155**	**63.08**ᵃ	**25.72**	**315**

Note: Thermometer feelings range from 0-100 with higher scores denoting warmer feelings toward the group
For each effect, cells with different subscripts significant differ at p <.05

Inclusion of self. The third factorial ANOVA analyzed the dependent variable

inclusion of self to measure group evaluation. No significant interaction effect emerged

between audience composition and valence of content, $F(2,310) = 1.87$, $p =.15$.

Significant main effects of audience composition, $F(2,309) = 9.17$, $p <.001$, and valence

of content, $F(1,310) = 39.98$, $p <.001$, were present in the analysis. Investigation of the

audience composition main effect revealed that individuals tended have higher inclusion

of self in the ingroup audience condition ($M = 4.39$, $SD = 2.00$) and mixed audience

condition ($M = 4.30$, $SD = 2.03$) compared to the outgroup audience condition ($M = 3.25$,

$SD = 1.88$). These results support hypothesis four in that participants rated the ingroup

higher than the outgroup. To answer research question four, there was no difference in

inclusion of self scores between the ingroup and mixed condition, with the mixed

condition scores reportedly higher than the outgroup scores. For valence of content, individuals rated the neutral group of users higher on the inclusion of self scale ($M =$ 4.70, $SD = 1.83$) compared to the hostile group of users ($M = 3.32$, $SD = 1.99$). Hypothesis seven is supported on the inclusion of self measures. See Table 5.13 for descriptive statistics.

Table 5.13 Descriptive Statistics for Inclusion of Self by Audience Composition and Valence

	Hostile			Neutral			Total		
	M	*SD*	n	*M*	*SD*	n	*M*	*SD*	n
Ingroup	3.94	2.14	53	4.77	1.80	61	**4.39ₐ**	**2.00**	**114**
Outgroup	2.46	1.47	57	4.27	1.85	44	**3.25ᵦ**	**1.88**	**101**
Mixed	3.63	2.03	51	4.98	1.80	50	**4.30ₐ**	**2.03**	**101**
Total	**3.32ₐ**	**1.99**	**161**	**4.70ᵦ**	**1.83**	**155**	**3.99**	**2.03**	**316**

Note: Higher scores denote a higher overlap between the self and the group.

For each effect, cells with different subscripts significant differ at p <.05

In summary, these results suggest that group evaluation varies as a result of communicating with different audience compositions (H4, RQ4) as well as the valence or tone of the group (H7)(see Table 5.14). A recurring result is that participants rated the ingroup much higher than the outgroup with the mixed audience bearing very similar results to the ingroup audience. Also, valence of content has an influence on how users rate the group in that hostile groups will be rated less favorably than neutral groups.

Table 5.14 Summary of Hypotheses and Research Questions for Group Evaluation

Hypothesis or Research Question	Results
H4: Group evaluation is dependent on audience composition such that individuals communicating with an ingroup audience evaluate the group higher than individuals communicating with an outgroup audience.	Supported, group evaluation including thermometer feelings, inclusion of self, and group evaluation measures was higher in ingroup and mixed compositions compared to outgroup compositions.
RQ4: Does communicating with a mixed audience influence the evaluation of the group such that it differs when compared to an ingroup or outgroup audience?	Yes, the group evaluation scores were higher in the mixed composition compared to the outgroup composition. The thermometer feelings scores were higher in the mixed composition compared to the outgroup composition. Thermometer feelings were higher in the ingroup composition compared to the mixed composition. Inclusion of self was higher in the mixed composition compared to the outgroup composition.
H7: The evaluation of the group will depend on whether the group's communication is hostile or neutral such that groups who communicate with hostility are viewed as less attractive than groups who communicate neutrally.	Supported, group evaluation including thermometer feelings, inclusion of self, and group evaluation measures was lower in the hostile condition compared to the neutral condition.

Interpersonal evaluation. In addition to group evaluation, I also measured the evaluation of one individual on the discussion board. Participants were asked to respond to one comment (i.e., one participant on the discussion board). Interpersonal evaluation items asked users to evaluate the individual on the discussion board thread. Table 5.15 includes a summary of hypotheses and research questions for interpersonal evaluation.

Table 5.15 Hypotheses and Research Questions for Interpersonal Evaluation

H5: Interpersonal evaluation is dependent on audience composition such that individuals evaluate their conversational partner higher when communicating with an ingroup audience than communicating with an outgroup audience.

RQ5: Does communicating with a mixed audience influence interpersonal evaluation such that it differs when compared to an ingroup or outgroup audience?

H8: The evaluation of an individual will depend on whether their communication is hostile or neutral such that individuals who communicate with hostility are viewed as less attractive than individuals who communicate neutrally.

In order to address these hypotheses and research question, I conducted a factorial ANOVA with interpersonal evaluation as the dependent variable and audience composition and valence as the two independent factors. ANOVA results revealed no significant interaction between valence and audience composition, $F(2,310) = 1.74$, $p = .31$. Examination of the main effects revealed no significant difference in interpersonal evaluation scores between each of the audience compositions, $F(2,310) = .56$, $p = .55$. Participants did not rate the individual differently based on group membership, rendering hypothesis five not supported. Since no significant main effect of audience emerged, there was no difference in evaluation scores between the mixed audience and ingroup and outgroup audiences (RQ5). Results did reveal a significant main effect of valence on interpersonal evaluation, $F(1,310) = 58.02$, $p < .001$; hypothesis . Individuals rated the neutral conversational partner higher ($M = 4.90$, $SD = .77$) than the hostile conversational partner ($M = 4.12$, $SD = 1.01$), which supports hypothesis eight.

Similar to results under group evaluation, the individuals who communicated with hostility were rated less favorable compared to neutral individuals (see Table 5.16).

However, participants' ratings of the individual were not influenced by the audience composition. This suggests that the valence of the content has a higher bearing on interpersonal evaluation than does the group affiliation.

Table 5.16 Descriptive Statistics for Interpersonal Evaluation by Audience Composition and Valence

	Hostile			Neutral			**Total**		
	M	*SD*	n	*M*	*SD*	n	*M*	*SD*	n
Ingroup	4.22	0.94	53	4.95	0.85	61	**4.61**	**0.96**	**114**
Outgroup	4.00	1.11	57	5.00	0.66	44	**4.43**	**1.06**	**101**
Mixed	4.24	0.97	51	4.76	0.78	50	**4.45**	**0.93**	**101**
Total	**4.12$_a$**	**1.01**	**161**	**4.90$_b$**	**0.77**	**155**	**4.50**	**0.98**	**316**

Note: Higher scores denote higher interpersonal evaluation

For each effect, cells with different subscripts significant differ at p <.05

Table 5.17 Summary of Hypotheses and Research Questions for Interpersonal Evaluation

H5: Interpersonal evaluation is dependent on audience composition such that individuals evaluate their conversational partner higher when communicating with an ingroup audience than communicating with an outgroup audience.	Not supported
RQ5: Does communicating with a mixed audience influence interpersonal evaluation such that it differs when compared to an ingroup or outgroup audience?	No difference in interpersonal evaluation scores between any audience compositions.
H8: The evaluation of an individual will depend on whether their communication is hostile or neutral such that individuals who communicate with hostility are viewed as less attractive than individuals who communicate neutrally.	Supported, interpersonal evaluation scores were lower in the hostile conditions compared to the neutral conditions.

Accommodative Language

Accommodative language is language that converges or orients toward another individual's style and content of communication. Participant comment responses were coded and rated for six accommodative behaviors. Confirmatory factor analyses revealed one factor *convergent language,* which includes convergence, shared viewpoint, topic content, and politeness. Collective language and self-disclosure acted as two separate dependent variables. See Table 5.18 for a review of each dependent variable for communication accommodation:

Table 5.18 Dependent Variables for Accommodative Language

Variable	Behaviors	Description
Convergent Language	Convergence	The extent to which the participant's response matches the original comment.
	Shared Viewpoint	Level or degree to which the participant agrees or shares a viewpoint with the original commenter.
	Topic Content	Degree to which the comment response includes information about the original comment.
	Politeness	Level or degree to which the participant uses polite language, words, or phrases to the original commenter and/or about the overall topic.
Collective Language		The extent to which the use of "we" or "us" language is used in the comment response.

Self-disclosure	Level of self-disclosure or information about the self by the participant.

My study is interested in understanding how communication accommodation varies as a result of communicating with various audience compositions (ingroup, outgroup, mixed) and under different types of valence (hostile, neutral). Table 5.19 presents the hypothesis and research questions associated with accommodative language.

Table 5.19 Hypotheses and Research Questions for Accommodative Language

H6: Individuals communicate with more accommodative language when communicating with ingroup audiences as opposed to communicating with outgroup audiences.
RQ6: Does accommodative language differ when communicating in a mixed audience when compared to communicating with an outgroup audience?
RQ10: Does accommodative language vary as a result of responding to a hostile message versus a neutral message?

Convergent language. A factorial ANOVA between audience composition and valence of content on convergent language revealed no significant interaction, $F(2, 310)$ = .17, $p = 0.84$. Examination of the main effects revealed no significant effect of audience composition, $F(3, 310) = 1.21$, $p = 0.30$, and a significant main effect of valence, $F(1, 310) = 60.25$, $p < .001$. This means that hypothesis six for convergent language is not supported and that there is no significant difference in convergence language between the mixed audience composition and the ingroup or outgroup audience composition (RQ6). To answer research question ten, the valence of content did have an influence on convergent language. Participants used more convergent language (i.e., higher matching, topic content, politeness) when the valence was neutral compared to the hostile condition (see Table 5.20 for descriptive statistics).

Table 5.20 Descriptive Statistics for Convergent Language by Audience Composition and Valence

	Hostile			Neutral			**Total**		
	M	*SD*	n	*M*	*SD*	n	*M*	*SD*	n
Ingroup	2.47	0.57	53	2.92	0.54	61	**2.71**	**0.60**	**114**
Outgroup	2.50	0.47	57	3.04	0.70	44	**2.74**	**0.64**	**101**
Mixed	2.56	0.53	51	3.06	0.57	50	**2.81**	**0.60**	**101**
Total	**2.51$_a$**	**0.52**	**161**	**3.00$_b$**	**0.60**	**155**	**2.75**	**0.61**	**316**

Note: Higher scores denote higher convergent language.
For each effect, cells with different subscripts significant differ at p <.05

Collective language. The second factorial ANOVA for accommodation was with collective language as the dependent variable. No significant interaction emerged, $F(2, 310) = 2.12$, $p = 0.12$ as well as no main effect of valence on collective language, $F(1, 310) = 0.84$, $p = .35$. A main effect of audience composition approached significance, $F(2, 310) = 2.56$, $p = .07$. Further examination of this main effect revealed that individuals used more collective language in the ingroup audience compared to the outgroup audience, supporting hypothesis six in that more accommodation is used in the ingroup condition compared to the outgroup condition. A LSD post hoc test revealed that the participants in the mixed audience composition used a similar amount of collective language as participants in the ingroup audience composition (RQ6). As a result, the mixed audience composition scores on collective language were significantly higher than the scores in the outgroup audience composition (RQ6). Finally, since no main effect of valence influenced the levels of collective language, there is no significant difference in

using collective language between neutral and hostile conditions (RQ10). Table 5.21

includes a summary of descriptive statistics for collective language.

Table 5.21 Descriptive Statistics for Collective Language by Audience Composition and Valence

	Hostile			Neutral			**Total**		
	M	*SD*	n	*M*	*SD*	n	*M*	*SD*	n
Ingroup	1.83	0.84	53	1.85	0.67	61	**1.84$_a$**	**0.75**	**114**
Outgroup	1.77	0.90	57	1.43	0.62	44	**1.62$_a$**	**0.81**	**101**
Mixed	1.73	0.75	51	1.80	0.80	50	**1.76$_b$**	**0.77**	**101**
Total	**1.78**	**0.84**	**161**	**1.72**	**0.72**	**155**	**1.75**	**0.78**	**316**

Note: Higher scores denote more collective language.
For each effect, cells with different subscripts significant differ at p <.05

Self-disclosure. The third factorial ANOVA used self-disclosure as a dependent

variable of communication accommodation. Similar to previous results, there was no

interaction between audience composition and valence of content, $F(2, 310) = .21$ $p =$

0.81. The main effects revealed no difference in self-disclosure between each valence,

$F(1, 310) = 1.27$, $p = 0.26$, and a significant main effect of audience composition, $F(2,$

$310) = 14.82$, $p <.001$. An LSD post hoc test demonstrated that individuals used more

self-disclosure in the ingroup audience compared to the outgroup audience (see Table

5.22). These results support hypothesis six in that more accommodation is used in the

ingroup condition. To address research question six, the same post hoc test showed that

the ingroup and mixed audience compositions had no difference between them in self-

disclosure. When comparing self-disclosure scores between the mixed and outgroup

audience compositions, individuals tended to use more self-disclosure in the mixed

condition compared to the outgroup condition (RQ6). Lastly, there was no difference in self-disclosure between the neutral and hostile conditions (RQ10).

Table 5.22 Descriptive Statistics for Self-disclosure by Audience Composition and Valence

	Hostile			Neutral			**Total**		
	M	*SD*	n	*M*	*SD*	n	*M*	*SD*	n
Ingroup	2.69	0.99	53	2.59	0.97	61	**2.64$_a$**	**0.98**	**114**
Outgroup	2.14	0.91	57	2.09	0.93	44	**2.11$_a$**	**0.91**	**101**
Mixed	2.94	0.92	51	2.72	1.05	50	**2.83$_b$**	**0.99**	**101**
Total	**2.57**	**0.99**	**161**	**2.49**	**1.01**	**155**	**2.53**	**1.00**	**316**

Note: Higher scores denote more self-disclosure.
For each effect, cells with different subscripts significant differ at p <.05

In summary, the results from the three dependent variables of communication accommodation showed varying results. Convergent language did not vary as a result of communicating with ingroup or outgroup audience compositions, which does not support hypothesis six. However, participants did use more collective language and self-disclosure with ingroup audiences compared to outgroup audiences. In both collective language and self-disclosure, the ingroup and mixed audience compositions function similarly in that the mean scores have no significant difference between them (RQ6). The valence of content also provided varying results between the three variables. First, convergent language was significantly higher in the neutral condition compared to the hostile condition. In other words, participants used more politeness, had more agreement, and wrote comment responses similar to the original response when communicating with more neutral individuals. On the other hand, collective language and self-disclosure did not vary as a result of the two different valences. These results suggest that

accommodative behaviors can function differently and go in divergent directions. See

Table 5.23 for a summary of the hypothesis and research questions.

Table 5.23. Summary of Hypotheses and Research Questions for Accommodative Language

Hypothesis or Research Question	Results
H6: Individuals communicate with more accommodative language when communicating with ingroup audiences as opposed to communicating with outgroup audiences.	Partial support. There was no difference in convergent language between the ingroup and outgroup compositions. Participants used more collective language in the ingroup condition compared to the outgroup condition. Participants self-disclosed more in the ingroup condition compared to the outgroup condition.
RQ6: Does accommodative language differ when communicating in a mixed audience when compared to communicating with an outgroup audience?	For convergent language, there was no difference between the mixed audience and ingroup and outgroup audiences. For both collective language and self-disclosure, scores for the mixed audience and ingroup audiences were very similar, whereas the mixed audience scores differed significantly from scores in the outgroup audience.
RQ10: Does accommodative language vary as a result of responding to a hostile message versus a neutral message?	Yes, participants used more convergent language in the neutral condition compared to the hostile condition. However, participants did not use self-disclosure or collective language differently between neutral and hostile conditions.

Chapter Summary

Overall, the results from this chapter addressed how audience composition and valence of content potentially impacts several identity and communicative outcomes. In summary, results revealed that the composition of audience does not influence an individual's identity salience, nor does it impact interpersonal evaluation. Also, the personal-enacted identity gap did not change based on communicating with an ingroup, outgroup, or mixed audience. However, the enacted-communal identity gap was contingent on the type of audience such that individuals that communicated with ingroup audiences demonstrated a lower enacted-communal identity gap compared to both the ingroup and mixed audience conditions. This suggests that individuals' communication (i.e., enactment) has a higher discrepancy with the group when the group is an outgroup compared to an ingroup or mixed composition.

For the evaluation of the group and individual, participants reported higher evaluation scores for the group when they communicated with ingroup and mixed audiences compared to outgroup audiences. This was true for each of the group evaluation variables (group evaluation, thermometer feelings, inclusion of self). On the other hand, interpersonal evaluation did not vary as a result of audience composition with equal means in each audience condition. Results revealed that valence of content has a heavy influence on evaluation of both the group and the individual.

Participants rated both the group and individual much higher in the neutral condition compared to the hostile condition. There are two main suggestions from these results. First, an interaction effect between audience and valence revealed that individuals tended to rate the hostile outgroup much lower than the hostile ingroup. This suggests

that group affiliation may have an additive effect when individuals act in hostile ways. However, participants rated their conversational partner lower in the hostile condition, regardless of group affiliation. This might suggest that in a one-on-one conversation, individuals don't focus as much on group affiliation. However, in situations where more group members are present, the outgroup nature of the situation has an influence on evaluation.

When analyzing results for communication accommodation or accommodative language, I found different results for each of the three dependent variables, suggesting that some accommodative behaviors function differently than other accommodative behaviors. For example, collective language and self-disclosure were influenced by audience composition in that more of both behaviors were found in the ingroup condition compared to the outgroup condition. Additionally, participants used more convergent language in the neutral condition compared to the hostile condition. However, valence of content did not determine collective language or self-disclosure.

In review, audience composition did not impact some identity and evaluative outcomes; yet, it is important to note that this discussion board environment had no visual cues to signal to group members, only text prompts. Thus, even though identity salience and the personal-enacted identity gap did not vary with each audience composition, the presence of different audience members did impact the evaluation of the group as a whole as well as influence an individual's enacted-communal identity gap. Valence of content also revealed to be a significant factor on how individuals communicated and evaluated the group and individual. In the next chapter, I present the results associated with Time 2 of the study.

CHAPTER SIX: RESULTS: TIME 2

The experimental manipulation in Time 2 included viewing positive or negative feedback in the form of social recommendations. My study is interested in examining how identity and evaluative outcomes potentially change as a result of viewing positive versus negative feedback. During Time 2, participants viewed the original discussion board thread with user comments and their original comment response. Participants viewed a comment score, which was manipulated to be either negative or positive. All participants received feedback during Time 2. After viewing their comment score (i.e., feedback), participants completed some of the same measures from Time 1.

First, I explain the data analyses used to test each set of hypotheses and research questions (see Table 3.3 for review). I organized these based on the nature of the variables such that there is a section on identity gaps and group evaluation. After data analysis, I present the results pertaining to identity gap outcomes and group evaluative outcomes. Overall, these results demonstrate the importance of feedback in the form of positive and negative social recommendations.

Data Analysis

I used SPSS version 22 to test each hypothesis and research question. In total, there were five dependent variables and three independent factors for Time 2 data. Some variables from Time 1 were not measured during Time 2 because of the nature of the experiment (e.g., since participants did not communicate with the other users during Time 2, interpersonal evaluation was not a necessary measure). The hypotheses and research questions inquired about a perception of change in various variables (e.g.,

personal-enacted identity gap, group evaluation) from Time 1 to Time 2. Rather than testing via a 3 (composition of audience) X 2 (valence of message) X 2 (nature of feedback) design resulting in a 4-way interaction given the repeated measure design, I opted to use mean difference scores. Doing so, limits the potential of Type II error based on the complexity of the 4-way factorial, mixed design. Specifically, for each set of dependent variables, Time 2 scores were subtracted from Time 1 scores where positive mean differences denote a higher score in Time 2 for the variable and a negative mean difference representing a decrease from Time 1 to Time 2. For instance, a group evaluation score of 5.2 in Time 1 and a group evaluation score of 3.2 in Time 2 would equal a -2.00 score for that participant. This would indicate that that evaluation of the group was more negative in T2 compared to T1. After mean difference scores were computed in SPSS, I proceeded to analyze the hypotheses and research questions related to identity gaps and group evaluation using multiple three-way ANOVAs. In short, the mean difference score serves as a proxy for the Time 1 and Time 2 difference effectively shifting the analysis to a 3-way factorial.

In total, I conducted five separate three-way ANOVAs for each dependent variable: (a) personal-enacted identity gap, (b) enacted-communal identity gap, (c) group evaluation, (d) thermometer feelings, and (e) inclusion of self and the other. Audience composition, valence of content, and feedback acted as independent factors. Following standard procedures, I initially looked for a three-way interaction between audience composition, valence of content, and feedback.I also looked for two-way interactions between each of the factors. After looking for interaction effects, I analyzed main effects of each independent factor. I used LSD posthoc tests when composition of audience

revealed as a main effect in order to analyze pairwise comparisons between ingroup, outgroup, and mixed conditions.
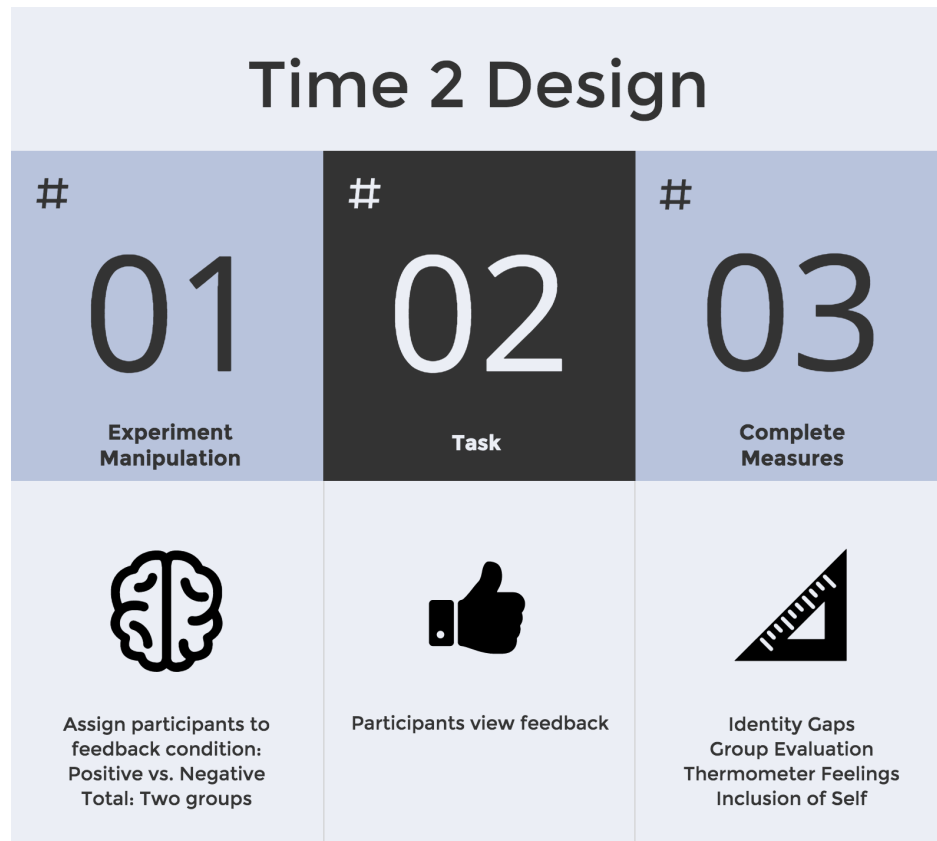
Figure 6.1. *Research design for Time 2.*

Results

Results are organized by each set of dependent variables: identity gaps and group evaluation. First, I will present results for each identity gap.

Identity Gaps

Identity gaps are discrepancies between two or more layers of identity. My study is concerned with the personal-enacted and enacted-communal identity gaps. In short, I

am interested in how positive and negative feedback influences these identity gaps. First, I will explain results regarding the personal-enacted identity gap.

Personal-enacted identity gap. When an individual communicates in a way that does not match or correspond with their self-concept, there is a personal-enacted identity gap. A higher or lower personal-enacted identity gap is associated with several communicative outcomes such as communication satisfaction and feeling understood (Jung & Hecht, 2004). My study is concerned with how the personal-enacted identity gap changes based on a feedback mechanism. Although I do not hypothesize any specific effects with audience composition and valence of content, I also describe results for each significant main effect.

Table 6.1 Hypothesis and Research Question for Personal-Enacted Identity Gap

H8: Individuals exhibit a lower personal-enacted identity gap after viewing positive feedback.
RQ11: Does viewing negative feedback in the form of social recommendations alter the personal-enacted identity gap?

I tested the hypothesis and research question through a three-way ANOVA to account for each independent factor from Time 1 and Time 2. The mean difference between Time 2 and Time 1 scores acted as a dependent variable. Results revealed no significant three-way interaction, $F(2, 303) = 1.28$, $p = .27$. Similarly, there were no significant interactions between group and feedback, $F(2, 303) = .20$, $p = 0.81$, group and valence, $F(2, 303) = .11$, $p = 0.88$, and valence and feedback, $F(1, 303) = 0.68$, $p = .41$.

Examination of the main effects revealed one marginally significant effect of audience composition on the personal-enacted identity gap, Time 1-Time 2 difference,

$F(2, 303) = 2.67$, $p = .07$. Posthoc analyses revealed a significant difference between the mixed audience Time 1-Time 2 score differences ($M = .04$, $SD = .57$) and ingroup audience Time 1-Time 2 score differences ($M = -.08$, $SD = .52$) , where the mixed audience reported a slightly higher personal-enacted identity gap in Time 2 (MMD $= .12$, $p = .06$). Participants in the mixed audience condition also reported higher scores compared to the outgroup audience Time 1-Time 2 score differences ($M = -.10$, $SD = .42$). Between the mixed and outgroup conditions was a minimum mean difference of .15 ($p = .03$). These results suggest that feedback from Time 2, *regardless of the positive or negative emphasis*, prompted individuals in the mixed audience condition to alter their perception of their comment response in relation to their self-concept. Thus, although the focus of this manipulation was on the valence of the feedback, these results suggest that there is something about feedback in and of itself that may potentially change outcomes as evidenced in additional findings forthcoming.

There were no significant main effects of valence, $F(1, 303) = 2.10$, $p = .14$, or feedback, $F(1, 303) = .29$, $p = 0.59$ on the personal-enacted identity gap Time 1-Time 2 score differences. See Table 6.2 for mean differences for each condition in the three-way ANOVA.

These results do not support hypothesis eight (H8), which posited that individuals report a lower personal-enacted identity gap after viewing positive feedback. Furthermore, since feedback was not a significant main effect on the personal-enacted identity gap, there was no change in scores after viewing negative feedback (RQ11).

Table 6.2 Mean Differences (Time 2 - Time 1) for Personal-Enacted Identity Gap by Audience Composition, Valence, and Feedback

		Positive			Negative		
		M	*SD*	n	*M*	*SD*	n
Ingroup	Hostile	-0.05	0.55	29	0.12	0.44	24
	Neutral	0.22	0.53	28	0.05	0.51	33
Outgroup	Hostile	0.06	0.48	27	0.11	0.46	29
	Neutral	0.07	0.29	27	0.19	0.44	17
Mixed	Hostile	-0.10	0.75	25	-0.09	0.46	26
	Neutral	0.01	0.56	21	0.01	0.51	29

Note: A positive mean difference indicates a higher mean in Time 2 compared to Time 1.

In review, the main effect results point to the marginal influence of composition of audience on the personal-enacted identity gap in that participants tended to report a higher identity gap from the mixed condition after receiving feedback. However, it is worth noting that these mean differences between each audience composition are very small. Finally, valence or neutral and hostile environments did not influence the personal-enacted identity gap in Time 2.

Enacted-communal identity gap. The enacted-communal identity gap is the discrepancy between an individual's expressed message and their identification with the larger group or communal beliefs relating to that message. Similar to the personal-enacted identity gap, my study is interested in understanding how feedback can change one's enacted-communal identity gap. Similar to the previous identity gap, the following hypothesis and research question inquire on how feedback potentially changes one's perception of their enacted-communal identity gap:

Table 6.3 Hypothesis and Research Question for Enacted - Communal Identity Gap

H9: Individuals exhibit a lower enacted-communal identity gap after viewing positive feedback.

RQ12: Does viewing negative feedback in the form of social recommendations alter the enacted-communal identity gap?

I conducted a three-way ANOVA with audience composition, valence, and feedback serving as independent factors to the mean difference scores of the enacted-communal identity gap. No significant three-way interaction emerged between audience composition, valence, and feedback, $F(2, 295) = .16$, $p = 0.84$. Likewise, no two-way interactions emerged between group and valence, $F(2, 295) = .61$, $p = 0.54$, group and feedback, $F(2, 295) = .88$, $p = .41$, and valence and feedback, $F(1, 295) = 2.17$, $p = .14$.

However, main effects between each independent factor and the Time 1-Time 2 score differences of the enacted-communal identity gap did emerge. First, a significant main effect of audience composition surfaced, $F(2, 295) = 2.86$, $p = .05$. An LSD posthoc test revealed that participants' enacted-communal identity gap Time 1-Time 2 score difference in the ingroup audience ($M = .25$, $SD = 1.00$) increased in Time 2 compared to participants' Time 1-Time 2 score difference in the outgroup audience ($M = -.17$, $SD = .98$) (MMD $= .34$, $p < .01$). In other words, participants from the ingroup audience reported a higher enacted-communal identity gap in Time 2 compared to participants from the outgroup audience. There were no significant mean differences between ingroup and mixed Time 1-Time 2 score differences ($M = .09$, $SD = 1.30$), and mixed and outgroup conditions.

A second main effect of valence of content emerged as a significant factor on the enacted-communal identity gap, $F(1, 295) = 19.91$, $p = .001$. Participants in the neutral condition tended to report higher Time 1-Time 2 score differences of the enacted-communal identity gap ($M = .16$, $SD = .92$) when compared to participants in the hostile condition ($M = -.43$, $SD = .96$). This denotes that participants who communicated with neutral users reported a higher identity gap in Time 2, on average.

Lastly, feedback surfaced as a main effect of the enacted-communal identity gap, $F(1, 295) = 23.82$, $p = .001$. Participants who viewed positive feedback in Time 2 reported lower Time 1-Time 2 score differences of the enacted-communal identity gap ($M = -.22$, $SD = .91$) compared to participants who viewed negative feedback ($M = .35$, $SD = 1.22$). This means that participants' perception of their comment response from Time 1 more reflected that of the larger group when they received feedback of a positive nature, whereas participants' receiving negative feedback perceived their comment response as less aligned with the larger group. After viewing negative feedback, the enacted-communal identity gap increased, whereas viewing positive feedback led to a decrease in the identity gap. Table 6.4 summarizes mean differences and standard deviations for each condition.

Table 6.4 Mean Differences (Time 2 - Time 1) for Enacted-Communal Identity Gap by Audience Composition, Valence, and Feedback

		Positive			Negative		
		M	*SD*	n	*M*	*SD*	n
Ingroup	Hostile	-0.17	0.71	29	0.31	1.16	22
	Neutral	0.08	0.74	26	0.76	1.09	32
Outgroup	Hostile	-0.50	0.83	27	-0.37	1.08	29
	Neutral	-0.08	0.77	26	0.55	1.01	17
Mixed	Hostile	-0.54	1.12	24	0.06	1.44	26
	Neutral	-0.15	1.18	20	0.82	1.07	29

Note: A positive mean difference indicates a higher mean in Time 2 compared to Time 1.

From these results, hypothesis nine (H9) is supported given that participants' enacted-communal identity gap scores were lower, on average, after viewing positive feedback with an Time 1-Time 2 score difference of -.22 (*SD* = .90). Research question twelve (RQ12) asks whether viewing negative feedback alters the enacted-communal identity gap. Participants reported a higher enacted-communal identity gap Time 1-Time 2 difference by .35, on average (*SD* = 1.22) when viewing negative feedback.

Both valence of content and audience composition also emerged as main effects of the enacted-communal identity gap. Results suggest that participants from the ingroup audience perceived a higher enacted-communal identity gap during Time 2 compared to the outgroup audience. One explanation for this is that the enacted-identity gap from Time 1 was higher in the outgroup condition compared to the ingroup condition, thus feedback potentially equalizes or evens these scores out. Similar to this argument,

participants also reported a higher enacted-communal identity gap coming from the neutral condition.

In summary, the two identity gaps examined in my study revealed fluctuating results. Negative and positive feedback did not determine or challenge one's personal-enacted identity gap. Furthermore, there were no significant main effects from audience or valence when accounting for any change in the personal-enacted identity gap scores. In short, the personal-enacted identity gap remained steady for the duration of the experiment. One marginal exception to this is that participants in the mixed audience condition reported a slightly higher personal-enacted identity gap when compared to ingroup and outgroup compositions.

For the enacted-communal identity gap, examination of each main effect revealed a significant change from Time 1 to Time 2. First, individuals from the ingroup audience condition reported slightly higher enacted-communal identity gap scores when compared to the scores from the outgroup audience condition. Second, participants from the neutral condition also reported higher scores of the enacted-communal identity gap. Likewise, participants from the hostile condition reported lower scores for the enacted-communal identity gap. The last significant main effect was the nature of the feedback from Time 2. Participants who viewed positive feedback reported lower enacted-communal identity gaps, whereas participants who viewed negative feedback reported higher levels of the enacted-communal identity gap. This is in line with hypothesis nine and explains that negative feedback can heighten one's identity gap.

Group Evaluation

After viewing positive or negative feedback, participants were asked to reevaluate their evaluation of the group of users on the discussion board. Participants were informed prior to viewing feedback that lurkers or non-contributing users might view and provide feedback. This means that the group potentially changes during Time 2 of the study; the same posts from Time 1 still appeared during Time 2. I used the same group evaluative measures from Time 1 to measure any significant changes: (a) *Group Evaluation Scale,* (b) *Thermometer Feelings*, and (c) *Inclusion of Self.* Hypothesis ten posits that group evaluation scores will increase after participants receive positive feedback and decrease when participants receive negative feedback. I used each of the three dependent variables to help test this hypothesis. I will present separate results for each outcome below.

Group evaluation scale. A three-way ANOVA with audience composition, valence, and feedback serving as independent factors to the mean difference scores of group evaluation did not reveal a significant three-way interaction, $F(2, 303) = .44$, $p =.64$. Likewise, no significant two-way interactions emerged between group and valence, $F(2, 303) = 1.88$, $p = .15$, or group and feedback, $F(2, 303) = .04$, $p = 0.95$. However, an interaction between valence and feedback was marginally significant, $F(1, 303) = 2.79$, $p =.09$. Examination of the simple effects revealed that participants in the neutral condition who received negative feedback evaluated the group significantly lower in Time 2 ($M = -0.85$, $SD = 1.21$, $p = .001$) compared to participants in the hostile condition who received negative feedback ($M = -0.15$, $SD = 1.06$). Those in the hostile condition who received positive feedback increased their rating of the group by .11 ($SD = 0.93$, $p = .09$).

After analyzing interaction effects, I looked at main effects of each factor. No main effect of audience composition surfaced, $F(2, 303) = 2.05$, $p = .13$. A main effect of valence of content revealed to be significant, $F(1, 303) = 15.54$, $p = .001$, in that participants in the neutral condition tended to evaluate the group less favorable ($M = -0.49$, $SD = 0.93$) compared to participants in the hostile condition ($M = -0.02$, $SD = 1.00$). Examination of the main effect of feedback, $F(1, 303) = 15.54$, $p = .001$, revealed that participants who received negative feedback reported lower group evaluation ($M = -0.50$, $SD = 1.19$) compared to participants who received positive feedback ($M = .001$, $SD = 0.90$). Table 6.5 provides a summary of mean differences and standard deviations for each condition.

Thermometer feelings. A three-way ANOVA between audience composition, valence, and feedback using mean difference scores of thermometer feelings from Time 1 to Time 2 revealed no significant three-way interaction, $F(2, 303) = 0.64$, $p = .52$. Similarly, there were no two-way interactions between audience and valence, $F(2, 303) = 1.49$, $p = .24$, audience and feedback, $F(2, 303) = .10$, $p = .89$, or valence and feedback, $F(1, 303) = .00$, $p = .98$.

Table 6.5. Mean Differences (Time 2 - Time 1) for Group Evaluation by Audience Composition, Valence, and Feedback

		Positive			Negative		
		M	*SD*	n	*M*	*SD*	n
Ingroup	Hostile	-0.18	1.13	29	-0.34	0.85	24
	Neutral	-0.12	0.69	28	-0.89	1.27	33
Outgroup	Hostile	0.20	0.55	27	-0.03	1.18	29
	Neutral	0.07	0.79	27	-0.63	0.96	17
Mixed	Hostile	0.37	0.92	25	-0.12	1.11	26
	Neutral	-0.35	1.08	21	-0.94	1.29	29

Note: A positive mean difference indicates a higher mean in Time 2 compared to Time 1.

Examination of each main effect revealed no main effect of audience composition, $F(2, 303) = 0.53$, $p = .58$. A significant main effect of valence emerged, $F(1, 303) = 17.44$, $p = .001$; participants in the neutral condition rated the group much lower ($M = -8.79$ $SD = 19.04$) compared to participants in the hostile condition ($M = -.05$ $SD = 19.97$). Feedback also emerged as a significant main effect, $F(1, 303) = 29.79$, $p = .001$. Similar to valence of content, participants who received negative feedback rated the group much lower ($M = -9.92$ $SD = 22.33$) compared to participants who received positive feedback ($M = 1.32$ $SD = 15.29$). See Table 6.6 for a summary of mean differences for thermometer scores across each condition.

Inclusion of self. A three-way ANOVA revealed no significant interaction between audience, valence, or feedback, $F(2, 304) = 1.19$, $p = .30$. There were also no significant

interactions between group and valence, $F(2, 304) = 0.71$, $p = .49$, group and feedback,

$F(2, 304) = 0.95$, $p = .38$, or valence and feedback, $F(1, 304) = 0.69$, $p = .40$.

Table 6.6 Mean Differences (Time 2 - Time 1) for Thermometer Feelings by Audience Composition, Valence, and Feedback

		Positive			Negative		
		M	*SD*	n	*M*	*SD*	n
Ingroup	Hostile	2.32	12.29	28	-8.87	17.98	24
	Neutral	-2.85	9.83	28	-12.45	23.22	33
Outgroup	Hostile	5.74	16.21	27	-3.23	25.54	30
	Neutral	-4.03	12.12	27	-19.64	21.97	17
Mixed	Hostile	9.36	18.36	21	-5.88	21.68	26
	Neutral	-2.80	18.73	21	-12.75	20.83	29

Note: A positive mean difference indicates a higher mean in Time 2 compared to Time 1.

I examined main effects among each of the independent factors and found a nonsignificant main effect of audience composition, $F(2, 304) = 0.77$, $p = .46$, a significant main effect of valence, $F(1, 304) = 6.13$, $p = .01$, and a significant main effect of feedback, $F(1, 304) = 17.29$, $p = .001$. For valence, participants in the neutral condition tended to have a lower inclusion of self and the other (i.e., smaller overlap between the individual and the group) ($M = -.65$, $SD = 1.56$), compared to participants' scores in the hostile condition ($M = -.18$, $SD = 1.64$). Also, participants who received positive feedback reported lower levels of inclusion of self ($M = -.04$, $SD = 1.38$) compared to participants who received negative feedback ($M = -.77$, $SD = 1.61$).

From the results for each of these dependent variables, hypothesis ten is partially supported in that evaluation of the group increased for group evaluation scores and

thermometer feelings, but group evaluation slightly decreased when analyzing inclusion of self scores. Participants who received negative feedback reported lower levels of all dependent variables associated with group evaluation.

Table 6.7 Mean Differences (Time 2 - Time 1) for Inclusion of Self by Audience Composition, Valence, and Feedback

		Positive			Negative		
		M	*SD*	n	*M*	*SD*	n
Ingroup	Hostile	0.06	1.86	29	-1.00	1.71	24
	Neutral	-0.10	1.22	28	-1.12	1.89	33
Outgroup	Hostile	-0.03	0.89	27	0.06	1.57	30
	Neutral	-0.07	0.82	27	-1.05	1.14	17
Mixed	Hostile	0.24	1.58	25	-0.57	1.83	26
	Neutral	-0.42	1.66	21	-1.10	1.79	29

Note: A positive mean difference indicates a higher mean in Time 2 compared to Time 1.

Overall, the results from Time 2 reveal how both positive and negative feedback can influence the evaluation of a group. In all three group evaluation measures, negative feedback was associated with lower scores of the group. Positive feedback mostly resulted in higher group evaluation scores, except for inclusion of self. Another influencing factor was valence of content in that participants from the neutral condition tended to lower their group evaluation scores on each outcome. Table 6.8 includes a summary of hypotheses and research questions.

Chapter Summary

In summary, results from this chapter indicate the change in identity gap and group evaluative scores based on feedback in the form of positive and negative social

recommendations. First, the enacted-communal identity gap lowered after receiving positive feedback and increased after receiving negative feedback. However, the personal-enacted identity gap was not altered as a result of receiving feedback. Group evaluation scores for each of the three group evaluative outcomes (i.e., group evaluation, thermometer feelings, and inclusion of self) decreased after receiving negative feedback. When individuals received positive feedback, they indicated an increase in group evaluation and thermometer scores, but a decrease in inclusion of self scores. In short, results from this chapter suggest that negative feedback seems to have a more prevailing hold on an individual's identity gap and evaluation of the group, whereas positive feedback increased, but increased only slightly compared to the changes from negative feedback.

Since participants went through two experimental manipulations in Time 1 (audience composition and valence), I also analyzed interaction effects and main effects of both audience composition and valence. Audience composition did not seem to have an influence on scores from Time 2 in both identity gaps and the group evaluative outcomes. One marginal exception to this is that the personal-enacted identity gap was slightly higher in Time 2 when participants came from the mixed condition when compared participants from the outgroup condition. However, the change is so small that it is difficult to interpret whether this is a meaningful result. Table 6.6 provides a summary of hypotheses and research questions pertaining to feedback and each of the dependent variables.

Valence of content (hostile vs. neutral) appeared to influence some of the Time 2 scores. The enacted-communal identity gap increased in participants from the neutral

condition compared to participants from the hostile condition. Similarly, scores for group evaluation, thermometer feelings, and inclusion of self also decreased for participants from the neutral condition compared to the hostile condition. One explanation for this is that in Time 1, scores for the enacted-communal identity gap and for each of the group evaluative outcomes were much lower for participants in the hostile condition. Feedback from Time 2 could potentially equalize this scores. Finally, I found an interaction effect between valence and feedback as participants reported lower group evaluation scores when receiving negative feedback and being from the neutral condition.

Overall, results from Time 2 point to the importance of feedback on several identity and evaluative outcomes in that receiving feedback can potentially shift one's perception of their comment response from Time 1. Though my hypotheses and research questions emphasize the nature of feedback (i.e., positive versus negative feedback), some of these results suggest that the presence of feedback itself can alter identity gaps and evaluation of the group from the audience composition and valence of content variables. This implies that one's perceived audience and valence potentially carries over when viewing feedback of any nature. It is important to note that participants were able to view the entire discussion board thread during Time 2, which also activates or reinforces the audience composition and valence of content from Time 1.

In the next chapter, I discuss each set of results from Time 1 and Time 2, describe significant findings from these results, and present some limitations and future directions for research involving communication, identity, and relational technology.

Table 6.8 Summary of Hypotheses and Research Questions for Identity Gaps and Group Evaluation

Hypothesis or Research Question	Results
H8: Individuals exhibit a lower personal-enacted identity gap after viewing positive feedback.	Not supported, no difference in personal-enacted identity gap scores between Time 1 and Time 2.
H9: Individuals exhibit a lower enacted-communal identity gap after viewing positive feedback.	Supported, participants reported a lower enacted-communal identity gap after receiving positive feedback in Time 2.
RQ11: Does viewing negative feedback in the form of social recommendations alter the personal-enacted identity gap?	No difference in personal-enacted identity gap scores between Time 1 and Time 2.
RQ12: Does viewing negative feedback in the form of social recommendations alter the enacted-communal identity gap?	Yes, participants reported a higher enacted-communal identity gap after receiving negative feedback in Time 2.
H10: The evaluation of the group will depend on the type of received feedback such that positive feedback increases group evaluation and negative feedback decreases group evaluation.	Partial support. Group evaluation scores increased in the positive feedback condition and decreased in the negative feedback condition. Thermometer scores went up in the positive condition and decreased in the negative feedback condition. For inclusion of self, participants ratings marginally decreased in the positive feedback condition, but decreased more in the negative feedback condition.

CHAPTER SEVEN: DISCUSSION

Communication in the digital age has drastically changed how we encounter others and in turn influences how we see ourselves (Kim & Hubbard. 2007; Shan, 2010; Wertley, 2014). These relational networks have arguably, "…changed the perception of what community is, redefined the meaning of cultural identity and civic society, and demanded a new way of intercultural interactions" (Chen, 2012, p. 1). Relational networks or relational technology are broadly groups of individuals connected through the sharing of information. These networks are heavily used and have become the fabric of communication in everyday life in the United States (Rainie & Wellman, 2012). Technological innovations and changes are commonplace in our society with relational networks such reddit altering and shifting our ways of communicating with ingroup and outgroup members (see Chapter 1 for review). Reddit is ranked as the 9th most visited site in the United States and the 27th most visited site on a global scale ("Alexa", 2016). Little research has explored the intergroup context that reddit affords to its users and how communication and identity are influenced by its technological factors.

The purpose of my study was to examine the potential impact that specific technological factors of relational networks have on communication and identity. More specifically, my study sought to uncover how individuals perceive others, judge their own communication, and use accommodative language against the backdrop of some of reddit's most prominent technological factors. Figure 1.3 includes a conceptual model of each of the technological factors and communicative and identity outcomes.

In this concluding chapter, I provide an overview of my study by reviewing results and procedures and discussing implications for each technological factor. In the

discussion of the technological factors, I conclude each section by highlighting design and method considerations to guide future inquiries. Following these sections on the technological factors, I move to a more general overview of the implications of this study in terms of our understanding of identity and communication on relational networks. Following this, I provide an overview of some of the limitations of this inquiry.

Review of Procedures and Method

Participants in my study engaged in an experimental discussion board environment (similar to reddit's user interface) about the 4th of July. During Time 1, I manipulated the audience composition in that participants communicated with either an ingroup, outgroup, or mixed audience. I also created the comments to be either hostile or neutral for valence. Participants read a series of comments and responded to one comment on the discussion board and proceeded to complete several measures (e.g., Group Evaluation, Interpersonal Evaluation, and Identity Gaps). During Time 2, I manipulated a feedback score in either a positive or negative number. Participants viewed their discussion board environment again (with their feedback) and proceeded to complete some of the same measures from Time 1.

In Chapters 5 and 6, I presented results for each set of hypotheses and research questions pertaining to Time 1 and Time 2 of the study. These results point to the varying impacts that composition of audience in an ingroup, outgroup, and mixed composition can have on one's identification with the group and how it reflects on their own communication within the group. I also found that more hostility in an environment prompts for lower evaluation of the group and of a specific group member. The use of collective language and self-disclosure was used more in neutral environments, while

convergent language was used differently between each of the audience compositions. Lastly, the nature of feedback influenced a number of identity and communicative variables. Participants who received positive feedback reported lower scores of the enacted-communal identity gap, whereas negative feedback influenced a higher identity gap (i.e., more discrepancy). Likewise, negative feedback led to lower group evaluation in Time 2, whereas positive feedback led to some increase in the group evaluative outcomes.

Overall, the findings revealed mixed support for the hypotheses and intriguing outcomes from the research questions. As such, this initial foray into investigating these technological factors provides a fertile ground for discussion on identity and communication in a digital context. In the following sections, I discuss implications specific to each of these factors beginning first with composition of audience.

Composition of Audience

Several relational networks promote and maintain communication between and within groups of various types. Reddit is a prime example of this phenomenon because of its emphasis on subreddits (i.e., groups based on shared interests) and how its user interface presents multiple subreddits to readers. In other words, individuals are engaging in ingroup and outgroup communication through the usage of various relational networks and these audience types have a bearing on how individuals perceive and approach conversations. There are several terms and arguments for how technology promotes or attempts to foster communication with various others (e.g., the global village, mass self-communication, and disembodied audiences). Thus, in the current study, I positioned *composition of audience* as an important consideration in understanding how the

perception of ingroup and outgroup audiences influence a number of identity and communicative outcomes.

My study positioned audience composition as an independent factor with three levels: ingroup, outgroup, and mixed. Participants were introduced to their audience type by way of the framing of the discussion board thread (e.g., "My Fellow Americans", "Non-Americans,") and was reinforced in the comments section of the thread (e.g., "Being an American…", "Non-Americans think…"). I organized results pertaining to composition of audience in Time 1 and in three separate sections: (a) identity outcomes, (b) evaluative outcomes, and (c) communicative outcomes. I will discuss each of these areas in turn and explain some implications of each.

Identity Outcomes of Audience Composition

For identity outcomes, I analyzed how identity salience (i.e., the degree to which national identity is important or becomes magnified) functions as a result of communicating with different audiences as well as how identity gaps (personal-enacted and enacted-communal) fluctuate based on audience type. In general, identity salience and the personal-enacted identity gap did not emerge as significant outcomes of the audience composition variable whereas the enacted-communal identity gap revealed that individuals tended to communicate more in line with an ingroup audience compared to an outgroup audience. First, I will discuss results about identity salience.

My study posited that identity salience would be higher under communication with outgroup members compared to ingroup members, which piggybacks off of social identity theory (Tajfel & Turner, 1986) and self-categorization theory (Turner et al., 1987). Results revealed that identity salience did not fluctuate between any of the

audience compositions. There are a few potential explanations for this. First, the platform in my study only used textual cues to prompt for ingroup, outgroup, and mixed compositions. There were no avatars, banners, or anything pictorial to depict the audience. Participants might not have been influenced very much by the textual manipulation in regards to their assigned audience composition. However, it is important to note that participants did communicate with nationality (i.e., American values and 4th of July activities) in their comment responses. Therefore, it could be that national identity is important in the interaction but that the audience composition itself is not a guiding factor in understanding salience. This leads to another potential explanation of why identity salience did not vary between the audience compositions.

Another implication that can be taken from this result is that discussion board environments might elicit different outcomes of identity salience because of the technological affordances of the platform. For example, my study utilized asynchronous interactions where participants were not communicating with other users in real time. In research that confirms identity salience as stronger in ingroup compositions, the communication channel is usually synchronous such as instant messaging or face-to-face communication. This is especially true in research utilizing the social identity model of deindividuation effects (SIDE). SIDE has a long range of studies that confirm how visually anonymous environments promote more identity salience than their face-to-face counterparts or more visually supported platforms (see Postmes & Spears, 1998 for review). Relational networks that promote short-term asynchronous interactions might not elicit identity salience in the way that social identity theory and SIDE posits. Most of

this research utilizes instant messaging or synchronous channels of communication, whereas my study utilizes asynchrony.

My study also did not compare multiple channels or forms of intergroup communication to measure differences between channels, which is common in SIDE research (Postmes, Spears, and Lea, 2002) and in intergroup communication research looking at presence of outgroup members and involvement of the self (Harwood, 2010). In short, results did not reveal any significant implication of identity salience and point to future research questions inquiring how communication and affordances on multiple relational networks informs identity salience.

The communication theory of identity (CTI) proposes that identity is comprised of four layers and that these layers can interpenetrate and produce identity gaps (Hecht et al., 2004). I proposed that the personal-enacted and enacted-communal identity gaps would be lower when communicating with ingroup audiences compared to outgroup audiences. I also queried whether the comparisons of each identity gap on the mixed audience type would differ from either the ingroup or outgroup condition. Results for both identity gaps revealed varying implications and so I will discuss each identity gap in turn.

First, the personal-enacted identity gap did not fluctuate as a result of communicating with an ingroup, outgroup, or mixed audience. Thus, the personal-enacted identity gap remained steady across all audience types. There are a few potential explanations for these results. The first explanation is that the personal-enacted identity gap is not influenced by a public audience or by an unknown set of group members. Much of the research on the personal-enacted identity gap focuses on communication in

personal relationships (e.g., Jung, 2011; Kennedy-Lightsey, Martin, LaBelle, and Weber, 2015). The personal-enacted identity gap might only fluctuate or be influenced when communicating with known individuals rather than anonymous online group members.

Another potential reason for why participants had a relatively low personal-enacted identity gap is that of the anonymous online environment itself. Participants did not know whom they were talking to and knew that they would never see or meet the discussion board users. Thus, participants might be more confident in their communication because of little repercussions of the experiment itself. Another potential explanation for why the personal-enacted identity gap is not influenced by composition of audience is the lack of research on identity gaps sprouted from online communication. There have been no research studies to my knowledge that utilize online communication to account for any identity gap. Perhaps the online environment alters how the personal-enacted identity gap is perceived when compared to face-to-face communication.

The second identity gap in the study was the enacted-communal identity gap, which is the discrepancy between one's communication and the group at large. The group was described to participants as the other discussion board users. Unlike the personal-enacted identity gap, participants reported lower levels of the enacted-communal identity gap with the ingroup audience compared to the outgroup audience. Furthermore, those in the mixed audience also reported lower levels of the enacted-communal identity gap compared to the outgroup audience. This means that individuals had more of a discrepancy between their comment response and the group's messages when the discussion board was comprised of outgroup members. One reason for this is that the group was well defined and relatively small in the study, comprising of five users.

Participants were able to view all the users' messages on one screen and comments were short and easy to read. This also points to the potential influence of online environments on the communal layer of identity. Entering into a number of relational networks will show the communal layer or group attitude very quickly. For instance, a subreddit titled r/SandersForPresident is clearly a community of pro Bernie Sanders supporters. Thus, the general group attitude (i.e., communal layer) can be easily interpreted.

These results suggest that individuals tend to have higher discrepancy (i.e., higher enacted-communal identity gap) based on group membership and not solely on the messages of the group, which can potentially be present because of an implicit ingroup bias. Tajfel's (1978) social identity theory posits that an ingroup member is likely to favor their own group in order to achieve ingroup distinctiveness and have a positive self-image. To drive intergroup competition, the ingroup members discriminate or differentiate toward the outgroup members.

Evaluative Outcomes of Audience Composition

Drawing out of intergroup scholarship, I measured evaluation on the group and individual level. Evaluation has and continues to be an important factor in gauging the effectiveness of communication on the internet (Amichai-Hamburger & McKenna, 2006). Furthermore, an activation of a social identity prompts more ingroup and outgroup distinctions (Reicher, Spears, & Postmes, 1995). Participants were asked to evaluate the group of users on the discussion board and to answer items about one specific individual on the board. Results reflected tenets from social identity theory as well as updates recent literature on how individual and group evaluation differ.

First, results for group evaluation revealed that participants rated the group higher when the users represented either ingroup (Americans) or a mixed composition (Americans and Non-Americans). This was true for each of the three group evaluative measures (Thermometer Feelings, Group Evaluation, Inclusion of Self). The social identity model of devinidiation effects (SIDE) supports higher evaluation or higher group attraction toward ingroup members compared to outgroup members (Lea & Spears, 1999). This is especially true when visual anonymity is controlled and present in the experiment. Since SIDE research has yet to experimentally use discussion board interfaces for its main tenet, my research adds more support to the principle that ingroup members will generally evaluate other ingroup members more favorable than outgroup members. Though they did not measure group evaluation, Kulik, Pepper, Shapiro, and Cregan (2012) observed group conformity from insiders on the discussion board and demonstrated less conformity toward outsiders. In short, it seems that visual anonymity will usually (a) spark identity salience and (b) promote more favorable attitudes toward ingroup members. Both of these aspects reflect social identity theory and the SIDE model along with adding that relational networks espouse technological affordances that potentially exacerbate these outcomes (e.g., visual anonymity, text based platforms).

On the other hand, interpersonal evaluation did not fluctuate the same as group evaluation when accounting for ingroup, outgroup, and mixed compositions. Interpersonal evaluation was not found to differ based on the audience composition. As an overview, participants were asked to evaluate the individual with whom they replied to on the discussion board. Thus, the researcher created user was part of the larger group and their comment demonstrated their group affiliation (e.g., "As an American…"). This

suggests that participants might have rated the group higher or lower compared to the individual on the discussion board. An explanation for this result is that participants are likely to have had a well-defined attitude toward the group (i.e., Americans) before entering into the discussion board. The researcher created user was a new and unknown individual to the participants, thus, potentially overriding or altering interpersonal evaluation. This implies that the group membership of the individual does not seem as strong as the larger group. A further discussion of interpersonal evaluation will be discussed under valence of content.

Communicative Outcomes of Audience Composition

The language that individuals use with varying audiences (e.g., ingroup, outgroup) also informs the social and intergroup relations promoted by relational networks. Using the participant's comment response, communication accommodation was rated based on three areas of accommodation: convergent language, collective language, and self-disclosure. Using this framework, I found that participants used each type of accommodative language differently based on the audience composition.

First, participants did not use convergent language differently between each of the three audience compositions. This means that participants' comment responses had similar convergence scores between ingroup, outgroup, and mixed conditions. This suggests that convergent behaviors such as politeness and shared viewpoint do not necessarily vary between an ingroup or outgroup perception. Communication accommodation theory (CAT) posits that individuals use more accommodative behaviors with ingroup members, piggybacking off of social identity theory's principle that ingroup members tend to like each other more. Research using CAT's principles in online

environments have generally supported that more convergence is used with ingroup members (Riordan, Markman, & Stewart, 2012; Tamurrini, Cinnirella, Jansen, & Bryden, 2015). However, both these studies used convergence very differently. Riordan et al. (2012) purported that message length and duration equated to convergence and Tamburrini et al. (2015) used big data analyses to look at word matching in tweets. My study adds to this literature by coding for more behaviors of convergence such as politeness and agreement. One implication for this is that convergence is much more complex is online environments and that convergent behaviors need to be expanded and separately studied in order to understand how intergroup communication functions in multiple online environments.

However, unlike convergent language, the other two accommodative behaviors did vary as a result of communicating with different audiences. Both collective language and self-disclosure were used more in comment responses from the ingroup condition. Furthermore, the mixed condition acted similar to the ingroup condition in that participants' comment responses also had more collective language and self-disclosure than the outgroup condition. The use of collective language with ingroup and mixed audiences makes sense because using words and phrases such as, "We need to…" and "July 4th is for us!" The use of "we" and "us" is not likely to be used when an individual perceives their conversational partner to be an outgroup member.

Furthermore, CAT research on the use of self-disclosure with ingroup and outgroup members points to an increase in self-disclosure behaviors among ingroup members and also between ingroup and outgroup members where a power differential is present (Jones, Gallois, Callan, & Barker, 2006). In my study, participants demonstrated

more self-disclosure when ingroup members were present as opposed to when no ingroup members participated. However, one unique technological factor of online platforms is its ability to create equality between users (Amichai-Hamburger, Haslar, & Shani-Sherman, 2015). No single user in the experiment exhibited more power than another user. Research looking at change in self-disclosure across time suggests that multiple sessions with an outgroup member can steadily increase self-disclosure over time (Vezzali, Crips, Stathl, & Giovannini, 2015). In my study, participants only communicated once with the group of users. With that said, in that next section I describe some design and method considerations in regards to studying composition of audience in the future.

Design and Method Considerations for Future Research

The composition of audience was introduced to participants by way of the text used throughout the discussion board thread. The topic of the discussion was aimed at either an ingroup, outgroup, or a mixed composition. The comments on the discussion board also reinforced the assigned audience composition. No avatars, symbols, or usernames triggered an ingroup or outgroup identity. This was done to promote the technological features of reddit and its focus on dialogue rather than on profiles and pictures. I will describe some ways future research can attend to studying composition of audience on relational networks and tailor these suggestions off of the current study.

First, the design of the platform should be taken into consideration for future research. As stated, it was important to use reddit's user interface to analyze how these features promote ingroup and outgroup distinctions. However, as with all relational networks, each platform uses a different set of affordances to allow for users to display their group affiliation. For example, many networks display a user's group of followers

or friends such as on Twitter and Facebook. Also on these networks allow for profile pictures and the use of a real name. By adding these features to a future experiment, research can better gauge how the different ways of prompting ingroup and outgroup identities can inhibit or enable identity salience as well as gain a better picture of how identity gaps fluctuate in conversations on these networks. Furthermore, it is likely that the adding of images or more visual cues about the group can prompt individuals to use different levels or types of accommodative language. For instance, if a user sees a profile picture of an outgroup member and also perceives an age identity, this aspect of identity is likely to influence results (e.g., an older outgroup member is likely to be perceived differently than a younger outgroup member).

Another consideration for future research is the method itself. My study primarily utilized the undergraduate student population with a portion of the population identifying as reddit users. Although I did recruit participants directly from reddit as well, my sample population was largely a group of individuals that knew of reddit, but did not use or access reddit on a normal basis. Future research that aims to empirically investigate reddit's platform should only pool from participants who have knowledge and are currently active reddit users (i.e., redditors). Piggybacking off of this, participants should ideally be recruited from both the outgroup and ingroup compositions (e.g., participants from the United States and participants from China). This will allow for more between group comparisons between various groups.

Longitudinal studies in intergroup contact research have also been successful in recognizing the importance of repeated contact or gradual contact (e.g., Vezzali, Crips, Stathl, & Giovannini, 2015). Since many relational networks promote asynchronous

platforms such as reddit and its discussion board layout, my study might elicit different results if participants were asked to return back to the discussion board and continue reading and contributing comments over time. Likewise, research has confirmed that prejudicial views of the outgroup decrease over time even after just one encounter with the outgroup (Wertley, 2014). Future research should use longitudinal methods to measure change in identity and communicative outcomes over time, especially if prejudicial views are a central part of the study.

As a brief overview, participants from my study tended to favor and use more accommodative language with ingroup or mixed audience compositions when compared to the outgroup audience composition. However, identity salience, the personal-enacted identity gap, and interpersonal evaluation did not vary as a result of perceived audience. In this next section, I review and describe valence of content and provide some implications and future considerations for this area.

Valence of Content

Although the internet affords spaces where individuals can form unique relationships and have positive experiences, relational networks have also been at the forefront of hostile behavior such as cyberbullying, trolling, and flaming (Shepherd et al., 2015). The prevailing affordance that promotes hostility is visual anonymity (Duggan et al., 2014). The SIDE model provides one explanation for why hostility and extremist conversations exist more in online environments. Social identities become much more important because of the process of deindividuation, which leads to individuals seeing each other less as unique individuals (Lea, Spears, & De Groot, 2002; Lee, 2008). The *valence of content* refers to the emotional tone of a conversation. Online conversations

are argued to be polarized and extremist because of the topic of conversation as well as the technological affordances of the platform.

In my study, participants communicated on a discussion board that promoted visual anonymity and less information about the individual such as their location and name. I also manipulated the valence of content to reflect hostile comments or neutral comments. This was done to study how entering into different types of conversations impacts identity and communicative processes. Results generally revealed that hostility has a strong hold on evaluative outcomes in that hostility is viewed less favorable than neutral content. Participants also used different accommodative behaviors between both the hostile and neutral conditions. I will describe each area of results along with implications for each.

Identity Outcomes of Valence

Though identity salience is effectively prompted with the use of visual anonymity, the valence of content has yet to be experimentally investigated under identity salience. Results revealed that similar to composition of audience that the valence of content did not determine identity salience. Therefore, there was no difference in identity salience between hostile and neutral conditions. This suggests that the topic of conversation might play a larger role than the valence of conversation itself. For example, a conversation about politics should spark political affiliation, especially in a visually anonymous environment. Research has found that politically centered conversations tend to contain more extremist and hostile communication (Duggan et al., 2014).

Drawing from these results, the personal-enacted identity gap also did not vary between the hostile and neutral conditions. Furthermore, the personal-enacted identity

gap steadily remained low throughout the study. This means that an individual's comment response is very closely aligned with their sense of self regardless of the tone of conversation. Again, the topic of conversation as well as one's own commitment with their social group is likely to have more of a pull on the personal-enacted identity gap. Another implication is that the anonymity of the users as well as the environment might promote a lower identity gap between the personal and enacted layers.

Unlike the personal-enacted identity gap, the enacted-communal identity gap was higher when communicating with hostile users compared to communicating with neutral users. The communal layer represented the group's attitudes and overall message and therefore makes sense that participants stated that they did not align their message (i.e., their enacted message or comment response) with that of the group's message. No research to date has examined how identity gaps function on a relational network and so these results add to literature on communication theory of identity and how identity gaps exist and vary in online environments.

Evaluative Outcomes of Valence

Dislikeable behavior of a group member from either ingroup or outgroup affiliations has been found to lead to lower levels of group attraction and interpersonal evaluation (Wang et al., 2009). Dislikeable behavior can be direct attacks or unfriendliness toward another group member. Moreover, Wang et al. found that acting unfriendly overrode social identity theory's principle that individuals tend to favor ingroup members over outgroup members. Ingroup members who acted dislikeable were also rated just as low as outgroup members who acted dislikeable. Results from my study

reflect these outcomes, but also point to a different interaction between the audience composition and valence of content.

Results from my study demonstrated that hostile behavior was associated with lower levels of group evaluation for each of the three evaluative outcomes: thermometer feelings, group evaluation, and inclusion of self and the other. This adds to Wang et al.'s (2009) study on dislikeable behavior in the realm of ingroup and outgroup members. Wang et al. used instant messaging as a platform to gauge identity salience and deliver dislikeable behavior in real time. One group member was assigned to act as dislikeable. My study used an asynchronous platform, which did not include direct hostile behavior toward the participant; rather it was hostile behavior about the group in general (e.g., "All Americans are lazy and drink all the time"). Furthermore, my study included all group members acting hostile and not just one group member. This suggests that dislikeable behavior toward a specific group member along with hostile behavior about a group will result in lower evaluation scores of the group as a whole.

In addition to these results, I also found an interaction effect between audience composition and valence of content on the thermometer feelings variable. Participants tended to rate the hostile outgroup less favorable compared to the hostile ingroup. In addition, participants also rated the hostile outgroup as less warm compared to the neutral outgroup. Thus, the hostile outgroup achieved the lowest ratings in the thermometer feelings outcome. These results point to two implications. First, hostile behavior is seen as less favorable regardless of the ingroup or outgroup nature of the group. However, when an outgroup acts hostile they are seen as less attractive than the ingroup that acts

hostile. This suggests that group membership paired with general group behavior is an important facet to consider when investigating group evaluation.

Similar to the results on group evaluation, participants also rated the hostile group member less attractive than the neutral group member. Participants were asked to rate their conversational partner on the discussion board, which is a similar procedure used in Wang et al.'s (2009) study. However, unlike the interaction effect previously described, group affiliation was not a factor in determining interpersonal evaluation. Regardless of ingroup, outgroup, or mixed composition, participants rated the hostile group member less favorable than the neutral group member. This result reflects Wang et al.'s implication that interpersonal behavior can potentially override effects from group affiliation.

Communicative Outcomes of Valence

The degree of accommodative language (i.e., convergent language, collective language, and self-disclosure) is predicated on whether the individuals perceive each other as part of the same group. Few studies have explored accommodative language in online environments and have yet to examine how the valence of conversation can influence language. Results pertaining to valence of content revealed a higher use of convergent language when group members acted neutral, whereas collective language and self-disclosure were used similarly between both valence conditions. These results add to the literature on communication accommodation theory and online environments in three ways.

First, when participants communicated with a hostile group member they used less convergent language or in other words acted less polite and had more disagreement.

This suggests that individuals are likely to respond negatively to hostile comments. Furthermore, individuals are less likely to agree with hostile group members. A second implication from the results is that both collective language and self-disclosure are used similarly with hostile and neutral group members. This suggests that valence impacts some accommodative behaviors while some behaviors do not fluctuate based on the emotional tone of the conversation. Recalling that individuals tended to use more collective language and self-disclosure with ingroup members, these results might also imply that the group status influences some accommodative behaviors, while other behaviors such as politeness are more influenced by the valence of content and not by group membership.

Finally, by adding valence of content as a potential factor in accommodative language, my study demonstrated that the tone of conversation could influence particular types of accommodative language. Being that hostility and extremist views are so prevalent in anonymous online spaces, more research on establishing optimal intergroup contact through technology should account for how tone and valence can deter or inform accommodation between and within groups.

Design and Method Considerations for Future Research

Valence of content was manipulated by having all group members in each condition act in either a hostile or neutral manner. Future research should consider making only some group members act hostile, similar to what Wang et al. (2009) did in their experiment on likeable versus dislikeable group behavior. Only one member of the group acted dislikeable. Another consideration is to add feedback to hostile behavior by way of either text responses or social recommendations. For example, a hostile comment

might be perceived differently if the participant can see that 10 other users support the hostile comment. There might also be other users responding to the hostile comment. This begs the questions, "How does a socially recommended hostile message influence group and interpersonal evaluation?" and "What types of accommodative behavior do individuals use in response to a socially recommended hostile comment?" All of these design considerations open up future research to explore more technological affordances of many relational networks. There are also methodological considerations for studying valence of content in the future.

My study asked participants to respond to an assigned comment response. Allowing participants to choose a comment might lead to different communicative results. Future research could also have participants respond to multiple comments to compare and contrast comment responses from the same participant, which surfaces the question, "Do individuals use different levels of accommodative language when responding to multiple hostile comment responses?" Another methodological consideration is to incorporate more relational networks in a controlled study.

A second methodological consideration is to compare and contrast hostility on multiple platforms. It is likely that valence is interpreted differently based on the culture of the platform itself. For example, hostility on Twitter and hostility on reddit is likely to produce different evaluative, identity, and communicative outcomes because of the structure and visibility of each network. Twitter users often use real names and have profiles pictures, whereas reddit utilizes more visual anonymity and pseudoanonymity. Future research should continue to research hostility on multiple platforms in order to better gauge how communication and identity fluctuates on each relational network.

Nature of Feedback

Feedback on relational networks is an extremely important factor because of the emergence and popularity of social recommendation systems (Kim, 2014). These social recommendations allow individuals to simply click on a feedback option to provide support, nonsupport, or a myriad of other feedback options. Social recommendation systems represent an aggregate of feedback from a group such that it makes it easier and more efficient to gauge the usefulness of the message (Kim). The experiment in my study manipulated feedback in the form of upvotes and downvotes to reflect reddit's feedback system. Participants received either a negative feedback score (i.e., more downvotes than upvotes) or a positive feedback score (i.e., more upvotes than downvotes). My study revealed that the feedback in the form of upvotes and downvotes influences the enacted-communal identity gap and group evaluative outcomes. These results add to the emerging body of literature on how individuals perceive social recommendations and how they impact one's evaluation of the group. First, I will explain the results for identity gaps and what these results imply about online feedback. As a reminder, I looked at score differences between Time 1 (comment response) and Time 2 (receiving feedback).

Identity Outcomes of Feedback

Results revealed no change in the personal-enacted identity gap during Time 2 for each of the feedback conditions. This means that receiving positive and negative feedback did not alter one's perception of their message and how that message matches their sense of self, which goes against my prediction that positive feedback would lower this identity gap. One reason for this is that the personal-enacted identity gap might be influenced by communication with closer ties (e.g., friends, family) rather than

communication from strangers. No research on the personal-enacted identity gap has explored how communication with weak ties or strangers can influence the personal-enacted identity gap and so results from the current study lend some insight into this area of communication. Moreover, research on the personal-enacted identity gap has yet to investigate online communication. It could be that the personal-enacted identity gap functions differently in an online environment compared to a face-to-face environment.

On the other hand, the enacted-communal identity gap did show a change during Time 2 of the study. Participants exhibited a lower enacted-communal identity gap after viewing positive feedback and a higher enacted-communal identity gap after viewing negative feedback. These results demonstrate the importance of social recommendations on the reflection of one's message (enacted layer) and its relation to the group message (communal layer). Participants did not receive verbal feedback from the group; rather feedback was only in the form of a numeric score. This suggests that participants' interpretation of their feedback score does have an impact on their perception of their past communication. This is extremely important for asynchronous environments, where users can give feedback to others at any given time. Users might feel confident in their original message but upon receiving feedback may alter their own view of the message.

Evaluative Outcomes of Feedback

As predicted, participants rated the group as less favorable after viewing negative feedback for each group evaluative outcome (thermometer feelings, inclusion of self, and group evaluation). Likewise, participants rated the group as more favorable after viewing positive feedback, albeit, the increase of group evaluation only occurred for thermometer feelings and group evaluation scores. Interestingly, the decrease of group evaluation

between Time 1 and Time 2 was higher than the increase in group evaluation. This suggests that negative feedback can have a larger impact than positive feedback in the realm of evaluation of others. For example, if a user receives negative feedback they might feel upset and confused as to why their message was not supported. The same user receiving positive feedback in the same degree (i.e., the same number of upvotes and downvotes) would only feel some satisfaction from the positive feedback. One reason for this is because relational networks are flooded with more positive social recommendations than negative social recommendations. For instance, Facebook is adamant about not integrating a dislike button because they want to promote positive and meaningful conversations.

These results also extend and reflect a study on user feedback and social recommendations by Cheng, Danescu-Niculescu-Mizil, and Leskovec (2014). Their study found that negatively recommended authors act differently than authors who receive positive feedback. Authors who received positive feedback were not likely to improve the quality of future posts, nor did positive feedback seem to feel rewarding to authors. Negative feedback garnered different effects by motivating authors to contribute more content, however, their negative feedback rating followed them and led to lower evaluation by the group. Results from my study also produced different effects between negative and feedback scores. Receiving positive feedback produced an increase in group evaluation and lower enacted-communal identity gap scores, yet this increase was very small. Negative feedback produced a bigger change between Time 1 and Time 2 scores for each variable except for the personal-enacted identity gap.

Results from Cheng, Danescu-Niculescu-Mizil, and Leskovec's (2014) study suggest that individuals will act differently in future posts based on the nature of feedback received. Although I did not have participants communicate after receiving feedback, I asked participants whether they would delete, edit, or respond to the feedback. Analyses revealed that participants would be less likely to edit or respond to the feedback regardless off feedback type. However, participants who received negative feedback reported that they would be more likely to delete their post ($M = 2.00$, $SD = .91$) than participants who received positive feedback ($M = 1.79$, $SD = .81$), $F(1, 312) = 4.16$, $p = .04$. Although this group difference is quite small, it lends insight into how negative feedback is perceived by users. By deleting the post altogether, their feedback score along with their comment response would not be viewable. This result adds to Cheng, Danescu-Niculescu-Mizil, and Leskovec's study on future behavior after receiving feedback. In their study, post deletion was not a possibility or was not reported.

Reasons for why users choose to not edit their response is because it (a) wouldn't remove the negative feedback and (b) edit history is often viewable and so the original comment response would still be present. Also, participants did not receive any other feedback other than their feedback score and so a response would not be as necessary. These results beg more questions about how feedback informs future behaviors of users and is likely to depend on post visibility (e.g., Is the post popular enough to be seen by many? Is feedback seen by others?), relational network type (e.g., Is the platform anonymous or does it include personal identification?), and the nature of the feedback itself. There are several ways for future research to incorporate these facets in order to increase research on the influence of social recommendation systems.

Design and Method Considerations for Future Research

There are a few method and design considerations from my study that might have promoted different or more reinforcing results. The feedback score for both the positive and negative conditions was 11 or (-11). This number was used because of the time duration between Time 1 and Time 2, which was estimated to be approximately 20 minutes. Although the number itself is important, it was more important in the study to delineate between the negative and positive score conditions. However, future research can adjust this design by using a larger feedback score and comparing multiple numeric scores to see if any differences arise. It is likely that a feedback score of 50 to be interpreted differently than a feedback score of 11.

Piggybacking off of Cheng, Danescu-Niculescu-Mizil, and Leskovec's (2014) study on future behavior after receiving feedback, future research can use a longitudinal design by having participants post another comment response after receiving feedback. By introducing this feature, future research could also assess accommodative behavior and compare between multiple posts at different time points. Do individuals use more or less accommodative language after receiving negative feedback?

A general limitation to the method and design in my study is that all participants received some sort of feedback, which limits the implication of how the absence of feedback may also be associated with group evaluation and identity outcomes. For instance, Walther's (1996) hyperpersonal model promotes that feedback itself is what makes an interaction *hyperpersonal* (i.e., more personal or more relationally satisfied) than a message without feedback. Walther et al. (2011) argues that feedback in online environments where asynchrony thrives is also a factor in hyperpersonal communication.

Moreover, feedback in private versus public spaces can also determine the degree of the hyperpersonal effect (i.e., relational satisfaction, identity commitment) (Carr & Foreman, 2016). My study only examined public feedback and did not do a private/public comparison that has often been done in past research. However, my study does extend hyperpersonal literature by introducing the comparison between negative and positive feedback. Future research can borrow from both the current study and previous hyperpersonal studies to incorporate both the nature of feedback itself as well as the ways in which feedback is delivered (i.e., public, private, or no feedback).

It is evident that feedback is clearly an important part of communication on relational networks and that more feedback will be incorporated into these platforms. At the time of writing, Facebook has introduced its new "Like" button with Facebook Reactions. These reactions give the user a myriad of ways to provide a response to another user through a like, love, sad, angry, wow, or laughing emoji. Despite users pushing for a negative feedback option (e.g., 'dislike'), Facebook uses the emoji to promote a playful and positive environment. Future research should assess the effectiveness of these reactions to see if different types of positive recommendations elicit different communicative outcomes.

In review, the three technological factors from the current study have each demonstrated specific implications, limitations, and directions for future research. Communication and technology researchers should consider continuing to research these factors in tandem, add or remove factors, and research new platforms to add more literature on how relational networks influence communication and identity. The next

section details general implications from my research by looking more specifically at identity, perception of the other, and learning from relational networks.

General Implications

In addition to each of the three aforementioned technological factors, there are also general or global implications from my study on relational technology and communication. There are three areas I will address: (a) identity in the digital age, (b) perception of the other, and (c) learning from relational networks. First, I will explain the ways in which my research has addressed issues and questions pertaining to identity in the digital age.

Identity in the Digital Age

Identity is arguably one of the most important facets of an individual. Baym (2015) positions identities as always social, "They are made, displayed, and reshaped through interaction…digital media seem to separate selves from bodies, leading to disembodied identities that exist only in actions and words" (p. 107). Relational networks primarily rely on text for interaction, whether the text consists of images, video, or words. As noted in Chapter 2, affordances of technology allow for identities to magnify through disembodiment, giving way to some technological factors such as multiple compositions of audience and valence of content. My study points to the importance of how identity is prompted and negotiated in the digital age.

Results from my study suggest that a social identity can become easily prompted through the framing of conversations (e.g., "My Fellow Americans", "Non-Americans") as well as the framing of the conversations themselves (e.g., "Americans are lazy and

miserable!", "Americans are full of pride for their nation!"). This is particularly

represented in results pertaining to the enacted-communal identity gap in which

participants consistently produced messages that "matched" the communal layer when

the messages were neutral. Although I did not compare multiple platforms in my study,

this suggests that the communal layer of identity is a variable worth investigating in light

of identity research on relational networks. Every single relational network will have

some sort of communal message or general leaning from the group and these messages

have implications for how individuals judge their own communication, evaluate the

group, and in turn respond or choose not to respond to the message. This presents some

questions for future research such as, "What types of communal messages evoke higher

identity salience?" "What types of communal messages deter individuals from

contributing to the group?" and "How does the communal layer of identity influence the

personal, enacted, and relational layers of identity?" More research should use

communication theory of identity to further research on how these online environments

impact a multitude of identities and how and why some relational networks are more

successful than others.

In addition to continuing research on identity layers and identity salience in the

digital age, research should also attend to the specific social identity and group itself. My

study used national identity or American identity to prompt for ingroup and outgroup

language and associations. The experimental manipulation was successful in prompting

for this identity and in turn most participants communicated about their American

identity by discussing beliefs, attitudes, and activities about 4th of July. Though this

speaks to the importance of national identity to one's self concept, there are a myriad of other social identities that might produce different results.

Future research needs to attend to more social identities, particularly identities that are timely and need to be consistently negotiated and maintained. Research should also analyze specific relational networks that promote such identities. For example, Nuru (2014) promoted the identity negotiation and management that transgender individuals use and how the online project ItGetsBetter.org helps to provide that space. More research should look at specific platforms to understand how these spaces evoke and maintain identity messages. Another current example is political identification in the event of an oncoming election. At the time of writing, several online groups have emerged to collectively discuss and promote their political ideology and preferred candidate in the United States presidential election. Visiting even just two subreddits from two different party candidates will demonstrate how identity is becoming magnified and potentially exasperated within these groups. The participatory culture of reddit is likely an aspect of why these groups are so successful in terms of number of users and activity (Massanari, 2015).

While more individuals seek relational networks to find similar others, it is becoming more important to study identity in a digital context. In doing this, I urge communication researchers to use identity theories to help unpack the complexity of identity in a digital context. Communication theory of identity is just one theory that attempts to see identity as a multitude of layers, which allows researchers to parcel out different parts of identity (i.e., the personal, relational, enacted, and communal layers). Other theories of interest might be identity management theory, cultural identity theory or

face theory. Overall, identity is and will continue to be an extremely important facet to research under the umbrella of relational technology and communication.

Perceptions of the Other

Another implication drawn from the current study is the perception of the other and how relational technology promotes new and potentially exciting ways for individuals to "meet" and talk with individuals from other groups. As a result of these new and different ways of interacting, the perception of the other (i.e., outgroup members) is altered. My study uncovered some potential reasons for how the perception of the other is altered in a digital context.

First, in support of social identity theory, outgroup members were evaluated as less favorable than ingroup and mixed group members in the discussion board environment. Moreover, outgroup members who acted hostile were evaluated as less favorable compared to ingroup members who acted hostile. This supports Wang et al.'s (2009) study on dislikeable group behavior in instant messaging and extends it by adding that asynchronous relational networks like discussion boards also evoke similar results. When group members act in a dislikeable or hostile fashion, individuals are likely to regard them as less favorable and the temporal structure of the platform does not seem to alter these general results. Also, outgroup members are seen as less favorable even though their behavior was identical to the ingroup member.

Second, both ingroup and outgroup members who acted hostile were rated consistently lower on each of the group evaluative outcomes as well as for interpersonal evaluation. These results expand on our knowledge of how valence and negativity can influence the perception of others. Walther et al. (2010) found that negative YouTube

comments led to participants not supporting a PSA and positive YouTube comments influenced more support for the PSA. Whereas Walther et al. measured the support of a PSA, my study utilized evaluation of the individuals who crafted the hostile messages. Communicating with hostility is not likely to garner positive evaluation; however, hostility might already be a prevailing factor in the online discussion. Results in my study suggest that when a new user enters into a hostile environment that evaluation of the group and group members will be low. However, this also begs the question, "How do hostile users evaluate other hostile users?" Future research should collect data from existing hostile groups and understand how this type of valence influences their evaluation of each other.

Finally, results from the current study revealed how the nature of feedback influences a change in the perception of group evaluation. Specifically, my study shed light on the weight of social recommendations on evaluation of the group. A negative feedback score was associated with lower levels of group evaluation, whereas a positive feedback score led to an increase in group evaluation. These seemingly small aspects of online interaction have become a central factor in how individuals choose to convey judgment toward content (Kim, 2014), perceive the quality of content (Xu, 2013), and my study demonstrates the power that social recommendations have on increasing and decreasing group evaluation. These results also suggest that feedback doesn't need to come in the form of a verbal response as well as come from specific group members in order for feedback to influence a change in group evaluation.

To further understand the important role of valence and feedback in perception of others, it is important for future researchers to understand the roles that these factors can

have intergroup communication. Research on building optimal intergroup contact through the internet have primarily focused on reflecting Allport's (1954) contact hypothesis in that group members have equality, shared tasks, support, and shared goals. Amichai-Hamburger and McKenna (2006) positioned the contact hypothesis as much more effective through the assistance of technology. More recently, Amichai-Hamburger, Haslar, and Shani-Sherman (2015) have pushed more into understanding the specific online factors that allow for successful online intergroup contact (e.g., fun, anonymity, control over interactions). My study can potentially add to this line of work by promoting the use of feedback mechanisms to achieve favorable outgroup attitudes as well as the management of valence in these interactions.

Future research should continue to understand how the perception of others is influenced through technological factors on several relational networks. My study utilized three popular measures to gauge group evaluation (i.e., Group Evaluation Scale, Thermometer Feelings, Inclusion of Self and the Other). However, other measures can also test for change in the perception of others such as measures of prejudicial attitudes and behavioral measures.

Learning from Relational Networks

Perhaps one of the more important contributions from the current study is the use of reddit's platform in a controlled experimental setting. By doing this, my study was able to control for three prominent technological factors that arguably make reddit a successful and intriguing space for intergroup communication. Few research studies have approached studying communication in this fashion. When looking at other relational networks, we can analyze the composition of audience, valence of content, and nature of

feedback in order to gauge the intergroup nature of the platform. Moreover, these factors lend great insight into the participatory culture of the relational network. We can learn more from other relational networks by applying these three factors in research and in our everyday communication with others. I will explain some ways we can apply these factors to some new and popular examples of relational networks.

New relational networks are emerging at a rapid rate in today's digitally saturated landscape. Existing networks undergo changes quite frequently, which challenge the ways in which users approach and perceive the platform. In order to understand the rapid changes of technology and to gauge how intergroup communication plays a role, I argue that we look at composition of audience, valence of content, and nature of feedback in order to begin to understand the participatory culture of the network. By analyzing these factors we can answer questions such as, "How does communication on this network inform identity?", "How does communication on this network invite for outgroup and ingroup communication?" and "How, if at all, does this network evoke and maintain one's views of ingroup and outgroup members?" I'll present an overarching question for each factor and then present some examples to support how each factor can help answer the aforementioned questions.

First, the composition of audience should be assessed by addressing the question, "Is the audience ingroup, outgroup, or mixed?" We can answer this question by looking at whether the platform is organized by way of friends or follower lists as well as how popular content is promoted, it at all. Facebook is a prominent example of a network comprised of mostly ingroup members because of Facebook's emphasis on maintaining existing ties (e.g., friends, family, coworkers). Many networks follow this model by

asking users to add existing ties to their network (e.g., LinkedIn, Snapchat, Twitter). However, there are also other networks that promote a mixed or outgroup emphasis on the audience composition. Reddit's front page contains the most popular content, regardless of a friends or followers list. The friends list option on reddit is not widely used and it is much more likely to stumble on new content from outgroup members (Massanari, 2015). We can assess the ingroup and outgroup nature of an audience by looking at whether the network promotes and is configured to show users different content that is not from their chosen network.

Once there is a sense of the audience composition (e.g., ingroup, outgroup, mixed), there are sets of communicative and identity outcomes that can be defined and further researched. As found in my study, the perception of an ingroup audience is likely to promote a lower enacted-communal identity gap as well as be evaluated as more favorable. Is expected that in networks where ingroup members thrive, users communicate in similar patterns to the larger group. In an outgroup network, these outcomes would be reversed and the outgroup would be seen as less favorable and because outgroups are less known, the communication between the ingroup and outgroup will fluctuate. For example, a conversation between republicans is likely to have more collective language and self-disclosure. When an outgroup member (e.g., democrat) enters the conversation, he or she would communicate differently and be evaluated less positive as the republican members. Overall, it depends on how the network is constructed – do users engage in outgroup discussions or do they communicate mostly with ingroup members? In order to answer this adequately, the technological affordance

(e.g., ability to add friends) paired with the social practices (e.g., users tend to engage in outgroup discussions) should be understood.

In addition to the audience composition, the valence or emotional tone of conversations on the network will also lend insight into a number of communicative and identity outcomes. A question to pose is, "Is the content positive, hostile, or neutral?" Though this question might seem too definitive in that content only falls into three categories, the important aspect is to get a general indication of valence. This can be answered by looking at social practices, moderation and policy enforcement, and the topics discussed. For instance, on Snapchat a common social practice is to joke and create snaps (i.e., pictures or videos) that are playful and not serious (Utz, Muscanell, & Khalid, 2015). This is promoted by the filters and private nature of Snapchat, but also is part of common social rules of Snapchat use. Thus, the valence can be determined as much more positive. A negative or hostile valence can be found on websites that afford more anonymity and/or discussions about controversial topics (Duggan et al., 2014). Facebook, YouTube, and Twitter have recently been at the forefront of attempting to decrease hostile conversations on their network (Moscaritolo, 2016). Interestingly, these networks promote using real names and photos, which suggests that anonymity is not a sole affordance to hostility. Valence of content is much more complex and can vastly differ on different parts of same network. On Facebook, there is likely to be more hostile and hateful language on a politician's Facebook page as opposed to personal and private pages. Once the valence of content is determined, we can look at some potential outcomes.

The first likely outcome of a hostile conversation is negative evaluation of both individual group members and the group as a whole. From my study, I found that group and interpersonal evaluation functioned similarly in regards to valence – neutral groups were evaluated higher than hostile groups. I also found that participants who viewed the hostile group were more likely to communicate in a negative valence in their comment response. This suggests that a hostile environment can espouse more hostility. Users who perceive a hostile environment are also likely to use less convergent language such as politeness, shared agreement, and similar language cues. It is no wonder that large relational networks are attempting to reduce hostile and hateful environments because research suggests that these conversations do not yield positive outcomes and in some cases can lead to severe bullying. Overall, understanding the general valence of conversations can point to several communicative and evaluative outcomes.

As discussed throughout this chapter, the nature and presence of feedback is an important component of online conversations. The last technological factor to analyze in light of understanding the participatory culture of a relational network is to gauge the type and usage of social recommendation systems (e.g., Like, upvote, favorite). The overarching question to this factor is, "How do users provide feedback?" Feedback in this sense will be narrowed to social recommendations where users use a provided feedback option as their communication to others. A first step to answering this question is to look at the available feedback options on the network such as a like, recommend, or downvote button. However, it is important to note that a feedback option might not *mean* what it is intended to provide. This is where the social practice and culture of the platform come into play. At the time of writing, Facebook has recently launched a new range of

feedback options, called Facebook Reactions. A preliminary study on the usage of these reactions suggests that Facebook users are not using the new reaction options and do not understand the purpose of them for conversation and content promotion (Quintly, 2016). Although feedback options might exist, it is important to understand if they are used and how they are perceived.

On reddit there is a downvote option for both submitted posts and for individual comments on each thread. This is what reddit says about the voting feedback option: "If you think something contributes to conversation, upvote it. If you think it does not contribute to the subreddit it is posted in or is off-topic in a particular community, downvote it." Despite the clear principle set forth by reddit, users interpret downvotes vastly different than upvotes (Massanari, 2015). The user Xeroxgirl asked a question to fellow reddit users, "Do you get hurt by downvotes too? I feel so stupid." Xeroxgirl's narrative is as follows:

> I've been blabbering a lot today and it resulted in some comments with negative karma and whenever it happens I get very offended by it. I keep checking my comments' scores and replying to people, trying to explain myself and be funny and chill. What the hell is wrong with me? Why do I care about what random people on the internet think? Why do I take it so seriously when I know I'm not really a stupid troll? Why in my mind a downvote means more about me than the hundred upvotes I received before? I feel so stupid and I know my insecurity is pathetic. Caring what people think about you is understandable and normal, but it's not my classmates or my family! It's goddamn reddit and I let it crash my confidence. I feel dumb as hell.

Other users supported Xeroxgirl's narrative as they also detailed their own frustration with dealing with downvotes (i.e., negative karma). The intention of a feedback option can be vastly different than how users use and perceive that feedback option. This means that researchers and users need to not only understand what the feedback options are – but also what these feedback options mean to the larger community.

Supporting Xeroxgirl's claim that one downvote means more than hundreds of upvotes, results from my study suggest that negative feedback can alter the evaluation of the group and one's enacted-communal identity gap in decreasing scores rather than positive feedback. Though I did not measure different levels of negative and positive feedback, results trend on the revelation that negative feedback can promote a different perception of others. Participants who received negative feedback also reported that they would probably delete their comment as compared to participants who received positive feedback. These are just some outcomes relating to identity and evaluation. There are other current examples of feedback systems that lead to more questions about how feedback impacts communication, identity, and evaluation of others.

In April 2016, a teenage girl used the live streaming application Periscope to document her friend getting sexually assaulted. Periscope promotes both ingroup and outgroup audiences by allowing streamers to post their video live to the "world", which prompts non-followers to enter into their video stream. Several users engaged in Periscope's feedback option to provide their feedback to the teenage girl. The feedback option is a floating heart that can be repeatedly activated by tapping the screen. During a court hearting about reasons why the teenager used Periscope to document the attack instead of calling police or for help, her lawyer stated, "She got caught up in the likes."

This begs the question, "Did users who engaged in the feedback option support or love the sexual assault?" In an age where live streaming is becoming more prevalent, it is more important to understand how these feedback options are used and perceived. The teenager enjoyed getting feedback and as argued by her lawyer, was distracted and caught up in the feedback. In short, analyzing social recommendation systems should be a factor to consider when investigating the participatory culture and potential outcomes relating to communication and identity.

As an overview, we can learn a lot about the communication of a relational network by sifting through these three technological factors. These factors provide a backbone to how the network is organized, perceived, and used. Figure 7.1 provides a visual infograpic depicting each technological factor. It is my intention that this infographic provides a quick and easy to understand map of learning from relational networks.
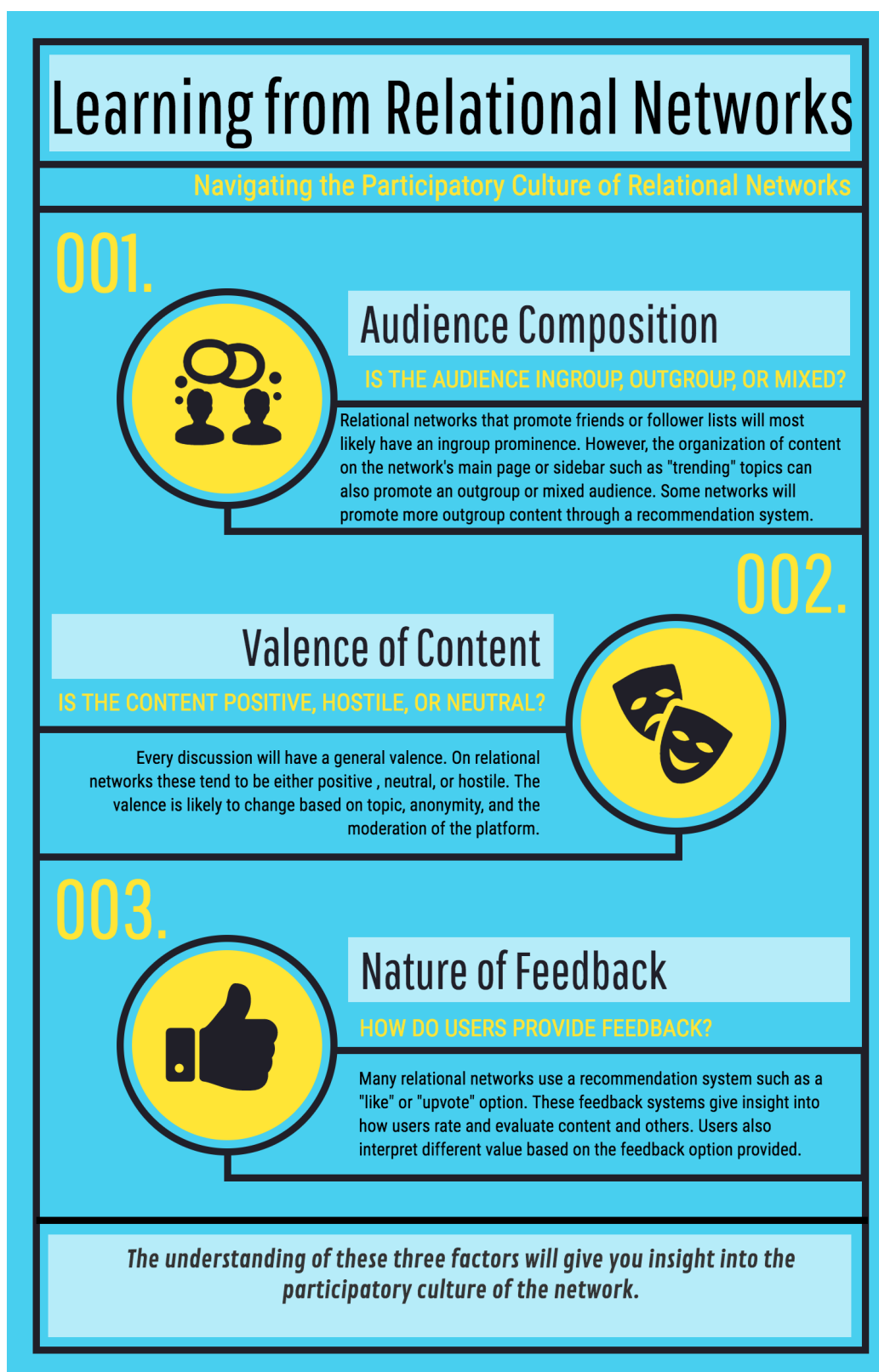
Figure 7.1. Infographic for Learning from Relational Networks.

Limitations and Additional Directions for Future Research

While my study was able to integrate three prominent technological factors into one study and demonstrate the communicative and identity outcomes for each, there are general limitations to consider for future research. These limitations include: (a) knowledge and usage of the network, (b) time constraints, (c) the usage of only three technological factors, and (d) methodological approach. First, I will explain the limitation pertaining to knowledge and usage of the network and discuss some ways for future research to integrate these for research on relational networks.

My population sample primarily consisted of university students between the ages of 18-24. Despite this population being an optimal age range for technology usage, only a minority of the participants reported using and being an active user of reddit. This suggests that a majority of the participants had never used reddit despite their knowledge of knowing or hearing about the platform. Using a platform for the first time includes learning how to use the platform and also learning how other users engage in conversations. Future researchers interested in understanding communication patterns from a specific relational network should use a population sample consisting of individuals who are active users. Some research in this area has found that computer literacy and competence of a platform can inform a number of attitudinal and cognitive outcomes (Appel, 2012). Researchers can measure each participant's frequency and knowledge of the platform in order to control and understand how these facets impact other outcomes (Hwang, 2011).

The second limitation is the time constraints of the study itself. I used two time segments that were bound to one session, meaning that participants had to complete Time 1 and Time 2 during the same sitting. I also had participants only communicate once in the discussion board environment, which is also a time constraint since I did not allow users to return back to the discussion board to alter, edit, or add another comment. I also did not do any follow-up tests after the completion of the experiment. Future research should add longer time segments or perhaps have participants contribute to the discussion board and come back several hours or days later. Another way to improve this part of the study is to allow participants to come back to the discussion board at any given time. This gives participants much more control over their interactions and also gives more ecological validity to the asynchronous environment of a discussion board. In a synchronous environment such as instant messaging, integrating longer time segments might not be beneficial. Researchers interested in analyzing the change of outgroup attitudes (e.g., prejudicial attitudes) would also benefit from using a longitudinal design (Vezzali, Crips, Stathl, & Giovannini, 2015). Overall, future research should attempt to have more than one communicative exchange and include follow-up tests and discussions that are not bound in one sitting.

Third, even though my study successfully controlled for three technological factors of reddit's platform, there are more technological factors that future research should consider when studying intergroup communication on relational networks. These added factors would be highly contingent on the specific relational network. For instance, many relational networks afford different type of media in conversations such as pictures, GIFs, and videos. These types of messages are heavily used on networks such as Twitter

and Snapchat. This technological factor could account for the richness of the message to see any change in evaluation, language, or identity based on the message richness or type. My study employed plain text and did not afford users to insert links, pictures, or any other media. Recent research on GIFs in computer-mediated communication suggests that GIFs provide a more light and positive way to interact with others (Tolins & Samermit, 2016). Likewise, the use of memes and GIFs can be interpreted as potentially threatening to a serious conversation and issue (Shepherd, Harvey, Jordan, Sruay, & Miltner, 2015). Future research can advance research in this area by adding a technological factor that analyzes the media type used in the conversation.

Finally, the methodological approach in my study was entirely quantitative analysis. Though this proved to allow for more data units to be used through statistical analyses, there are other methodological approaches that could provide a richer and more detailed analysis of my study. For instance, a follow-up interview with a sample of participants about their experience on the discussion board might lend insight into how they felt and perceived their feedback score and to their general understanding of feedback systems. A focus group on using relational networks such as reddit might also prove interesting in that focus groups allow for users to share experiences together.

Conclusion

Relational technology brings about a new lens for seeing the world, a new relationship of offline to online identities, and new relationships between the technology itself and the user(s) (Lister et al., 2009). Intergroup communication plays a large role in how individuals identify with others (i.e., audience or group members) and because so much communication occurs in networked environments, the intergroup nature of

technology cannot be ignored. Liu and Morris (2014) argued that speaking with outgroup members can deter stereotypical viewpoints and broaden one's own view of their own culture, "People who speak to outgroup audiences regularly will be less prone to the conventionalization bias in the serial transmission of information, a mechanism of cultural maintenance" (p. 101). Thus, relational networks such as reddit serve to incorporate a myriad of cultural perspectives but also serve as a space for individuals to share their own viewpoints and connect with similar others. My study aimed at revealing the communicative, evaluative, and identity based outcomes that are espoused by primary technological factors of reddit. I will briefly review my study and some major takeaways.

Throughout my study I argued for three technological factors that exist on relational networks: composition of audience, valence of content, and nature of feedback (Chapters 1-2). More importantly, I positioned several communication outcomes that are associated with each of the technological factors (Chapter 3). These positions led to the hypotheses and research questions for my study. In order to address these inquiries, I created an online experiment where participants communicated in a discussion board environment that was very similar to reddit's user interface (Chapter 4). Participants completed a series of measures and then returned to the discussion board to see their feedback score. I analyzed the perceptual change in group evaluation and identity gaps between the Time 1 and Time 2 sequences.

Results from my study reveal the influence that audience composition, valence, and feedback can have on a number of communication outcomes (Chapters 5-6). Some notable results include a bias toward the ingroup audience, lower group and interpersonal evaluation in light of hostile behavior, and a change in group evaluation and the enacted-

communal identity gap after receiving either positive or negative feedback. More specifically, negative feedback revealed to alter scores of group evaluation and the enacted-communal identity gap more than positive feedback.

The current study demonstrates the importance of integrating multiple technological factors into one study. These factors reflect both technological affordances and social practices (i.e., social shaping of technology). As Massanari (2015) puts it, "…technologies function both materially and symbolically – and focusing on one aspect in exclusion of the other does not fully reflect the complex and multitudinous ways in which technologies and our everyday lives are interwoven" (p. 25). Although the study's experiment only controlled for three technological factors in a one time study, there are significant takeaways for moderators and creators of these relational networks. More researchers and technologists should continue to understand how these technological factors alter, change, and maintain communication and identity between and within groups.

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APPENDICES

Appendix A: Recruitment Scripts

<u>Communication and Identity on Discussion Boards</u>
University of Nebraska - Lincoln IRB Approval: 20150915465EP
Valid until: 9/14/2016

The purpose of this research project is to investigate how individuals discuss issues related to culture and nationality on a discussion board. Completion of this study requires approximately 45-60 minutes **and earns you 2 course credits if you are in a Communication Studies class at the University of Nebraska – Lincoln.**

In order to participate, you must be 18 years of age or older and be familiar with how to use an online discussion board.

Participation involves responding to another participant in the study on a discussion board thread. Participation on the discussion board is completely anonymous. The discussion board is built into the online survey. No login or personal information is necessary.

In addition to responding to a discussion board thread, you will be asked to complete questions about your experience on the discussion board and other items about your cultural background.

The entire study can be completed during one time by clicking on the link below.

Please click or copy and paste the following link to participate:

https://ssp.qualtrics.com/SE/?SID=SV_1AB4LcNWvBb5Ybj

If, for whatever reason, the link above does not work, please click on this link:

https://goo.gl/OBFwTJ

Thank you and please let me know if you have any questions or concerns,

Jennifer Kienzle
jen@huskers.unl.edu
Instructor
Department of Communication Studies
University of San Francisco

<u>**Call for Participants**</u>

**Communication and Identity on Discussion Boards
University of San Francisco IRB Approval: 531**

The purpose of this research project is to investigate how individuals discuss issues related to culture and nationality on a discussion board. Completion of this study requires approximately 45 minutes and may earn you extra credit in a Communication Studies course at University of San Francisco. Please contact your instructor for more information on extra credit for this study.

In order to participate, you must be 18 years of age or older and be familiar with how to use an online discussion board. You also need access to your own computer or tablet to complete this study.

Participation involves responding to another participant in the study on a discussion board thread. Participation on the discussion board is completely anonymous. The discussion board is built into the online survey. No login or personal information is necessary.

In addition to responding to a discussion board thread, you will be asked to complete questions about your experience on the discussion board and other items about your cultural background.

The entire study can be completed during one time by clicking on the link at the end of this document.

Please click or copy and paste the following link to participate:

https://ssp.qualtrics.com/jfe/form/SV_2ozk3hMVgTT4PeR

You can alternatively type in this link:

https://goo.gl/nppWuI

Thank you and please let me know if you have any questions or concerns,

Jennifer Kienzle
jkienzle@usfca.edu
Instructor
Department of Communication Studies
University of San Francisco

Communication and Identity on Discussion Boards
University of San Francisco IRB Approval: 531
University of Nebraska - Lincoln IRB Approval: 20150915465EP
Valid until: 9/14/2016

The purpose of this research project is to investigate how individuals discuss issues related to culture and nationality on a discussion board. Completion of this study requires approximately 45 minutes.

In order to participate, you must be 18 years of age or older and be familiar with how to use an online discussion board such as reddit.

Participation involves responding to another participant in the study on a discussion board thread. Participation on the discussion board is completely anonymous. The discussion board is built into the online survey. No login or personal information is necessary.

In addition to responding to a discussion board thread, you will be asked to complete questions about your experience on the discussion board and other items about your cultural background.

The entire study can be completed during one time by clicking on the link at the end of this document.

Please click or copy and paste the following link to participate:

https://ssp.qualtrics.com/SE/?SID=SV_0BTAq6lpOYn82rj

Thank you and please let me know if you have any questions or concerns,

Jennifer Kienzle, M.A.
Doctoral Candidate – University of Nebraska - Lincoln
Instructor
Department of Communication Studies
University of San Francisco
jenkienzle@gmail.com

Appendix B: Informed Consent Form

UNIVERSITY OF Nebraska Lincoln

COMMUNICATION AND IDENTITY ON DISCUSSION BOARDS

The purpose of this research project is to investigate how individuals discuss issues related to culture and nationality on online discussion boards. In order to participate, you must be 18 years of age or older and be familiar with how to use an online discussion board. You will not be required to disclose any personal information or create login information. All information on the discussion board is completely anonymous.

Participation in this study involves replying to a discussion board comment from another participant in the study. You will also be asked to provide general demographic information and respond to questionnaire items regarding your experience on the discussion board and other items relating to your cultural background. It is estimated that this will take approximately 45-60 minutes of your time. Please do not leave this browser's window during any point in your participation.

There are no direct benefits for participating in this research. We believe that there are no known risks that may result from participating in the study. However, please remember that your participation in this study is strictly voluntary and you are free to withdrawal at any time without adversely affecting your relationship with the investigator, the Department of Communication Studies, or the University of Nebraska. You may also refuse to answer any questions you are uncomfortable answering. Your decision will not result in any loss of benefits for which you are otherwise entitled.

If you are receiving course credit or extra credit for participation in this research study, completing the study is worth 2 credits for Communication Studies courses at the University of Nebraska, Lincoln. You may still participate in research or non-research alternative options if you choose to withdraw from the study.

We assure you that your name will not be associated in any way with the research findings and you will not need to use your real name in any correspondence with the other participant. The personal information you provide to earn research credit will be collected separate from the survey and will not be retained after reporting participation. In reporting your participation to the instructor, your name will not be linked to any specific study. Results of this research may be presented at research presentations at UNL, professional conventions, and in journal articles.

Please feel free to ask questions before or during the completion of the survey. If you would like additional information concerning this study after it is complete, please feel free to contact the investigator by phone or email. If you have any questions about your rights as a research participant that have not been answered by the investigators or

to report any concerns about the study, you may contact the University of Nebraska-Lincoln Institutional Review Board at (402) 472-6965.

You are voluntarily making a decision whether or not to participate in this research study. By entering your name and clicking on the "I agree" button below, you are certifying that you have decided to participate having read and understood the information presented. Again, your identifying information will not be linked with the completion of this study. Please email the principal investigator if you would like a copy of this informed consent form.

Sincerely,

Jenifer Kienzle, Principal Investigator

jenkienzle@gmail.com

Jordan Soliz, Ph.D., Secondary Investigator

jsoliz2@unl.edu

Appendix C: Discussion Board Comments

Ingroup Hostile Condition (#1)
Topic: Fellow Americans, what are your thoughts on 4th of July and how do you celebrate? Just wondering what activities you might participate in and your thoughts on the holiday.

Comment Type	Script
Response	"I honestly feel like us Americans just use 4th of July to skip work, be lazy, drink a bunch of booze, and eat fattening foods. Most of us probably have no idea the historical significance of the holiday and just use it as an excuse to be lazy. I know this because I witness this every year!" User rmd937
General	"Ugh. As an American, I really dislike July 4th because I usually have to work and then see some fireworks that usually just end up making the night extremely noisy. The weather is also a factor and is usually pretty bad during that time of year." User trd745
General	"When I think of 4th of July I refer back to Dazed and Confused where Ms. Ginny Stroud said, 'This summer when you are inundated with all this American bicentennial 4th of July brouhaha, remember what you're celebrating, and that's the fact that a bunch of slave-owning white males didn't want to pay their taxes.' That pretty much sums up the holiday and how I feel about it as an American. The celebrations mean nothing. – User jgh346
General	"The 4th is a holiday that us Americans all get into. Self-loathing is one of the strongest American traditions but on the 4th we will put our anti-American attitudes away and put Americans flags EVERYWHERE: shirts, short, bikinis, hats, sunglasses, paper plates, napkins, tablecloths, etc. Then the next day we will go back to complaining about America!" wtp321
General	"Yelling at other Americans and telling them the UK is the real America and some other insults." – User rlp412

Ingroup Neutral Condition (#2)
Topic: Fellow Americans, what are your thoughts on 4th of July and how do you celebrate? Just wondering what activities you might participate in and your thoughts on the holiday.

Comment Type	Script
Response	"July 4th is a time for us Americans to take time off work and relax with friends and family. I like to participate in fireworks because that's what the holiday is for, right? Overall, I really enjoy hanging out with friends and family and other fellow Americans." User rmd937
General	"American here…I usually work during the 4th. If I didn't then I would probably have a cookout and then head down the street to see the fireworks. Of course the weather has to cooperate!" User trd745
General	"When I think of 4th of July I refer back to the movie Independence Day where the president said, "We will be united in our common interests. Perhaps it's fate that today is Fourth of July, and you will once again be fighting for our freedom…not from tyranny, oppression, or persecution…but from annihilation.' As an American, I feel that this pretty much sums up the holiday and makes it pretty meaningful." User jgh346
General	"The 4th is a holiday that us Americans all get into (and it's low stress, unlike holidays like Christmas where you have to buy gifts for everyone). Everything you see has an American flag: shirts, shorts, bikinis, hats, sunglasses, paper plates, napkins, tablecloths, etc. And that doesn't include all the actual American flags, both teeny tiny, gigantic, and every size in between. They are literally everywhere!" – User wtp321
General	"The 4th is all about food, family, and fireworks." – User rlp412

Mixed Hostile Condition (#3)
Topic: Americans and non-Americans living in the United States, what are your thoughts on 4th of July and how do you celebrate?
Just wondering what activities you might participate in and your thoughts on the holiday.

Comment Type	Script
Response	"I honestly feel like everyone just uses 4th of July to skip work, be lazy, drink a bunch of booze, and eat fattening foods. Most people probably have no idea the historical significance of the holiday and just use it as an excuse to be lazy. I know this because I witness this every year!" User rmd937
General	"Ugh. I really dislike July 4th because I usually have to work and then see some fireworks that usually just end up making the night extremely noisy. The weather is also a factor and is usually pretty bad during that time of year." User trd745
General	"When I think of 4th of July I refer back to Dazed and Confused where Ms. Ginny Stroud said, 'This summer when you are inundated with all this American bicentennial 4th of July brouhaha, remember what you're celebrating, and that's the fact that a bunch of slave-owning white males didn't want to pay their taxes.' That pretty much sums up the holiday and how I feel about it. The celebrations mean nothing. – User jgh346
General	"The 4th is a holiday that everyone gets into. Self-loathing and national pride go together but on the 4th everyone puts their anti-national attitudes away and puts flags EVERYWHERE: shirts, short, bikinis, hats, sunglasses, paper plates, napkins, tablecloths, etc. Then the next day we will go back to complaining about our lives!" User wtp321
General	"Yelling at people and telling them the UK is the real America and some other insults." – User rlp412

Mixed Neutral Condition (#4)
Topic: Americans and non-Americans living in the United States, what are your thoughts on 4th of July and how do you celebrate?
Just wondering what activities you might participate in and your thoughts on the holiday.

Comment Type	Script
Response	"July 4th is a time for everyone to take time off work and relax with friends and family. I like to participate in fireworks because that's what the holiday is for, right? Overall, I really enjoy hanging out with friends and family." User rmd937
General	"I usually work during the 4th. If I didn't then I would probably have a cookout and then head down the street to see the fireworks. Of course the weather has to cooperate!" User trd745
General	"When I think of 4th of July I refer back to the movie Independence Day where the president said, "We will be united in our common interests. Perhaps it's fate that today is Fourth of July, and you will once again be fighting for our freedom…not from tyranny, oppression, or persecution…but from annihilation.' I feel that this pretty much sums up the holiday and makes it pretty meaningful." User jgh346
General	"The 4th is a holiday that everyone gets into (and it's low stress, unlike holidays like Christmas where you have to buy gifts for everyone). Everything you see has an American flag: shirts, shorts, bikinis, hats, sunglasses, paper plates, napkins, tablecloths, etc. And that doesn't include all the actual American flags, both teeny tiny, gigantic, and every size in between. They are literally everywhere!" – User wtp321
General	"The 4th is all about food, family, and fireworks." – User rlp412

Outgroup Hostile Condition (#5)

Topic: Non-Americans in the United States, what do you think Americans do on 4th of July and what are your thoughts on it?

Just wondering what your thoughts are on the holiday!

Comment Type	Script
Response	"I honestly feel like Americans just use 4th of July to skip work, be lazy, drink a bunch of booze, and eat fattening foods. Most Americans probably have no idea the historical significance of the holiday and just use it as an excuse to be lazy. I know this because I witness this every year!" User rmd937
General	"Ugh. Non-American here…I really dislike July 4th because I usually have to work and then see some fireworks that usually just end up making the night extremely noisy. The weather is also a factor and is usually pretty bad during that time of year." User trd745
General	"When I think of 4th of July I refer back to Dazed and Confused where Ms. Ginny Stroud said, 'This summer when you are inundated with all this American bicentennial 4th of July brouhaha, remember what you're celebrating, and that's the fact that a bunch of slave-owning white males didn't want to pay their taxes.' That pretty much sums up the holiday and how I feel about it as a non-American. The celebrations mean nothing. – User jgh346
General	"The 4th is a holiday that all Americans get into. Self-loathing and is one of the strongest American traditions but on the 4th Americans put their anti-national attitudes away and put flags EVERYWHERE: shirts, short, bikinis, hats, sunglasses, paper plates, napkins, tablecloths, etc. Then the next day Americans will go back to complaining about their lives!" User wtp321
General	"Yelling at Americans and telling them the UK is the real America and some other insults." – User rlp412

Outgroup Neutral Condition (#6)
Topic: Non-Americans in the United States, what do you think Americans do on 4th of July and what are your thoughts on it?
Just wondering what your thoughts are on the holiday!

Comment Type	Script
Response	"July 4th is a time for non-Americans to take time off work and relax with friends and family. I like to participate in fireworks because that's what the holiday is for, right? Overall, as a non-American I really enjoy hanging out with friends and family." User rmd937
General	"Being that I'm not American, I usually work during the 4th. If I didn't then I would probably have a cookout and then head down the street to see the fireworks. Of course the weather has to cooperate!" User trd745
General	"When I think of 4th of July I refer back to the movie Independence Day where the president said, "We will be united in our common interests. Perhaps it's fate that today is Fourth of July, and you will once again be fighting for our freedom…not from tyranny, oppression, or persecution…but from annihilation.' As a non-American, I feel that this pretty much sums up the holiday and makes it pretty meaningful for anyone." User jgh346
General	"The 4th is a holiday that everyone (Americans and Non-Americans) gets into (and it's low stress, unlike holidays like Christmas where you have to buy gifts for everyone). Everything you see has an American flag: shirts, shorts, bikinis, hats, sunglasses, paper plates, napkins, tablecloths, etc. And that doesn't include all the actual American flags, both teeny tiny, gigantic, and every size in between. They are literally everywhere!" – User wtp321
General	"The 4th is all about food, family, and fireworks." – User rlp412

Appendix D: Questionnaire

<u>General Instructions</u>

Once again, thank you for participating in this research project. As indicated on the informed consent form, we are interested in how individuals communicate about various national and cultural issues. Please refrain from exiting your browser until you have completed both sections of the study.

The study has two major sections:

Section 1: Discussion Board Participation & Questionnaire

Section 2: View Comment Score & Questionnaire

Please click on the arrow to start section 1.

<u>Section 1: Discussion Board Participation & Questionnaire</u>

<u>Directions</u>

The first section of the study asks you to respond to a comment on a current ongoing discussion board thread. The discussion board topic revolves around views and activities relating to either a topic about food, sports, election processes, or national holidays. You will be randomly assigned to a topic and, on the next page, you will enter into an online discussion board about the topic. You will also be randomly assigned a username with no identifying information.

All communication on the discussion board is anonymous.

Other participants from the study generate all of the comments on the discussion board thread. Please note that the discussion board environment might be aimed at Americans

and/or those from other countries. Because the nature of the study includes participants posting and replying to comments, you may see only a couple of comments or several comments.

You will respond to one original comment on the discussion board, meaning you will be the first person to respond to that comment. This comment will have a response box already available for you to type into. We ask that you reply solely to the comment you are assigned to. We also ask that you read through all the comments on the thread so that you can get an idea of the discussion board group you are a part of.

Please take approximately 10 minutes on the discussion board thread. Once you complete your comment, please hit save and you will be automatically sent to the next portion of the study.

Click the following button to enter the online discussion board.

Section 1: Questionnaire

Thank you for participating in the online discussion board. We will now ask you a series of questions relating to your experience on the discussion board. Click the following arrow to begin the questionnaire.

Section 1: Post-Discussion Board Questions

1. Please describe some characteristics of the group you communicated with, and how you reacted and perceived the other users.
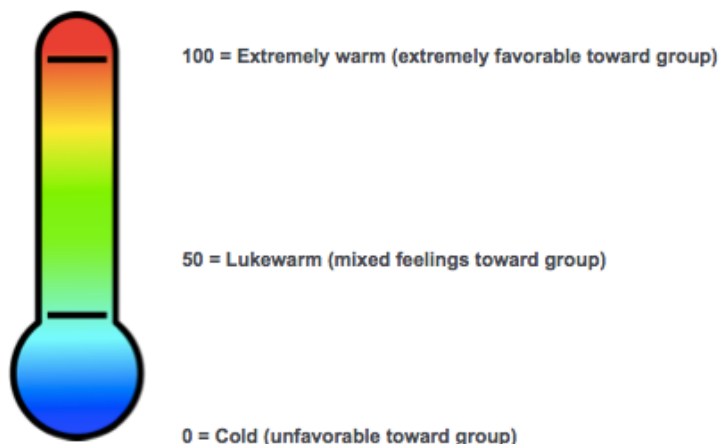
Questions to consider answering are:

- Was the group positive, negative, or neutral?
- Was the topic discussed in a positive or negative light?
- Do you feel that you "fit" with the other group members? In other words, how do your own beliefs/attitudes reflect the other users in the group?

2. Referring solely to the comment you responded to, we would like to know whether you supported the comment, in general. On many websites like reddit and YouTube, you can like or vote on content. Please indicate whether you would upvote, downvote, or provide no action to your assigned comment
    a) Upvote (Support, Like)
    b) Downvote (Dislike)
    c) No Action (Would neither downvote or upvote the comment)

Section 1: Thermometer Scale

Directions: Think about how you feel about the group of users on the discussion board. The group represents all the comments you read (including the one you responded to). Please indicate how you feel by entering in one number from 0-100 that matches your feeling toward this group. See the scale below for reference:

100 = Extremely warm (extremely favorable toward group)

50 = Lukewarm (mixed feelings toward group)

0 = Cold (unfavorable toward group)

Section 1: Inclusion of the other in the self

Directions: The following picture displays two circles, one representing the "self" and the "other". Self refers to you. The "other" refers to the group of individuals from the discussion board thread. Please indicate which picture best represents your identification with the discussion board group.

For example, let's say you have a liberal political ideology and the "other" represents a group of conservatives, you would probably select a circle that has very little overlap of the self and other.

Section 1: Group Evaluation Scale

Directions: The following items relate to your perception of the *group* on the discussion board. In other words, when considering the group, think of all the comments you viewed.

1. I highly identified with the group. I felt strong ties with the group.
2. I see myself belonging to the group.
3. I felt annoyed to interact with that group.
4. I shared similar beliefs and attitudes as the group.
5. I was happy to communicate with the group.
6. I liked the group as a whole.
7. The individuals of the group seemed to fit together.
8. I felt strong ties with the members of the group.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
○	○	○	○	○	○	○

Section 1: Enacted-Communal Identity Gap

Directions: The following items relate to how your comment response reflects the general group in the discussion board thread. You should think about how your comment response reflects the other comments on the thread.

1. I feel that the group's comments match well with how I communicated my message.
2. I feel proud to have communicated with this group of users.
3. My message is very different than the other messages on the discussion board.
4. There is a drastic difference between how I see this group and how I communicated my message.
5. I feel that this group represents what I communicated on the discussion board.
6. I believe that this group would support the message that I posted on the discussion board.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
○	○	○	○	○	○	○

Section 1: Interpersonal Evaluation Scale

Directions: The following items ask you to evaluate a person. The person refers to the individual you directly responded to on the discussion board.

1. I think this person could be a friend of mine.
2. I would like to have a friendly conversation with her/him.
3. It would be difficult to meet and talk with her/him.
4. We could never establish a personal friendship with each other.
5. He/she just wouldn't fit into my circle of friends.
6. He/she would be pleasant to be with.
7. He/she is sociable.
8. I would NOT like to spend time socializing with this person.
9. I could become close friends with her/him.
10. He/she would be unpleasant to be around.
11. This person is not very friendly.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
○	○	○	○	○	○	○

Section 1: Personal-Enacted Identity Gap

Directions: The following items relate to your own reflection of your comment response. You should think about how your comment response reflects your own perception of yourself (i.e., sense of self).

1. Whoever reads my comment response will get to know the "real me".
2. I communicated in ways that were consistent with who I really am.
3. I was completely myself in my comment response.
4. I expressed myself in ways that were not the "real me".
5. I did not reveal important aspects of myself in my comment response.
6. When I was writing my comment, I lost a sense of who I am.
7. I did not express the "real me" when thinking about the expectations of my message.
8. I misled the other discussion board users (i.e., readers) through my comment response.
9. There is a difference between the "real me" and the impression I gave off in my comment response.
10. I spoke truthfully to the other discussion board users about myself.
11. I freely expressed the "real me" in my comment response.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
○	○	○	○	○	○	○

Section 1: Identity Salience

Directions: The following items relate to how important your nationality is in your life. These questions do not directly relate to your experience on the discussion board. Please think of your own nationality as you answer each item (e.g., American, Chinese, German).

1. I feel a connection with other individuals from my nation.
2. I see myself as a member of my nation.
3. Being a member of my nation is central to who I am as an individual.
4. I enjoy identifying as a member of my nation.
5. I understand the values of being a member of my nation.
6. I see myself as a typical member of my nation.
7. I am not like most members from my nation.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
○	○	○	○	○	○	○

Section 2: Comment Response Score & Questionnaire

Thank you for completing Section 1 of the study. Other individuals in this study have now read the posts including your comment and, potentially, responding to it either verbally or through ratings. In a few moments, we'd like you to view these responses and ratings and then complete a final set of questions.

On the following page you will see your comment response from Section 1 of the study. The page should look exactly the same except you will see your own comment response at the bottom with a score.

Comment scores are generated through an upvote and downvote procedure. Other participants concurrently taking the study have upvoted or downvoted your comment response. This is similar to the "Like" button on Facebook but also includes any negative feedback as well. Also, all upvoting and downvoting is anonymous and so you will not see "who" voted on your response.

Please take note on whether your score is a positive score or a negative score. This will be indicated with a negative sign (-) if it is negative.

The score represents the sum of upvotes and downvotes on your comment.Therefore, a positive score indicates that most people upvoted or liked your comment. A negative score indicates that most people downvoted or disliked your comment.

After you view your comment responses and score, please hit the arrow button to complete a follow-up questionnaire.

Section 2: Questionnaire

Thank you for viewing your comment score and any responses. We ask that you reflect on this score and complete a series of questions.

First, refer to the comment score you received. Please indicate whether the score was positive or negative.

- a) Positive
- b) Negative
- c) I didn't see a score

Please type in your exact comment score, including a negative sign (-) if necessary. You can also estimate your score if you don't recall the exact number (please do not click back on the browser though).

Reflecting solely on your comment score, please address the degree to which you agree with the following statements:

1. I would edit my original comment.
2. I would delete my original comment.
3. I would respond to the comments I received.
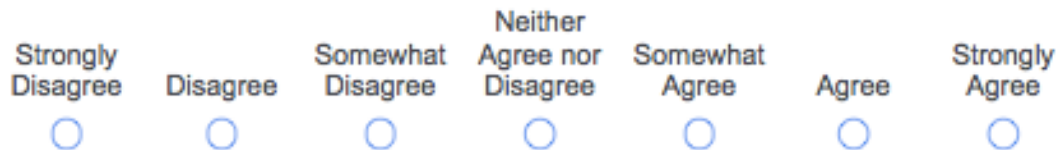
Please describe your general reaction to your comment score. For example, you might be very pleased with your comment score, or on the other hand, may feel confused about why you received a particular score. You can also react to your comments here as well (if you received responses to your comment).

Section 2: Inclusion of the other in the self

Directions: The following picture displays two circles, one representing the "self" and the "other". Self refers to you. The "other" refers to the group of individuals from the discussion board thread **and** the users who responded to you, plus your comment score.
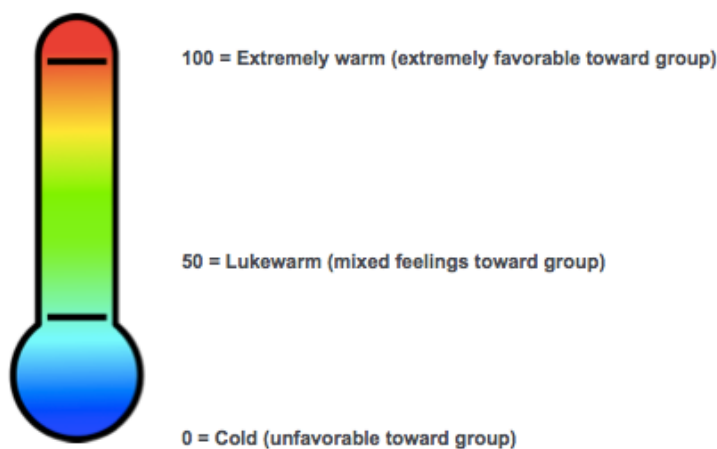
Please indicate which picture best represents your identification with the discussion board group.

For example, let's say you have a liberal political ideology and the "other" represents a group of conservatives, you would probably select a circle that has very little overlap of the self and other.
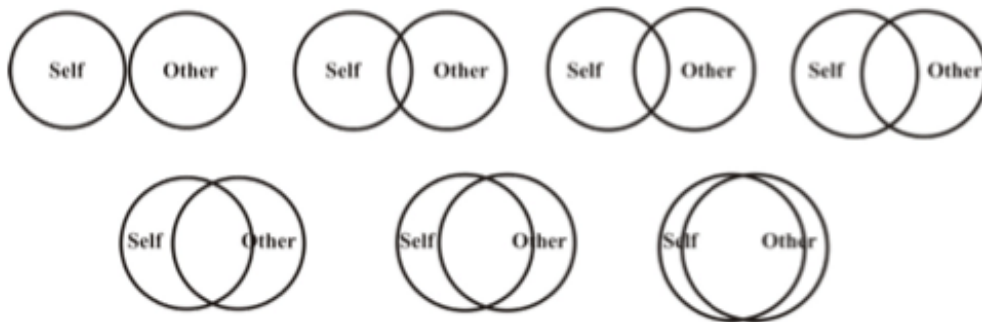
Section 2: Thermometer Scale

Directions: Think about how you feel about the group of users on the discussion board. The group represents all the comments you read (including the one you responded to) **and** the comment score and any responses you received. Please indicate how you feel by entering in one number from 0-100 that matches your feeling toward this group. See the scale below for reference:

100 = Extremely warm (extremely favorable toward group)

50 = Lukewarm (mixed feelings toward group)

0 = Cold (unfavorable toward group)

Section 2: Personal-Enacted Identity Gap

Directions: The following items relate to your own reflection of your comment response and how your comment response reflects your own perception of yourself (i.e., sense of self).You should take into account your comment score (i.e., feedback) you received).

1. Whoever reads my comment response will get to know the "real me".
2. I communicated in ways that were consistent with who I really am.
3. I was completely myself in my comment response.
4. I expressed myself in ways that were not the "real me".
5. I did not reveal important aspects of myself in my comment response.
6. When I was writing my comment, I lost a sense of who I am.
7. I did not express the "real me" when thinking about the expectations of my message.
8. I misled the other discussion board users (i.e., readers) through my comment response.

9. There is a difference between the "real me" and the impression I gave off in my comment response.
10. I spoke truthfully to the other discussion board users about myself.
11. I freely expressed the "real me" in my comment response.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
○	○	○	○	○	○	○

Section 2: Group Evaluation Scale

Directions: The following items relate to your perception of the *group* on the discussion board. The group reflects both the comments you received in section 1, your comment score, and any comment responses you may have received on your post.

1. I highly identified with the group. I felt strong ties with the group.
2. I see myself belonging to the group.
3. I felt annoyed to interact with that group.
4. I shared similar beliefs and attitudes as the group.
5. I was happy to communicate with the group.
6. I liked the group as a whole.
7. The individuals of the group seemed to fit together.
8. I felt strong ties with the members of the group.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
○	○	○	○	○	○	○

Section 1: Enacted-Communal Identity Gap

Directions: The following items relate to how your comment response from section 1 reflects the general group in the discussion board thread and the feedback you received (comment score and any responses). The group refers to all the comments you read in section 1 and the score you received.

1. I feel that the group's comments match well with how I communicated my message.
2. I feel proud to have communicated with this group of users.
3. My message is very different than the other messages on the discussion board.
4. There is a drastic difference between how I see this group and how I communicated my message.
5. I feel that this group represents what I communicated on the discussion board.
6. I believe that this group would support the message that I posted on the discussion board.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
O	O	O	O	O	O	O

Section 2: Discussion Board Items

Directions: The following questions are about your knowledge and usage of the website called reddit.

Are you familiar with reddit? (i.e., Do you use reddit or have you heard of reddit?)

a) Yes
b) No

Would you consider yourself a redditor?

a) Yes
b) No
c) Not Sure

How often do you use reddit?

a) Never
b) Less than Once a Month Once a Month
c) 2-3 Times a Month Once a Week
d) 2-3 Times a Week
e) Daily

Do you use a reddit user name?

a) Yes

b) No
c) Not Sure

How often do you upvote or downvote content on reddit?

a) Never
b) Less than Once a Month Once a Month
c) 2-3 Times a Month Once a Week
d) 2-3 Times a Week
e) Daily

How often do you create a post on reddit?

a) Never
b) Less than Once a Month Once a Month
c) 2-3 Times a Month Once a Week
d) 2-3 Times a Week
e) Daily

Section 2: Demographics

Directions: Please include some general information about yourself.

Your Age

Your Sex

a) Male
b) Female
c) Other

Your Race (e.g., White, Asian)

Race refers to one's physical characteristics that a group shares.

Your Ethnicity

Ethnicity refers to one's culture and traditions.

Are you an American citizen?

a) Yes
b) No

Please type in your nationality

<div align="center">END OF QUESTIONNAIRE</div>

Appendix E: Debrief

The purpose of this research project was to investigate how individuals discuss social and cultural issues in a mediated context; in this case, via a discussion board. The discussion board thread you viewed did not include other participants in the study. While we will be using the data from your comment response, the message you crafted will not be sent to anyone. We ask that you please keep this information confidential and do not let others know about the nature of this study. Thank you!

If you have any questions, please contact Jennifer Kienzle at jenkienzle@gmail.com