### COMPUTER-MEDIATED CELEBRATION: INVESTIGATING HOW COMPUTER-MEDIATED COMMUNICATION INFLUENCES RESPONSES TO CAPITALIZATION ATTEMPTS

By

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### A DISSERTATION

Submitted to Michigan State University in partial fulfillment of the requirements for the degree of

Communication—Doctor of Philosophy

#### ABSTRACT

Capitalization—the process of sharing good news with others to prolong the positive affect generated by the corresponding, news-generating event—has largely been studied from the perspective of those who initiate capitalization interactions-or capitalizers. Although recognized as an interpersonal phenomenon requiring feedback from a relational partner, capitalization research currently favors investigations of the intra- and interpersonal outcomes of the process for capitalizers. This research is also predominately framed by capitalizers' affect sustaining motivations, often overlooking the relational role of sharing good news; something critical to fully understanding the interpersonal outcomes of such interactions. Additionally, despite evidence suggesting contemporary, computer-mediated communication (CMC) channels are a popular venue for capitalization, neither these channels nor CMC theory have been thoroughly incorporated into capitalization research. Looking to address both issues, the present study designed, tested, and implemented a 2x2 experimental test of CMC factors proposed to influence the behaviors and cognitions of capitalization *responders*. Together, the testing of experimental stimuli and the results of the main study provide valuable insights concerning capitalization response quality, responders' experiences of personal engagement with capitalizers, and the perceived relational communication quality of capitalization attempts, resulting in both practical and theoretical implications for capitalization and communication research.

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#### ACKNOWLEDGEMENTS

First and foremost, I would like to acknowledge the members of my dissertation committee, all of whom have provided me guidance not only as committee members but also in different capacities as instructors or research team directors: Dr. Sandi Smith, Dr. Amanda Holmstrom, and Dr. David Ewoldsen. I would also like to specially acknowledge the feedback, advice, patience, and direction of Dr. Brandon Van Der Heide, my dissertation committee chair and doctoral program mentor. Without these individuals, I would not be the scholar I am today.

I would also like to acknowledge the members of my doctoral cohort and those cohorts surrounding it who have provided (and continue to provide) comradery, commiseration, advice, and, most importantly, friendship. Pursuing a doctoral degree is an undoubtedly arduous task, but I imagine doing so without any feeling of connection or community would make it nigh on impossible. So, to AGSCOM, Mandy's Mafia, Brandon's Research Team, The Shrek Hierarchy (the most memorable of our trivia team names, though there were many more), The Presidents Club, the people who enjoyed traveling The Mitten in search of excellent food and brewed beverages, everyone who nerded out with me at MCU movie premiers, the Barbenheimer crew, the tailgaters, the collaborators, the late-night conversators, and the idea generators...I say thank you for everything.

Next, I would like to acknowledge the support of my family (some born but mostly chosen) from Kansas to Illinois to Michigan that have been with me through this process. While exclusion from the following list is not meant as a slight, I do specifically want to acknowledge the love and support of Ryan, Lauren, Jillian, Ian, Caleb, and Becky. This process (not to mention my life) would have been so much different without you all, and I am immeasurably appreciative of the tangible and nontangible things each of you has done to support me and my goals.

iv

Last (and as far from "least" as anyone could possibly get), I would like to acknowledge two people without whom I could not possibly have made it through this process. To my daughter, Autumn, thank you for being a reflection of me; not just of what I am (the good, the bad, the frustrating, and the heartening) but also of what I can be. Being even a semi-adequate parent can be difficult at times, and your insistence that I am actually good at it has pushed me forward so many times when I might have otherwise stopped. To my wife, Chelsey, thank you for loving me and compensating for all I lack. On any given day, I am a strange cocktail of neuroticism, random thoughts, forgetfulness, impulsivity, self-deprecation, and imposter syndrome. Yet, you continue to love and support me all the same. Believing in me is hard to do; I know because I fail at it constantly, but you somehow always succeed. I will never be able to adequately express how much that means. But what I can do is say thank you for all that you have done and continue to do for me.

### TABLE OF CONTENTS

INTRODUCTION & REVIEW OF LITERATURE	1
METHODS & MEASURES	27
RESULTS	43
DISCUSSION	
CONCLUSION	68
BIBLIOGRAPHY	70
APPENDIX A: TABLES	79
APPENDIX B: STIMULI & MEASURES	

#### **INTRODUCTION & REVIEW OF LITERATURE**

Decades of social support research demonstrates myriad benefits resulting from supportive interactions for both support recipients and support providers (see Bodie & Burleson, 2008; Burleson, 2003; MacGeorge, Feng, & Burleson, 2011; Taylor, 2011). Because social support has proven such an essential contributor to individual well-being, the regular use of modern communication technology for the purposes of finding, accessing, and providing social support should come as no surprise. Accordingly, a substantial amount of scholarship has addressed the intersection of computer-mediated communication (CMC) and social support, elucidating the benefits, risks, and nuances of mediated supportive interactions (for review see Rains & Wright, 2016). Regardless the unquestionable utility of investigating support provision during times of adversity, the abundance of this work across contexts underscores the comparatively limited scholarship addressing how people effectively support each other's joy and contentment, a phenomenon known as *capitalization*.

Capitalization refers to the sharing of positive life events with relational partners as a means of extending—or *capitalizing* on—the positive affect associated with said events (Langston, 1994). Research on capitalization addresses how individuals maximize the impact of the positive events and cognitions they experience and how they are supported in those efforts. Thus, with the primary outcome of boosting or sustaining capitalizers' positive affect, capitalization functions as an important complement to traditional social support where, generally, the primary goal is to reduce negative affect and cognitions (Burleson, Albrecht, & Sarason, 1994; Holmstrom & Burleson, 2011).

Just as computer-mediated communication (CMC) provides new channels through which to seek and provide social support (Rains & Wright, 2016), it also offers individuals new

avenues, such as masspersonal social media platforms (O'Sullivan, 2005; O'Sullivan & Carr, 2018), for sharing and capitalizing on their achievements. Additionally, mediated communication channels make more accessible a variety of responses to a partner's capitalization attempts. Despite increased opportunity for computer-mediated capitalization, only two published studies to date, directly and purposefully examine capitalization and capitalization responses in such contexts (Noon et al., 2023; Zell & Moeller, 2018). Considering the information provided here, the present study contributes to both capitalization and CMC scholarship by investigating how responses to capitalization attempts are affected by the mediated channels through which *capitalizers*—or people celebrating and extending positive life events—might share good news. To accomplish this goal, the following sections provide a more detailed overview of capitalization research, address the need for such research in computer-mediated contexts, and offer theoretical frames for investigating the effects of mediation on capitalization.

#### **Conceptualizing Capitalization: From Psychological to Interpersonal Phenomenon**

Langston (1994) first proposed the term capitalization to describe "the process of beneficially interpreting positive events" (p. 1112). Langston argued social support research was focused almost entirely on ameliorating the negative feelings associated with harmful events and cognitions, overlooking that harmful mental states involved not just the presence of negative thoughts and feelings but also the absence of their positive counterparts. In this way, the idea of capitalization is very much tied to the positive psychology movement (see Seligman & Csikszentmihalyi, 2000) founded on the idea that psychology scholarship became overly-devoted to pathology and its treatment while essentially ignoring the positive processes that help individuals thrive. Given evidence supporting the independence of subjectively experienced

positive and negative affect (e.g., Diener & Emmons, 1984; Warr, Barter, & Brownbridge, 1983), understanding how individuals sustain positive affective experiences seems an important facet of supportive interaction. This idea is further supported by investigations of what constitutes a high quality capitalization support message (McCullough & Burleson, 2012) and more recent calls for social support research to incorporate how individuals thrive both by coping with adversity and pursuing fulfillment (Feeney & Collins, 2015). Moreover, research has consistently supported capitalization's link to important intrapersonal outcomes for capitalizers including increased positive affect (Arewasikporn et al., 2019; Langston, 1994; Gable et al., 2004; Reis et al., 2010; Roth & Holmstrom, 2016), improved personal and relational well-being (Pitts & Socha, 2013), greater life satisfaction (Gable et al., 2004), higher self-esteem (Pagani et al., 2015), and more resilient cognitions (Arewasikporn et al., 2019).

Although much research on capitalization has addressed these positive personal outcomes, the *process* of capitalization is an inherently interpersonal action requiring a relational partner (or partners) with whom one can share good news and from whom capitalizers can receive responses. As such, Gable and Reis (2010) proposed a model of capitalization explicitly noting the mechanisms by which it leads to personal and relational outcomes for both interactants, not just the capitalizers themselves. This model extended Gable et al.'s (2004) proposition and validation of a perceived responses to capitalization attempts (PCRA) scale. In developing this scale, Gable and her colleagues proffered responses to capitalization attempts could be placed along two intersecting continua: *active-passive* and *constructive-destructive*. The findings of four independent studies suggested responses which were both active (i.e., engaged, enthusiastic, inquisitive) *and* constructive (i.e., supportive, encouraging) were positively related to the desired outcomes of capitalization while passive and/or destructive messages were

negatively relate with such outcomes (Gable et al., 2004). To further explicate the interpersonal nature of the capitalization process, Peters, Reis, and Gable (2018) formalized the interpersonal model of capitalization (InterCAP). Aside from formalizing a model of how capitalization functions interpersonally, InterCAP was forwarded as a means of highlighting those propositions for which capitalization research had already found support as well as the proposed paths and underlying mechanisms which still required further investigation (Peters et al., 2018). Not all suggestions for future research made by Peters and his colleagues can be addressed by a single study, but the present study utilizes InterCAP to identify and investigate under-explored areas of the capitalization process while also addressing the dearth of computer-mediated capitalization research. Given copyright limitations, the original visualization of this model is not included here but can be found in Peters and colleagues' (2018) original manuscript. An adapted visualization of the specific InterCAP paths investigated in the present study was produced by its author and is provided in Figure 1.

Perhaps the largest gap in the capitalization literature exposed by InterCAP involves research focused on responder-based facets of this interpersonal process. This gap is not surprising considering the foundations of capitalization research as a primarily intrapersonal phenomenon initiated by the individual attempting to capitalize. To that end, much is known about capitalizers' intrapersonal outcomes and the mechanisms by which those outcomes occur (see Arewasikporn et al., 2019; Demir et al., 2019; and Reis et al., 2010). Capitalization research has also started to highlight the interpersonal and relational effects of capitalizer. For example, research demonstrates capitalizers who receive high quality capitalization responses experience increased relational satisfaction (Fivecoat et al., 2015; Gable et al., 2012; Gable et al., 2004,

Logan & Cobb, 2013), improved perceptions of relationship quality (Gable et al., 2006), and greater positive feelings—trust, commitment, intimacy—toward interaction partners (Gable et al., 2004; Reis et al., 2010). In contrast, few studies have examined the intra- or interpersonal impact of capitalization interactions on individuals responding to capitalization attempts *responders*—or the mechanisms related to these outcomes. However, studies involving the collection of dyadic data do indicate responders' personal and relational outcomes may closely parallel those of capitalizers (Kashdan et al., 2013; Monfort et al., 2014; Otto et al., 2015). Further responder-focused research is needed to confirm and extend these findings. In pursuit of this goal and moving beyond the intrapersonal motivations for initiating capitalization exchanges, the present study also considers the relational role played by sharing good news and examines responders' perspectives of the capitalization process, what capitalization message characteristics might affect the quality of response messages they provide, and how they evaluate capitalization exchanges from a relational perspective. The paths of InterCAP on which this study focuses are visually highlighted in Figure 1.

Figure 1. InterCAP Paths Examined in the Present Study



#### **Capitalization in Computer-Mediated Channels**

How capitalization is affected by communication in mediated channels also requires further investigation (Peters et al. 2018). Specifically, Peters and his colleagues make reference to social media-masspersonal, mediated channels supporting communication with audiences of various sizes (Carr & Hayes, 2015)—which provide spaces for sharing good news that are functionally different from the almost exclusively interpersonal, face-to-face (FtF) contexts studied in capitalization research. To date, only two studies appear to have been published specifically investigating capitalization processes on social media (Noon et al., 2023; Zell & Moeller, 2018) with additional studies investigating social sharing of both positive and negative life events online (Choi & Toma, 2014; Vermeulen et al., 2018). In their initial investigation of online capitalization, Zell & Moeller (2018) depart from traditional capitalization research by conceptualizing a participant's online social network as a single responding entity whose collective response to celebratory posts (number of Likes or Comments) would be positively related to the memorability of favorable life events and the affirmative feelings connected to them. The results of their research indicated the aggregate response of one's social network was related to participants evaluations of positive life events with perceived positivity and importance of the life event, self-esteem, and happiness all increasing with the number of total responses received. Additionally, Comments (but not Likes) were found to positively correlate with participants' perceptions that their social network was genuinely interested in and care about their positive life event. Thus, Zell and Moeller's (2018) furthered the findings for previous research identifying that online social sharing of life events (both positive and negative) enhanced salient, event-related emotions (Choi & Toma, 2014). However, Noon and colleagues (2023) found the personal benefits of online capitalization might be short lived, finding no

significant long-term association over the course of several months between frequent online capitalization and life satisfaction. While useful as a first step in investigating computermediated capitalization, these studies primarily emphasize the use of social media, limiting understanding about the extent to which CMC, more broadly construed, might functionally alter the capitalization process. The following paragraphs provide a roadmap for what this broader study of CMC and capitalization might entail.

Of course, the use of Facebook and similar social media for broadcasting celebratory news is undeniably common. Both the author of the present study and its readers can likely recall multiple times in recent memory where they have either shared, or watched friends share, good news via one of many widely available social media platforms. Although the occurrence of capitalization in masspersonal spaces might be considered common knowledge, empirical evidence also supports this claim. First, studies have repeatedly identified *information sharing* keeping friends updated about one's life and keeping up with the lives of friends—as one of the most consistently reported uses for social media platforms (e.g., Joinson, 2008; Quan-Hasse & Young, 2010; Quinn, 2016; Smock et al., 2011; Whiting & Williams, 2013). More directly connected to capitalization, Palmer et al. (2016) found mass-sharing—sharing good news with a large group of people via communication technology—was a regularly reported behavioral response to experiencing a positive life event. Similarly, Vermeulen et al (2018) found adolescents reported regularly sharing both positive and negative life events via various social media. Moreover, responding to good news shared by friends in masspersonal spaces, is common enough that the extent to which one agrees or disagrees with the statement "when I see a friend or acquaintance sharing good news on Facebook, I try to respond" warranted inclusion in the Facebook Relationship Maintenance Behavior Scale (FRMB; Ellison et al., 2014). Taken

together, this evidence clearly indicates capitalization attempts and responses occur on social media. Yet, masspersonal broadcast on social media is not the only mediated means of celebrating good news.

Aside from masspersonal fora like social media, individuals with access to advanced mobile communication devices regularly utilize software applications, or *apps*, which facilitate asynchronous or near-synchronous interpersonal interactions which are either entirely or partially text-based. Like the SMS (short message service), MMS (multimedia message service), or RCS (rich communication service) text messaging software native to almost all mobile smartphones, many popular mobile apps are designed explicitly for communication between dyads and/or small groups (e.g., WhatsApp, Google Chat) while other applications offer bundled access to both masspersonal and direct messaging services (e.g., Facebook, WeChat, Instagram, Snapchat). The development and adoption of these apps and the near-permanent social connection they afford users are integrally linked to the development and adoption of smartphones (Ling, 2017a). As of 2018, 75% or more of adults in South Korea, Israel, the Netherlands, Sweden, Australia, the U.S., Spain, Germany, the United Kingdom, and France reported owning a smartphone (Pew Research, 2019). Given the widespread use of these various communication media, research investigating their impact on the dynamics of group and interpersonal exchanges is increasingly important (e.g., Ling, 2017b; Ling & Lai, 2016; Rettie, 2009; Utz, 2017).

This shift in connectedness and channel variety necessitates more thorough consideration of how researchers can most effectively study the relational impacts of computer-mediated communication. In their respective essays on the future of the field, both Parks (2009) and Carr (2020) explicate that the continued relevance and utility of CMC scholarship rely on addressing

how the process of mediation affects peoples' enactment and interpretation of relational exchanges while eschewing over-concentration of effort on any one platform or device. Moreover, Parks (2017) argues overcoming a single medium approach is particularly necessary when studying modern, mixed-media relationships wherein partners are regularly engaged in communication with one another across a variety of channels, including FtF interaction. Capitalization researchers can benefit from applying this very proposition to investigations of computer-mediated capitalization.

#### (Inter)Personal Effects of Mediation on Capitalization: A Theory-Guided Approach

The proposed intrapersonal function of capitalization—sustaining positive affect for capitalizers (Langston, 1994)—has been largely supported and continues to drive capitalization research (see Peters et al., 2018). Pragmatically, for would be capitalizers, understanding what capitalization attempts inspire the most beneficial responses is important. Considering the inherently interactive nature of capitalization, identifying the relational purpose or function it serves for both capitalizers and responders is important to this goal. The integration of masspersonal communication—the use of "traditionally mass communication channels for interpersonal communication" (O'Sullivan, 2005, p. 5-6)—into individuals' broader relational communication repertoires (Lai, 2019; Liu, Ainsworth, & Baumeister, 2016) is one characteristic of contemporary CMC likely to affect both the personal and relational functions of capitalization. The following sections discuss factors of interest when comparing masspersonal messages to those exchanged interpersonally and offer hypotheses derived from situating capitalization research in a relational CMC context.

Rather than examining the effects of new communication media based on individual channel characteristics, O'Sullivan and Carr (2018) propose a more useful approach may be to

focus on message characteristics rendered more salient by one's choice of communication channel and its subsequent use, something they refer to as the masspersonal communication model (MPCM). Following this logic, the MPCM considers how a message's perceived *accessibility* and *personalization* may vary based on message content and chosen channel of transmission, ultimately affecting how such messages are received and interpreted. Accessibility refers to the number of recipients capable of viewing a message, while personalization indicates the extent to which a message is tailored to a certain recipient or recipients.

The present study utilizes an MPCM lens to examine how the perceived accessibility and personalization of mediated capitalization attempts affects the quality of capitalization responses rendered by responders and their assessment of interaction characteristics important to maintaining relationships. To accomplish this task, the previously mentioned masspersonal and interpersonal mediated forums where capitalization might occur are discussed in MPCM terms. However, one assumption about the perceived accessibility of messages in these contexts deserves explicit attention. Messages in almost all computer-mediated contexts are subject to *platform collapse* (Bigman et al., 2022) a process wherein "digital documentation enables transfer of digital content from one platform and audience context to another, dislocating the content from discourse architectures on the originating platform, including those that affect communication visibility" (p. 8). Simply put, information shared digitally can be replicated through device features such as *screen capture* and subsequently shared with groups or individuals who were not intended recipients. However, the communicative acts which contribute to platform collapse occur externally to the original interaction and, arguably, constitute a unique communication behavior in and of themselves. As such the occurrence and ramifications of platform collapse are beyond the scope of the present study, and the following

section discusses accessibility only in terms of a message's initially intended or perceived recipients.

#### Social Media Messages (Masspersonal Messages)

Many social media encourage sharing information broadly with users' social networks via personally managed profiles and digital storyboards (e.g., Facebook, Instagram, Snapchat, Twitter). These social media now also regularly provide tools which can be used to manage group chats or send private messages to other users. However, the messages broadcast in network-facing social media posts are referred to here as social media messages (SMMs) because such messages are a unique, defining characteristic of social media (Carr & Hayes, 2015) and the focus of previous propositions concerning the impact of social media on capitalization (Peter et al., 2018; Zell & Moeller, 2018). The general purpose of SMMs is to distribute personal and social information *en masse*. But, personalizing such broadcast messages to certain users is also possible using verbal content typical of a particular dyad and/or tagging other social media users who are subsequently informed by the software/system of their explicit mention in the SMM. Despite possible fluctuations in message personalization, SMMs should be considered highly accessible as they are capable of being viewed simultaneously by hundreds of other individuals if not more, limited only by the size of one's social media network.

#### Direct Messaging (Interpersonal Messages)

Direct messages are sent from one individual to another in a forum which is ostensibly only viewable by the interacting dyad. Thus, these messages should be perceived as having very low accessibility. But, by itself, the low accessibility of direct messages does not guarantee personalization. It is possible that the text or other content of a sender's direct message could itself be a copy of something previously or simultaneously sent to other individuals. More

personable and/or dyadically unique language choices and specific use of the recipient's name could indicate an increased level of personalization or provide assurance to the recipient that the message was, indeed, written uniquely for them.

# Does How You Share Determine How Much Others Care: Capitalization Responses, Diffusion of Responsibility, and Relational Contextualization

As previously noted, capitalization is foundationally viewed as a complement to social support research, both phenomena stemming from a desire or need for help in managing one's own affections and cognitions. And, as is true of traditional social support provided in times of need or in response to explicit requests for help (High & Dillard, 2012), the responses provided to capitalization attempts—commonly referred to in the support literature as *capitalization* support—are of central importance to this pursuit. Previous research demonstrates that all capitalization responses are not equal. Specifically, only capitalization responses which are both active (involved and enthusiastic) and constructive (supportive and uplifting) make positive contributions to the affect extension goals of capitalizers (Gable et al., 2004). Additionally, in their initial investigation of capitalization on social media, Zell and Moeller (2018) found support for propositions predicated on the idea that low-investment, mediated responses (i.e., giving someone's Facebook post a Like or React)-also known as paralinguistic digital affordances (PDAs; Hayes, Carr, & Wohn, 2016)-would be poorer predictors of positive capitalization support outcomes than would more involved responses (i.e., typing an individual reply, or *Comment*, in response to someone's social media post). While research has acknowledged the occurrence of capitalization in different contexts and the variability of capitalization responses within those contexts, no extant research examines capitalization responses comparatively across different, conjointly present communication contexts. Given the

increased prevalence of relationships routinely conducted through multiple communication media and calls for research examining interactions in these relationships (Parks, 2017), the present study investigates fluctuations in capitalization response quality related to differences in the verbal and contextual qualities of capitalization initiation messages, such as perceived accessibility and perceived personalization, possible across a variety of communication channels used by relational partners.

#### Perceived Accessibility and Response Quality

Having defined how the perceived accessibility of capitalization attempts might vary across different mediated channels, the present study proposes diffusion of responsibility (DoR; Darley & Latané, 1968) as a means of predicting the impact of this variable on the quality of responses received by masspersonal versus interpersonal mediated capitalization attempts. Diffusion of responsibility was originally proposed as an explanation for why bystanders might choose to intervene (or not) when witnessing another individual in distress. In particular, the infamous 1964 assault and murder of Kitty Genovese in New York City, is among the incidents which prompted this line of inquiry (Darley & Latané, 1968). Despite the prolonged nature of the attack and several individuals admitting they had witnessed at least part of the attack from their homes, intervention was limited and physical assistance for Kitty was fatally delayed. Contrary to a then prevailing narrative that societal decline in urban areas was responsible for the lack of timely intervention, Darley and Latané (1968) posited it was the number of witnesses and their awareness of one another that undermined swift intervention. They argued the knowledge that others *could* help meant providing help was not the responsibility of any one observer and bearing any blame resulting from inaction would also not fall on a single observer.

Although proposed as a singular process, DoR is now recognized as one of multiple, inter-related processes that contribute to a broader social psychological phenomenon known as the bystander effect. (Latané & Darley, 1970) which has received support and extension from decades of subsequent research (for review see Fischer et al., 2011). While much of the research concerning DoR as an explanation for human behavior appears to focus on the recognized presence of others (Liu, Liu, & Wu, 2022) other explanations have also been forwarded noting the ambiguity of *what* response is expected and from *whom* may also play a role in why individuals are reluctant to provide help in more public situations (Latané & Nida, 1981). Even isolated from the complexity of the bystander effect of which it is a part, DoR itself is still of central importance for explaining socially driven intervention reticence. This assertion is true of the emergency situations to which DoR was initially applied as well as less immediate, less dire, and less emergent situations (Fischer et al., 2011) such as bystanders speaking-up when others are the target of sexist remarks (Swim & Hyers, 1999) or adult children providing prolonged athome care for elderly parents (Van Den Broek & Dykstra, 2017).

Germane to the present study, Cutrona and Cole (2000) note DoR is particularly relevant to understanding the mobilization of broadly defined social support in much the same way it is useful to understanding the provision of tangible, physical assistance in an emergency. As such, DoR has been forwarded as an explanation for why individuals might choose to provide or not provide various forms of social support (Shumaker & Brownell, 1984) and has also been applied to mediated communication contexts. For example, Barron & Yechiam (2002) found email requests for information at work received higher quality responses when supposedly sent to a singular coworker rather than a visible email list of multiple coworkers. Martin and North (2015) expanded the application of DoR to social networking sites finding the number of individuals

virtually present when a request was seen and the amount of time that had passed since the request was made impacted the likelihood that assistance would be offered.

Like requests for traditional social support, capitalizers are asking for "help" feeling better about good events. As a process, capitalization assumes, at the very least, an anticipated response from the relational partner with whom an individual is sharing good news. This response is anticipated regardless of whether the call for capitalization support is explicitly requested (e.g., "would you like to help me celebrate my promotion?") or more implicitly stated (e.g., "I just got a promotion! Time to celebrate!"). The verbal content of a capitalization message aside, the choice to initiate a capitalization interaction with an SMM or direct message influences (a) who can see the message, (b) from whom a response is likely or expected, and (c) a message recipient's awareness of other recipients with the ability to respond (something particularly important concerning application of a DoR framework). Considering the variability of capitalization responses, the overarching proposition of the DoR framework, and its previous application to messages differing in perceived accessibility (e.g., Barron & Yechiam, 2002), the following hypothesis is offered concerning the initiation of capitalization using either masspersonal SMMs or direct messages:

*H1:* A main effect exists for the perceived accessibility of capitalization messages such that more accessible messages receive lower quality capitalization responses than do less accessible messages.

#### Perceived Personalization and Response Quality.

Independent of perceived accessibility, perceived personalization of capitalization initiation messages should also influence response quality. Miller and Steinberg (1975) proposed communication arises from the information we have about would-be interaction partners and the

information needed for making accurate predictions and decisions about how to interact with them. These scholars further proffer *interpersonal* communication requires interacting with partners utilizing *psychological level information* about them, or information unique to them and/or derived from knowledge of their idiosyncratic life experiences. In fact, foundational theories regarding the development and maintenance of interpersonal relationships such as uncertainty reduction theory (URT; Berger & Calabrese, 1975) and social penetration theory (SPT; Altman & Taylor, 1973) are built around the exchange of such information. But just as CMC has altered *how* individuals gather information about each other (Ramirez et al., 2002), it has also prompted reconsideration of *what* information is most helpful to relational partners as they attempt to effectively understand and navigate their interpersonal relationships. Given the substantial amount of psychological level information about many individuals readily available online through masspersonal communication channels, Walther (2019) advocates for the idea that interpersonal relationships may best be understood through interpersonal knowledge information which speaks to the unique interactions of two partners in reference to one another, contextualized in their specific relationship—rather than psychological level information alone.

Following this logic, regardless the perceived accessibility of a computer-mediated message, any quality of that message seen as invoking personal or interpersonal knowledge about the sender should influence subsequent interactions between that sender and a receiver. In other words, messages viewed by recipients as more personalized should ultimately inspire more personalized responses. In reference to capitalization messages across mediated contexts, capitalization initiation messages personalized to a single recipient should indicate a sender's desire to celebrate good news in a unique and specific way with the individual for whom it was personalized. Consequently, the recipients of messages personalized for them, whether it be by

name or through idiosyncratic interaction patterns, should be more likely to provide the types of engaged and enthusiastic capitalization support messages needed for positive capitalization outcomes (Gabel et al., 2004; McCullough & Burleson, 2012). Thus, the present research proposes the following:

*H2*: A main effect exists for the perceived personalization of capitalization messages such that less personalized messages receive lower quality capitalization responses than do more personalized messages.

#### The Interaction of Perceived Accessibility and Personalization on Response Quality

Opposing relational forces drive the theoretical mechanisms used here to predict the separate effects of message accessibility and message personalization on response quality in mediated capitalization interactions. However, rather than fluctuating entirely in tandem with one another, the MPCM (O'Sullivan & Carr, 2018) suggests these message qualities can vary independently of one another in mediated contexts. For example, a social media message is, as a consequence of broadcast distribution, highly accessible. But a sender's control of their message's verbal content and their ability to directly signal a message's most consequential recipients (i.e., tagging a friend in the social media post) can still produce fluctuations in message personalization. In the case of message accessibility and DoR (Darley & Latané, 1968), the presence of multiple others capable of seeing a message should mitigate the importance of feedback from any single respondent, effectively demotivating the provision of higher quality response messages. But if DoR is reliant also on the ambiguity of expected response or expected responders (Latané & Nida, 1981), increased message personalization could reduce or even eliminate such ambiguity by calling out a particular responder in the crowd. Basically, personalization should evoke a level of connection between two relational partners and

consequently illuminate the importance of that single recipient's participation in the capitalizer's revelry even when the message is broadcast in a more public forum. So, while message accessibility alone may obscure the interpersonal importance of capitalization interactions, message personalization could function as a beacon to help intended recipients recognize the importance of their unique response. Alternately stated, the present study proposes:

*H3*: An interaction effect exists between the perceived accessibility and perceived personalization of capitalization messages on response quality such that increased message personalization mitigates the effects of high accessibility on response quality.

# Does How You Share Demonstrate How Much You Care: Responders' Relational Evaluations of Capitalization Exchanges.

InterCAP (Peters et al., 2018) advocates for a model of capitalization research inclusive of the process's action-oriented components (i.e., the exchange of initiation and response messages) as well as its interpretive, relational components (e.g., the intrapersonal and interpersonal outcomes and evaluations of a capitalization exchange from the perspective of each partner). Unraveling what capitalization message characteristics inspire the most favorable responses deserves attention considering the intrapersonal goals proposed to drive the process (Langston, 1994). However, the intrapersonal rewards of capitalization alone seem an insufficient explanation for why individuals often expressly seek out close friends, romantic partners, and family members as capitalization partners as opposed to less close individuals. Opportunities for would-be capitalizers to share their good news with one or more strangers or loose acquaintances certainly exist and appear to be regularly utilized (Palmer et al., 2016). Moreover, the limited evidence available directly addressing capitalization via social media (Zell & Moeller, 2018) aligns with the proposition that celebrating good news with a large group

composed of both close and non-close relational partners is still capable of extending a capitalizer's positive affect given the appropriate response. But these findings do little to elucidate the relational impacts of capitalizing masspersonally on discrete interpersonal relationships conducted across a wide array of mediated communication channels. The preceding section demonstrated how the basic propositions of the MPCM can be used to hypothesize about action-oriented facets of computer-mediated capitalization interactions. The following section addresses the relational function of capitalization in friendships and posits how the MPCM may also prove useful for predicting the relational impacts of capitalization exchanges from the responder's perspective.

#### Capitalization: an important friendship maintenance behavior

Before Langston's (1994) coining of the phrase capitalization, sharing good news was identified by Argyle and Henderson (1984) as a key factor in the successful maintenance of friendships. In trying to codify the rules of friendship, Argyle and Henderson conducted four studies designed to identify and test the importance of different friendship behaviors. Only 6 of the originally generated 43 rules fulfilled all the criteria assessed between studies as they (a) were rated as important for friendship, (b) distinguished current and lapse friendships, (c) indicated different levels of friendship, and (d) were endorsed as important in the dissolution of friendships. Sharing news of success was one of these six rules. Capitalization appears then to satisfy many important functions in the maintenance of interpersonal friendships.

Having identified capitalization's importance to maintaining interpersonal relationships, consideration should also be given to how relationship maintenance processes may be functionally affected by partners' use of CMC. Vital scholarship pertaining to relational development via CMC contemplates how the process and prevalence of computer-mediation

disrupts broader communicative factors—amount/variety of information contained in a message (Daft & Lengel, 1986), chronemic cues (Walther, 1992; Walther & Burgoon, 1992), feelings of community (Baym, 1998), information veracity (DeAndrea & Carpenter, 2018; Walther & Parks, 2002); ways of encoding and decoding messages (Walther, 1996), number of channels used to communicate between partners (Haythornthwaite, 2005), and perceptions of partner availability (Vorderer et al., 2016; Utz, 2018)—which are important to establishing relationships. Likewise, CMC scholars have noted this same approach is essential for further advancing relational CMC research generally (Carr, 2020; Parks, 2009; Walther, 2017; Walther & Ramirez, 2009) and computer-mediated relationship maintenance research specifically (Mason & Carr, 2022; Tong & Walther, 2011).

While CMC, in many instances, strips messages of *traditional* nonverbal cues (see Culnan & Markus, 1987), it certainly does not render messages devoid of information external to their explicit verbal content. Mason and Carr (2022) call attention to this concept when illustrating how foundational relational communication theories focused on information exchange between partners can be extended to aid in understanding the effects of CMC on relationship maintenance. Accordingly, these scholars identify multiple features of contemporary CMC likely to affect exactly what information is being exchanged between relational partners and how that information is understood and used in perpetuating established interpersonal connections. Three of these features—the nature of disclosures, utilizing the tools provided by masspersonal communication channels, and feelings of psychological closeness—are applied below to contemplating the information which message recipients may derive from the perceived accessibility and perceived personalization of different computer-mediated capitalization attempts.

#### Perceived Accessibility and Responders' Relational Evaluations

Other than the information personal disclosures directly provide about their sender, Mason and Carr (2022) theorize interactants also ascertain important information about their relationship based on the type of disclosure made and the channel used to make it. Although much of the information exchanged between two relational partners contributes to the same goal-maintaining the desired level of connection and interdependence-not all of that information is equally important to developing or sustaining close relationships (Altman & Taylor, 1973). Duck (1988) notes "the maintenance of relationships is accomplished by a complex combination of individual strategic inputs, mundane properties, social pressures, ritual actions that celebrate the relationship, personal attention to partner's needs, adherence to relational rules, and social skills, amongst other things" (p. 100); each item making its own contribution to partners' evaluations of one another and their relationship. Keeping in mind Duck's (1988) assertions and the previously discussed findings of Argyle and Henderson (1984), the present study proposes capitalization exchanges, in addition to sustaining capitalizers' positive affect, functionally communicate adherence to a relationship rule identified as important to those hearing the good news (i.e., responders or potential responders). Sharing news of success is elevated as a key friendship rule because of the multiple functions it performs, one of which is distinguishing the level of closeness between two friends (Argyle & Henderson, 1984).

Because news of a friend's success is often shared with and known by multiple parties, a reasonable assumption can be made that what makes capitalization important to discerning different levels of friendship is not simply that the information is shared but *how* it is shared and *why* it was shared in a particular way. For example, imagine a friend has very recently become engaged. In time, family members, friends, and even coworkers will come to know this

information. The friend could seek you out to share the news, they might mention the engagement during a chance meeting, they may send a save-the-date, or they may inform mutual friends knowing the information will eventually make its way to you as a member of a particular social circle. In each of these scenarios, you are provided information that your friend is now engaged, allowing them to fulfill, in a very basic sense, the friendship rule of sharing good news. But, in each of these scenarios, the way your friend disseminates the news yields additional information about how your friend views their relationship with you, where they place you in the hierarchy of their various relational partners. As is the case with activating the diffusion of responsibility (Darley & Latané, 1968), what generates the additional relational information in each scenario is not the unavoidable fact that others will (or already do) know the good news but your pronounced awareness that others' receipt of the news occurred concomitant with, or even prior to, your own. In other words, you derive relational information from both what information should be shared between friends—capitalization as a friendship rule—and perceived access to the information at the time it was received. Considering differences in the perceived accessibility of interpersonal and masspersonal mediated capitalization attempts discussed previously, the present study offers the following hypothesis concerning message recipients' relational evaluations of such capitalization messages:

*H4*: A main effect exists for the perceived accessibility of capitalization messages on relational evaluations of capitalization exchanges such that exchanges involving more accessible messages are evaluated as being (a) less interpersonally engaging and (b) lower in relational communication quality than exchanges involving less accessible messages.

#### Perceived Personalization and Responders' Relational Evaluations

Separate from perceived accessibility, perceptions of message personalization should also influence the relational evaluations responders attribute to mediated capitalization exchanges. Message personalization, or tailoring messages to a particular receiver, has been, and continues to be, an important variable in persuasion and influence research which attempts to sway behavior and/or cognitions by distributing typically one-way, directed messages (e.g., Haumer et al., 2021; Hirsh, Kang, & Bodenhausen, 2012; Noar, Harrington, & Aldrich, 2009; Pope, Pelletier, & Guertin, 2018). But this message characteristic has received little attention in the realm of relational communication research. This scarcity of targeted research has likely been driven by a presumption that *interpersonal* communication is intrinsically *personalized* communication and not a belief that personalization is unimportant to relational communication. As O'Sullivan and Carr (2018) note, "by traditional definition and common practice, interpersonal messages are highly personalized for the receiver" (p. 1166), meaning the prevailing assumption in relational communication research is that messages exchanged interpersonally are, by default, personalized to a single recipient. However, CMC has called into question the certainty of this pairing. Although a communication exchange between two individuals may be interpersonal—occurring between two persons exchanging personal and relational information—no guarantee exists that the verbal content of the messages traded is tailored to each individual by the other. Consider the following interaction between person A and person B. Person A decides to text person B about a raise they received at work. To do this, A copies a message they previously sent to someone else saying "Excellent news! I just got a raise!!" and sends it, unaltered, to B. When B receives the message, they choose to reply quickly using a response suggestion generated by their messaging app which says "Congratulations!

That's great!". In this scenario, A and B engaged in a mediated, interpersonal capitalization exchange, but neither A's message to B nor B's response to A were tailored to their respective recipients.

In so far as routine interactions can contribute to the maintenance of a relationship (Duck, 1988), the exchange illustrated above is likely to be received positively by both parties. Yet, on account of capitalization's proposed tie to friendship differentiation (Argyle & Henderson, 1984), a responder who considers themselves a close friend of the initiator may interpret this exchange less positively because it lacks the personalization they have come to expect based on previous interactions and an assumption of close relationship status. Basically, the less-thanpersonal nature of the initial message contradicts a specialized function of the capitalization process which speaks to a stronger relational bond. While extant research indicates psychological feelings of connection and closeness to a relational partner are possible even when exchanging simple bits of information, it also alludes to these perceptions of closeness being reliant on a previously established relationship with its own communication conventions invoked by the exchange (see Mason & Carr, 2022). Regardless of if they are shared dyadically or broadcast to one's entire social network, impersonal messages, by definition, contravene the novelty of the relationship established between a sender and a receiver. Given the uncoupling of personalization and accessibility more readily available in CMC, the present study proposes the following:

*H5*: A main effect exists for the perceived personalization of capitalization messages on relational evaluations of capitalization exchanges such that exchanges involving less personalized messages are evaluated as being (a) less interpersonally engaging and (b)

lower in relational communication quality than exchanges involving more personalized messages.

## The Interaction of Perceived Accessibility and Personalization on Responders' Relational Communication Evaluations

In much the same way that a dyadic exchange between relational partners does not guarantee the personalization of the messages exchanged therein, broadcasting messages via masspersonal communication channels does not mandate those messages be impersonal. Social media—the premier fora for masspersonal interaction—are regularly used by individuals to maintain established relationships (Liu, Ainsworth, & Baumeister, 2016), but more than simply allowing individuals to stay connected, these channels almost universally allow for public displays of connection—features which highlight exactly who is connected to whom (Donath & boyd, 2004). Aside from passive displays of connection, social media also afford users the ability to call direct attention to their connection with specific relational partners when posting masspersonal messages. Essentially, individuals can boost the personalization of highly accessible messages by focusing attention on a single recipient among the crowd of other users who also have access to the message.

In the case of capitalization messages, sharing masspersonally is helpful for capitalizers who wish to activate capitalization support from as many individuals in their social network as possible. This practice might have unintended relational consequences though if close friends believe their relationship with the capitalizer merited a less accessible and/or more personalized exchange of important celebratory information. Underscoring their connection to important others while sharing masspersonally could allow capitalizers to mitigate or avoid any negative

relational consequences resulting from the choice to initiate capitalization using a more accessible message. Stated alternately, the present study advances the following hypothesis:

*H6:* An interaction effect exists between perceived accessibility and perceived personalization on relational evaluations of capitalization exchanges such that increased message personalization mitigates the effects of increased message accessibility on evaluations of (a) interpersonal engagement and (b) relational communication quality.

#### **METHODS & MEASURES**

The IRB at the author's current institution determined the experimental protocol described herein to be exempt. The study was conducted in two parts: (a) a pre-test for assessing proposed measures and stimuli, and (b) a main study to conduct hypothesis testing. Each of these parts is discussed further in the following section.

#### **Scale and Stimulus Pre-Testing**

A pre-test was conducted to evaluate measures and stimuli messages created for the main study. Specifically, self-report measures of perceived *message personalization*, perceived *message accessibility*, and anticipated capitalization *response quality* were examined alongside previously tested measures of *relational closeness* (Unidimensional Relationship Closeness Scale; URCS; Dibble, Levine, & Park, 2012) and *message realism* (Shebib et al., 2020). An explanation of each measure designed for the present study and their corresponding scale items is provided in the following section. The pre-test was also used to assess the extent to which potential stimulus messages were recognized as being different in accessibility (low v. high) and personalization (personalized v. non-personalized). The messages were written for a 2 (phrasing: dynamic v. plain) x 2 (personalization: participant name v. broad audience reference) x 2 (accessibility: low v. high) matrix. Dynamic phrasing was intended to make messages already personalized using participants' names appear more conversational and interpersonally unique, which could theoretically impact perceptions of message personalization (Walther, 2019). A full list of pre-test stimulus messages is provided in Table 1 (Appendix A).

#### Study Specific Measures

Message Personalization. In describing personalization as part of the MPCM, O'Sullivan and Carr (2018) state it is "the degree to which receivers perceive a message reflects

their distinctiveness as individuals differentiated by their interests, history, relationship network, and so on" (p. 1166) and "whether a disclosure appeared to be tailored toward an individual and specific participant" (p. 1166). Using these descriptions, 10 items were generated for the pre-test measure of perceived message personalization. A full list of these items can be found in Table 2 (Appendix A).

**Message Accessibility.** O'Sullivan and Carr (2018) note that the perceived accessibility of a message exists on a continuum with low accessibility messages being "accessible only by a single individual other than the originator" (p. 1165) and the highest accessibility messages being "accessible by anyone and everyone" (p. 1165) Using these descriptions, 10 items were generated for the pre-test measure of perceived message accessibility. A full list of these items can be found in Table 2 (Appendix A).

**Response Quality.** Currently, no standard self-report measure of anticipated capitalization response quality designed to be assessed by responders has been established. The present study drew on previous research to generate such a scale. Much of the contemporary research concerning responses to capitalization attempts emphasizes the two-dimensional structure of active-passive and constructive-destructive responses forwarded by Gable et al. (2004) in developing the PRCA scale. Gable et al. (2004) found that of the four categories of messages resulting from the intersection of their proposed continua, only active-constructive responses—responses seen as enthusiastic, involved, and effortful—were consistently associated with the most favorable outcomes for capitalizers, a benchmark supported by subsequent research (e.g., Gable et al., 2012; Reis et al., 2010; Reis et al., 2022). Similarly, communication researchers have evaluated the quality of capitalization responses by how explicitly they (a) affirm and reciprocate the emotions of the capitalizer; (b) encourage capitalizers to elaborate

about the good news; and (c) invite continued celebration (McCullough & Burleson, 2012). So, the extent to which a response is active-constructive (or not) and demonstrates investment in the capitalizer's celebration (or not) should offer a reasonable approximation of response quality. To keep the measure comprehensive but brief, 5 scale items were generated focusing on participant thoughts and behaviors that could indicate fluctuations in response effort, elaboration, and enthusiasm inclusive of behaviors unique to text-based interpersonal and masspersonal channels. Along with the items generated by the author, the measure also included items from the active/constructive subscale of the PRCA scale (Gable et al, 2004) revised to be answered from the perspective of the responder. This resulted in 8 total statements used as scale items which were evaluated by participants using a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). A full list of these items can be found in Table 2 (Appendix A)

#### **Participants**

Using Prolific participant recruitment services, data was collected from participants (N = 243) who consented to take part in an online experiment administered via Qualtrics survey software. In total, 11 cases were excluded from analysis as they failed one of two manipulation checks embedded in the study (n = 5) or were found to have missing data points (n = 6). This exclusion resulted in data from 232 participants (N = 232) being used to conduct an initial analysis of the measures and messages presented in the pre-test. Participants identified as male (n = 87, 37.5%), female (n = 127, 54.7%), and non-binary (n = 15, 6.5%) with the remaining participants preferring not to answer (n = 3, 1.3%). Participants ranged from 18 to 35 years of age (M = 27.10, SD = 4.57) with one individual declining to provide their age and identified primarily as White (n = 156, 67.2%), followed by Latinx (n = 21, 9.1%), Black (n = 20, 8.6%), APIDA (n = 20, 8.6%), and multiple races and/or ethnicities (n = 15, 6.5%).

#### Procedure

Once participants read and agreed to the statement of informed consent for the pre-test, they were asked to provide their first name and the first name of a *close friend* to individualize various survey elements and focus their attention on an exchange with a single communication partner. A definition of close friend (derived from Parks & Floyd, 1996; available in Appendix B) was provided to participants for clarification of what was meant by the term. In-line with the main study, participants were then prompted to imagine their close friend had recently been applying for new jobs related to their current or desired career<sup>1</sup> and had good news to share. After describing the scenario to participants, the survey randomly assigned them to one of eight experimental conditions where they were exposed to one message from the 2 x 2 x 2 capitalization initiation message matrix described earlier and available in Table 1 (Appendix A). Following exposure to a capitalization initiation message, participants were asked to respond to various scale items measuring the present variables of interest. Finally, participants were asked to provide basic demographic information prior to finishing the study.

#### Item Analysis

A full measurement model was constructed and tested using Maximum Likelihood Confirmatory Factor Analysis in SPSS AMOS 29. Using multiple fit indexes and the proposed cutoff values for those indexes established by Hu and Bentler (1999), the initially proposed model which included all scales items used in the pre-test demonstrated poor model fit ( $\chi^2 =$ 1707.51, chi-squared *df* = 809, TLI = .877, CFI = .884, RMSEA = .069). The first step in improving model fit was to eliminate items with error terms found to covary substantially with

<sup>&</sup>lt;sup>1</sup> The job scenario was chosen for the present study based on a study previously conducted by the author. The previous study used 3 different, yet similarly important, capitalization scenarios as a factor of the experimental induction, resulting in no statistically significant differences between groups based on scenario alone. Of those 3 scenarios, the job scenario was determined to be the most broadly applicable, leading to its present use.
the error terms of other scale items, resulting in a model which demonstrated improved, though still unacceptable, model fit ( $\chi^2 = 864.59$ , chi-squared df = 517, TLI = .934, CFI = .939, RMSEA = .054). Next, remaining items with factor loadings below .65 were removed from the measurement model. The resulting model demonstrated good model fit using Hu and Bentler's (1999) proposed cutoff values for multiple fit indexes ( $\chi^2 = 490.99$ , chi-squared df = 290, TLI = .955, CFI = .960, RMSEA = .055). Finally, to minimize the number of items used to conduct manipulation checks in the final experiment, the remaining scale items for message accessibility, message personalization, and relational closeness were revisited. With the message response scale having 4 items and the realism scale consisting of 2 items, the choice was made to limit the remaining scales to 5 items each. All items in the previously acceptable model demonstrated adequate factor loadings, but with a number of items demonstrating identical factor loadings, simply keeping the items with the highest factor loadings would have involved an arbitrary item choice in some instances. Thus, to reduce the arbitrary nature of item selection, the remaining scale items for each of the 3 measures were revisited using face validity as a determining factor. The 5 items for each scale determined by the researcher to have the highest face validity with the conceptualization of their corresponding variable were kept. The resulting model also demonstrated good model fit using Hu and Bentler's (1999) proposed cutoff values for multiple fit indexes ( $\chi^2 = 304.31$ , chi-squared df = 180, TLI = .963, CFI = .968, RMSEA = .055). A full list of final scale items, the calculated reliability scores for each scale, and factor loadings for each item retained for further analysis is located in Table 3 (Appendix A).

### Message Analysis

After conducting the ML-CFA, the eight pre-test stimulus messages were examined for differences in message personalization, message accessibility, and realism. Concerning message

personalization and accessibility, the following analyses were conducted to assess the extent to which manipulations of these two variables were successful or unsuccessful. Message realism for each condition was tested prior to manipulation efficacy as a means of verifying that the stimulus messages were evaluated as equally realistic and believable between groups. Equivalent evaluations of message plausibility would suggest the mixture of content and context provided did not make any one condition stand out as any more or less believable than the others. A oneway analysis of variance (ANOVA) indicated there was no statistically significant difference between groups on message realism, F(7, 224) = 0.80, p = .587. These results suggested the messages were seen as equally realistic.

Next, a two-way, univariate ANOVA was used to test whether message phrasing enhanced the perceived personalization of capitalization initiation messages referencing participants by name. Message phrasing (dynamic v. plain) and name-based personalization (participant name v. general audience reference) were set as fixed factors, and perceived message personalization was set as the dependent variable. Message phrasing was specifically posited to enhance the personalization of messages already addressing the participant by name. To justify the use of dynamic phrasing as a means of enhancing personalization in personalized message conditions, results would need to demonstrate (a) the phrasing did have a measurable effect on ratings of perceived personalization (main effect) and (b) a more pronounce effect on this variable for messages already personalized using the participant's name compared to those which were not (interaction effect). The 2 x 2 ANOVA revealed a statistically significant main effect on perceived personalization for both message phrasing, F(1, 228) = 16.373, p < .001,  $\eta^2 = .041$ , and name-based personalization, F(1, 228) = 156.880, p < .001,  $\eta^2 = .392$ . However, the interaction of message phrasing and name-based personalization failed to produce a statistically significant effect on perceived personalization, F(1, 228) = .152, p = .697. Given the lack of an interaction effect between the two factors and the effect size for name-based personalization being over nine times larger than the effect size for message phrasing. These results were interpreted as not supportive of using participants' names and dynamic message phrasing, in tandem, as an effective means of maximizing perceived personalization. As such, it was decided the main study would use plainly phrased stimulus messages and manipulating message personalization only by including the participant's name or a broad, non-specific audience reference—in this case, the phrase "for everyone"—in otherwise grammatically and syntactically identical messages.

Next, to test for main and interaction effects of name-based message personalization (name v. non-specific audience reference) and message accessibility (low v. high) on their respective anticipated outcome variables, a two-way, multivariate analysis of variance (MANOVA) was conducted using data from plainly phrased message conditions. Name-based message personalization and message accessibility were set as fixed factors, and perceived message personalization and perceived message accessibility were set as dependent variables. On perceptions of message personalization, the 2 x 2 MANOVA revealed a statistically significant main effect for personalization, F(1, 111) = 84.300, p < .001,  $\eta^2 = .42$ , and no statistically significant main effect for message accessibility, F(1, 111) = 1.529, p = .219 or the interaction of the two factors, F(1, 111) = .541, p = .464.

On perceptions of message accessibility, the 2 x 2 MANOVA revealed a statistically significant main effect for accessibility, F(1, 111) = 37.195, p < .001,  $\eta^2 = .16$ , but also a statistically significant and larger main effect for message personalization, F(1, 111) = 67.637, p < .001,  $\eta^2 = .28$ , and an interaction effect for the two factors, F(1, 111) = 28.130, p < .001,  $\eta^2 = .28$ 

.12. This result was unexpected given the respective, identical contexts referenced in low accessibility conditions (direct messages) and high accessibility conditions (social media messages). To further decompose the observed interaction effect, a one-way ANOVA was conducted with message condition set as the fixed factor and perceived message personalization and perceived message accessibility set as dependent variables. Table 4 (Appendix A) highlights the statistically significant differences between groups based on the results of these analyses.

The nature of the interaction between the two factors suggested the chosen manipulation of personalization—including the participant's name in the message versus using the general audience indicator "for everyone"-influenced participants' subjective evaluations of message accessibility for messages in the low accessibility condition but not in the high accessibility condition. Revisiting the name-based personalization manipulation, the researcher considered how the use of "for everyone" to signal a non-personalized message in the low accessibility condition (direct message) might allow for unintended interpretations. For example, participants in the low accessibility condition may have interpreted the phrasing "for everyone" as a sign that other people will see the message's exact verbal content-recognizing that the message is not personalized (as was intended). But, despite knowing others would need to view that content in their own private message exchange with the capitalizer, participants might see this as everyone, in all practicality, viewing the same exact same message period—believing the message as they received it was highly accessible (which was not intended). Put plainly, the manipulation of the message's verbal content successfully indicated its intended level of personalization but appeared to render the low accessibility nature of a direct message irrelevant in participants' assessments of who had access to it.

# **Revised Message Analysis**

Attempting to limit the influence of the non-personalized message manipulation on the low accessibility (direct message) condition, data was re-collected for two cells from the 2 x 2 x 2 pre-test message experiment matrix: (a) the plainly phrased, non-personalized, low accessibility message condition and (b) the plainly phrased, non-personalized, high accessibility message condition. As a revision to the personalization manipulation, the stimulus messages in these cells were altered to simply omit the name of the participant rather than including the phrase "for everyone". Otherwise, the messages were unchanged. The previously collected data in the corresponding cells were replaced, resulting in a new data set used to assess the fidelity of the message personalization and message accessibility manipulations. The new data set for this analysis included information from participants (N = 116) who identified as male (n = 56, 48.3%), female (n = 53, 45.7%), and non-binary (n = 5, 4.3%) with the remaining participants preferring not to answer (n = 2, 1.7%). Participants ranged from 18 to 35 years of age (M =27.01, SD = 4.56) and identified primarily as White (n = 75, 64.7%), followed by Black (n = 13, 11.2%), Latinx (n = 13, 11.2%), APIDA (n = 9, 7.8%), and multiple races and/or ethnicities (n = 12, 11.2%), APIDA (n = 9, 7.8%), and multiple races and/or ethnicities (n = 12, 11.2%). 6, 5.2%).

Using this data set, a two-way MANOVA was conducted to test for main and interaction effects of message personalization and message accessibility on their respective outcome variables. All messages were plainly phrased. Message personalization (name v. no name) and message accessibility (low/direct message v. high/social media message) were set as fixed factors, and perceived message personalization and perceived message accessibility were set as dependent variables. On perceptions of message accessibility, the 2 x 2 MANOVA revealed a statistically significant main effect for accessibility, F(1, 112) = 138.421, p < .001,  $\eta^2 = .54$ , and

no statistically significant main effect for message personalization, F(1, 112) = 3.022, p = .085, or the interaction of the two factors, F(1, 112) = 28.130, p = .053.

On perceptions of message personalization, the 2 x 2 MANOVA revealed a statistically significant main effect for personalization, F(1, 112) = 28.391, p < .001,  $\eta^2 = .14$ , but also a statistically significant main effect for message accessibility, F(1, 112) = 17.283, p < .001,  $\eta^2 = .09$ , as well as for the interaction of the two factors, F(1, 112) = 36.845, p < .001,  $\eta^2 = .19$ . To further decompose the observed interaction effect, a one-way ANOVA was conducted with message condition set as the fixed factor and perceived message personalization and perceived message accessibility set at the dependent variables. Table 5 (Appendix A) highlights the statistically significant differences between groups based on the results of these analyses.

The nature of the interaction suggested the new manipulation of personalization (name v. no name) affected participants subjective perceptions of message personalization such that those in high accessibility message conditions rated their messages differently in terms of personalization as was expected, but, contrary to expectations, low accessibility messages were not. Essentially, the findings mirrored that of the previous 2 x 2 message analysis MANOVA and provided evidence suggesting now participants were instead conflating personalization—the proposed capitalizer using their name specifically—and low accessibility as synonymous when assessing perceptions of message personalization. When considered together with the previous message analysis, one likely explanation for this finding is that without verbal content explicitly indicating a lack of personalization, the private, dyadic nature of a direct message may be adequate for making participants believe a message is personalized for them even when it is not.

# **Conclusion of Pre-Test Message Analysis**

Neither attempt to manipulate message accessibility and message personalization independently of one another was entirely successful. From a technical and theoretical perspective, the manipulations of each factor do align with the concepts of message personalization and accessibility forwarded by O'Sullivan and Carr (2018). However, the results of the pre-test message analysis support the conclusion that, even in tightly controlled conditions, message personalization and message accessibility may not be orthogonally related; something that will be addressed further in the discussion section of the present study.

Revisiting the scales created to measure perceived message accessibility and message personalization provided a potential alternative means of detangling the concepts themselves for the purposes of the present study. The previous scale items, derived from the conceptual definition of each variable, may have more effectively measured concepts which, in certain circumstances, participants evaluate as subjectively and practically intertwined. Attempting to confirm participants ability to recognize the accessibility and personalization of the messages as operationally different, new manipulation check scale items were generated for both factors. The new items were written to capture ratings of more objective characteristics related to each manipulation (e.g., "the sender personalized the message by using my name", "because of how it was sent, I am the only person with access to this specific message"). These items were designed to be answered using the same 7-point Likert scale used by the previous measure (1 = strongly *disagree* to 7 = *strongly agree*). Using these new manipulation check measures, it was decided the original, plainly phrased messages, manipulating personalization by using either participants' names or the non-specific audience reference "for everyone", would be used in the main study as the manipulation of personalization and accessibility in the first message analysis resulted in

larger effect sizes for both on their respective anticipated outcome variables. A final list of scale items and stimuli used in the main study is available in Appendix B.

# **Main Study**

Built following the pre-test of stimuli and measures, the main study utilized a 2 (personalized v. non-personalized) x 2 (low accessibility v. high accessibility) experimental design to test the proposed hypotheses. The following section provides an overview of the study participants, procedures, and measures.

### **Participants**

Using Prolific participant recruitment services, data was collected from participants (N = 401) who consented to take part in an online experiment administered via Qualtrics survey software. In total, 25 cases were excluded from further analysis as they were found to have missing data points (n = 13), had failed one of two attention checks embedded in the survey (n = 5), or rated the friend they chose to focus on during the experiment as being at or below the midpoint of the scale used to confirm friendship closeness and measure its variation (n = 7). This resulted in data from 376 participants (N = 376) being used to test the proposed hypotheses. Participants identified as male (n = 176, 46.8%), female (n = 175, 46.5%), and non-binary (n = 23, 6.1%) with the remaining participants (n = 2, 0.5%) indicating they would prefer not to respond. Participants ranged from 18 to 44 years of age (M = 27.84, SD = 4.73) and identified primarily as White (n = 226, 69.5%) followed by those who identified as multiple races/ethnicities (n = 51, 13.6%), APIDA (n = 35, 10.8%), Black (n = 30, 9.2%), Latinx (n = 27, 8.3%), and Other/Prefer to Self-Describe (n = 2, 0.5%) with the remaining participants preferring not respond (n = 5, 1.5%).

## Procedure

Once participants read and agreed to the statement of informed consent, they were asked to provide their first name and the first name of a *close friend* to individualize various survey elements and focus their attention on an exchange with a single communication partner. A definition of close friend (derived from Parks & Floyd, 1996; available in Appendix B) was provided to participants to clarify what was meant by the term. After providing these names, participants received a prompt describing a scenario in which their close friend had good news to share. Participants were told to imagine their friend had recently been applying for new jobs related to their current or desired career. The survey then randomly assigned individuals to one of four experimental conditions where participants would see a celebratory message written by their close friend indicating they had just been hired for their dream job. The messages were designed to vary in terms of perceived personalization and perceived accessibility. Following exposure to this celebratory message, participants answered various survey items related to the message itself, their potential response to their friend, and their relational evaluations of the hypothetical exchange. The survey concluded with a brief series of demographic questions.

# Measures

A full list of scale items used in the main study is included in Appendix B. Manipulation check measures (revised message accessibility, revised message personalization, message realism, and friendship closeness) and dependent variable measures (message response, relational communication quality, and interpersonal engagement) were tested using Maximum Likelihood Confirmatory Factor Analysis in SPSS AMOS 29. The initial measurement model for manipulation check items demonstrated good model fit ( $\chi^2 = 141.39$ , chi-squared df = 59, TLI = .979, CFI = .984, RMSEA = .061) that met the cutoff criteria for multiple fit indexes established

by Hu and Bentler (1999). The initial measurement model for dependent variable items did not demonstrate adequate fit ( $\chi^2 = 246.15$ , chi-squared df = 74, TLI = .929, CFI = .936, RMSEA = .078). One item each was removed from the scales used to measure relational communication quality and interpersonal engagement as they were found to have substantially lower factor loadings than other scale items. The resulting model demonstrated good model fit ( $\chi^2 = 119.98$ , chi-squared df = 51, TLI = .966, CFI = .974, RMSEA = .060) meeting established cutoff criteria for multiple fit indexes (Hu & Bentler, 1999). Final scale items for manipulation check measures and dependent variable measures as well as their associated factor loadings are available in Table 6 and Table 7 respectively (see Appendix A for both tables). A detailed list of all measures and instructions is in Appendix B.

**Message Accessibility.** The measure for message accessibility was created for the present study and was used as a manipulation check of the experimental induction. The scale was composed of 3 items evaluated by participants on a 7-point Likert scale ( $1 = strongly \ disagree$  to  $7 = strongly \ agree$ ). The scale demonstrated good reliability ( $\alpha = .95$ ). As an additional note, higher scores on this measure translate to lower levels of perceived accessibility.

**Message Personalization.** The measure for message personalization was created for the present study and was used as a manipulation check of the experimental induction. The scale was composed of three items evaluated by participants on a 7-point Likert scale (1 = strongly *disagree* to 7 = strongly *agree*). The scale demonstrated good reliability ( $\alpha = .99$ ).

**Message Realism.** The measure used to assess message realism was previously established by Shebib et al. (2020). The original scale consisted of 3 items, only 2 of which were retained for the present study based on the results of pre-test measurement modeling. The scale

was evaluated by participants on a 7-point Likert scale ( $1 = strongly \ disagree$  to  $7 = strongly \ agree$ ) and demonstrated good reliability (r = .91, p < .001).

**Friendship Closeness.** Items from the Unidimensional Relational Closeness Scale (URCS; Dibble et al., 2012) were used as a measure of friendship closeness in the present study. This measure was used to ensure individuals had identified a close friend to consider during the hypothetical capitalization exchange as instructed. The scale was originally composed of 12 items but in the present study was limited to 5 items based on pre-test measurement modeling. Participants evaluated items on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*), and the scale demonstrated good reliability ( $\alpha$  = .90).

**Response Quality.** The measure for response quality was created for the present study. Based on pre-test measurement modeling, the main study scale was composed of 4 items. Three scale items were generated by the author of the present study while one item was adapted from the PRCA (Gable et al., 2004) to be evaluated from the responder's perspective. Participants evaluated items on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree), and the scale demonstrated acceptable reliability ( $\alpha = .81$ ).

Relational Communication Quality. Many measures of relationship quality or relationship satisfaction seek to understand the whole of relational interactions or general affect for a defined partner and are not designed to address the effects of a single exchange of messages. As such, these scales are likely not sensitive enough to assess any relational impact attributable to a single capitalization exchange. However, if one assumes a favorable or unfavorable stance toward any relationship is the sum of accumulated interaction evaluations, measuring the qualities that make an interaction either more or less relationally appealing should serve as an acceptable substitute. As such, the relational communication quality of the

hypothetical capitalization exchange was measured in the present study using items adapted from one of three intimacy subscales of the Relational Communication Scale (RCS; Burgoon & Hale, 1987). Five items from the scale were used to measure relational communication qualities of the hypothetical capitalization exchange targeted at participants' perceptions of the extent to which the capitalizer communicated closeness and connection befitting a close friendship. Following the main study measurement model testing, only 4 scale items were retained for hypothesis testing (see Table 5; Appendix A). Participants evaluated items on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*), and the scale demonstrated acceptable reliability ( $\alpha$  = .86).

**Interpersonal Engagement.** The Electronic Propinquity Scale (EPS, Walther & Bazarova, 2008) was used as a measure of interpersonal engagement in the present study. The EPS, a semantic differential scale, was designed to measure feelings of psychological closeness felt towards communication partners while exchanging messages in a variety of communication contexts. The present study considers these feelings of psychological closeness during the hypothetical capitalization exchange as a proxy for the extent to which participants felt attentionally engaged or interactionally linked with their close friend during said exchange. Following the main study measurement model testing, only 4 of the 5 original scale items were retained for use in hypothesis testing (see Table 5; Appendix A). Participants evaluated adjective pairs on a 7-point semantic differential scale, and the scale demonstrated good reliability ( $\alpha = .91$ ).

### RESULTS

# **Manipulation Checks**

Similar to the pre-test analysis, a one-way analysis of variance (ANOVA) was conducted with message condition set as the fixed factor and message realism set as the dependent variable to ensure the stimulus messages were seen as equally realistic. Unlike the pre-test analysis however, results indicated there was a statistically significant difference between groups on perceptions of message realism, F(3, 373) = 7.053, p < .001,  $\eta^2 = .054$ . A Tukey HSD post-hoc analysis revealed that one condition was rated as significantly lower than the others in terms of message realism. The personalized/high accessibility message (M = 5.08, SD = 1.57) was rated as being less real than the personalized/low accessibility condition (M = 5.75, SD = 1.20; p < .01, 95% CI [-1.16, -.19]), the non-personalized/low accessibility message (M = 5.67, SD = 1.35; p < 1.35.01, 95% CI [-1.08, -.10]), and the non-personalized/high accessibility message (M = 5.86, SD =1.01; p < .01, 95% CI [-1.26, -.30]). To ensure participants still believed the personalized/high accessibility message to be realistic, a one sample t-test was conducted using data from that condition with the test value set at 4.5 (.5 above the scale midpoint for message realism). Results indicated the mean value of message realism for the personalized/high accessibility message (M= 5.08, SD = 1.57) was significantly above the proposed test value, t(98) = 3.66, p < .001. Although a small, unexpected variation in perceptions of message realism occurred, these results suggest all messages were seen as realistic. Additionally, a post-hoc analyses of planned hypothesis tests with perceived message realism set as a covariate were conducted to determine what influence, if any, this variable had on the dependent variables of interest. The post-hoc analysis and its results are discussed following the reporting of hypothesis test outcomes.

Between group differences for message personalization and message accessibility were further examined conducting a two-way factorial MANOVA with personalization (personalized v. non-personalized) and accessibility (low v. high) set as fixed factors and perceptions of message accessibility and message personalization set as dependent variables. On perceptions of message personalization, the 2 x 2 MANOVA revealed a statistically significant main effect of personalization condition, F(1, 372) = 5753.919, p < .001,  $\eta^2 = .94$ , and no statistically significant main effect of accessibility condition, F(1,372) = .014, p = .905, or the interaction of the two factors, F(1, 372) = .019, p = .890.

On perceptions of message accessibility, the 2 x 2 MANOVA revealed a statistically significant main effect of accessibility condition, F(1, 372) = 779.026, p < .001,  $\eta^2 = .58$ , as well as a statistically significant main effect of personalization condition, F(1, 372) = 110.579, p < .001,  $\eta^2 = .08$ , and the interaction of the two factors, F(1, 372) = 71.002, p < .001,  $\eta^2 = .05$ . To further decompose the observed interaction effect, a one-way ANOVA was conducted with message condition set as the fixed factor and perceived message personalization and perceived message accessibility set as dependent variables. Table 8 (Appendix A) highlights the statistically significant differences between groups based on the results of these analyses.

Like the pre-test analysis, even with the revised measure of message accessibility, the nature of the interaction between the two factors suggested the choice to signal non-personalization with specific verbal message content influenced participants' evaluations of message accessibility for messages in the low accessibility condition but not in the high accessibility condition. However, unlike the results of the pre-test analysis, ratings of accessibility in the non-personalized, low accessibility messages condition (M = 3.99, SD = 1.98) indicated the message was seen as significantly and substantially lower in accessibility than both

high accessibility messages—personalized (M = 1.75, SD = 1.10;  $M_{diff} = 2.23$ , p < .001, 95% CI [1.77, 2.70]) and non-personalized (M = 1.49, SD = .79;  $M_{diff} = 2.50$ , p < .001, 95% CI [2.03, 2.98]). So, despite being significantly different from one another in terms of accessibility, both low accessibility messages were demonstrated to be significantly lower in perceived accessibility than both high accessibility messages. Considering the available evidence, manipulations of message accessibility and message personalization were considered successful.

As for relationship closeness, all data from participants indicating that the close friend they named was at or below the scale midpoint for closeness (n = 7) were removed prior to hypothesis testing. Scores on this variable for remaining participants ranged from 4.20 – 7.00 with a mean of M = 6.29 (SD = .67). Additionally, a one-way ANOVA with the fixed factor set as message condition and the dependent variable set as relationship closeness revealed no statistically significant difference between groups F(3, 372) = .070, p = .976. So, although there was within group variance on closeness of identified friendship, that variance was consistent across conditions. Any potential impact of within factor variance for friendship closeness was further investigated in post-hoc analyses of the planned hypothesis tests including friendship closeness as a covariate. The results of these analyses are presented following the results of primary hypothesis testing.

### **Hypothesis Testing**

A 2x2 factorial ANOVA with the fixed factors set as message accessibility and message personalization and the dependent variable set as response quality was used to test H1, H2, and H3. The model was supported, F(1, 372) = 9.955, p < .001,  $\eta^2 = .074$ ,  $R^2_{adjusted} = .067$ . Hypothesis 1 predicted that capitalization initiation messages which were more accessible would receive lower quality responses than those which were less accessible. The results of the 2x2

factorial ANOVA revealed a statistically significant effect of accessibility on response quality,  $F(1, 372) = 18.941, p < .001, \eta^2 = .047$  with lower ratings of response quality reported by individuals in high message accessibility conditions (M = 5.89, SD = 1.09) compared to those in the low message accessibility conditions (M = 6.29, SD = .74). Thus, H1 was supported. Hypothesis 2 predicted capitalization initiation messages which were not personalized to a particular receiver would receive lower quality responses than those that were personalized. The results of the 2x2 factorial ANOVA revealed a statistically significant effect of personalization on response quality, F(1, 372) = 10.169, p < .01,  $\eta^2 = .025$  with lower ratings of response quality reported by individuals in non-personalized message conditions (M = 5.92, SD = .96) compared to those in personalized message conditions (M = 6.23, SD = .94). Thus, H2 was supported. Finally, Hypothesis 3 predicted an interaction effect of accessibility and personalization on response quality for capitalization initiation messages such that personalization would improve response quality for highly accessible messages more so than low accessibility messages. The results of the 2x2 factorial ANOVA revealed no statistically significant interaction effect of accessibility and personalization on response quality F(1, 372) = .768, p = .381. Thus, H3 was not supported.

A 2x2 factorial MANOVA with the fixed factors set as message accessibility and message personalization and the dependent variables set as interpersonal engagement and relational communication quality was conducted to test H4a through H6b. The omnibus univariate models were supported for both interpersonal engagement, F(3, 372) = 11.500, p <.001,  $\eta^2 = .085$ ,  $R^2_{adjusted} = .077$ , and relational communication quality, F(3, 372) = 28.269, p <.001,  $\eta^2 = .186$ ,  $R^2_{adjusted} = .179$ . Hypothesis 4a predicted the accessibility of a capitalization initiation message would affect responders' feelings of interpersonal engagement such that highly accessible messages would lead to lower ratings of interpersonal engagement. Hypothesis 4b predicted the same relationship would exist for ratings of relational communication quality. The univariate tests for interpersonal engagement revealed a statistically significant effect of message accessibility, F(1, 372) = 4.690, p < .05,  $\eta^2 = .012$ , with participants in the high accessibility message conditions reporting lower ratings of interpersonal engagement (M = 4.67, SD = 1.42) than those in the low accessibility message conditions (M = 4.99, SD = 1.44). Conversely, the univariate test for relational communication quality demonstrated no statistically significant effect of message accessibility, F(1, 372) = .286, p = .593. Thus, H4a was supported, but H4b was not.

Hypothesis 5a predicted the personalization of a capitalization initiation message would affect responders' feelings of interpersonal engagement such that non-personalized messages would lead to lower ratings of interpersonal engagement. Hypothesis 5b predicted the same relationship would exist for ratings of relational communication quality. The univariate test for interpersonal engagement conducted as part of the 2x2 factorial MANOVA revealed a statistically significant effect of message personalization on ratings of interpersonal engagement, F(1, 372) = 27.990, p < .001,  $\eta^2 = .069$ , with participants in the non-personalized message conditions reporting lower ratings of interpersonal engagement (M = 4.44, SD = 1.42) than those in the personalized message conditions (M = 5.19, SD = 1.36). Similarly, the univariate test for relational communication quality also revealed a statistically significant effect of message personalization, F(1, 372) = 84.116, p < .001,  $\eta^2 = .184$ , with participants in the non-personalized message conditions reporting lower ratings of relational communication quality (M = 4.22, SD = 1.31) than those in the personalized message conditions (M = 5.37, SD = 1.02). Thus, H5a and H5b were supported.

Finally, Hypothesis 6a predicted an interaction effect of message accessibility and message personalization on capitalization initiation messages such that personalized messages would improve reported ratings of interpersonal engagement for highly accessible messages more so than low accessibility messages. Hypothesis 6b predicted the same relationship would exist for ratings of relational communication quality. The univariate test conducted as part of the 2x2 factorial MANOVA for ratings of interpersonal engagement identified no statistically significant interaction effects of the two experimental factors, F(1, 372) = 2.014, p = .157. Likewise, the univariate test for ratings of relational communication quality failed to demonstrate a significant interaction of the two experimental factors, F(1, 372) = .156, p = .693. Thus, H6a and H6b were not supported. The means and standard deviations for all dependent variables of interest related to H1 – H6 are provided by condition in Table 9 (Appendix A).

# **Post-Hoc Analyses**

Considering the between group differences identified for ratings of message realism and the observed within group variance of friendship closeness, a post-hoc test of the hypotheses was conducted to include perceived message realism and ratings of friendship closeness as covariates in the previously tested models. The results of each test are reported in comparison to the originally tested model. Additionally, the means and standard deviations of each covariate by condition are presented in Table 10 (Appendix A).

A 2x2 factorial analysis of covariance (ANCOVA) was conducted to re-test H1, H2, and H3 to account for any effects of message realism and friendship closeness on ratings of anticipated response quality. Message accessibility and message personalization were set as fixed factors; message realism and friendship closeness were set as covariates; and response quality was set as the dependent variable. The model was supported, F(5, 370) = 21.747, p < .001,  $\eta^2 =$ 

.227,  $R^2_{adjusted} = .217$ ,  $\Delta R^2_{adjusted} = .15$ , and identified statistically significant relationships between response quality and both message realism, F(5, 370) = 20.766, p < .001,  $\eta^2 = .043$ , and friendship closeness, F(5, 370) = 44.772, p < .001,  $\eta^2 = .094$ . Additionally, when controlling for the message realism ( $M_{adjusted} = 5.58$ ) and friendship closeness ( $M_{adjusted} = 6.29$ ) the main effects of personalization on response quality, F(5, 370) = 15.467, p < .001,  $\eta^2 = .032$ , and accessibility on response quality, F(5, 370) = 18.051, p < .001,  $\eta^2 = .037$  remained significant with personalization now demonstrating a greater effect size and accessibility demonstrating a lower effect size compared to the previous test of hypotheses. Thus, when controlling for these variables, H1 and H2 were still supported, while H3 remained unsupported. A follow up regression analysis with message response set as the dependent variable and personalization condition, accessibility condition, friendship closeness, and message realism set as predictor variables revealed both friendship closeness, t(370) = 6.73, p < .001,  $\beta = .310$ , 95% CI [.314, .573], and message realism, t(370) = 4.34, p < .001,  $\beta = .203$ , 95% CI [.080, .213], had a significant and positive relationship to message response quality.

Next a 2x2 factorial multivariate analysis of covariance (MANCOVA) was conducted to re-test H4a through H6b, accounting for any effects of message realism and friendship closeness on ratings of interpersonal engagement and relational communication quality. Message accessibility and message personalization were set as fixed factors with message realism and friendship closeness set as covariates and interpersonal engagement and relational communication quality set as dependent variables. The omnibus univariate models were supported for both interpersonal engagement, F(5,370) = 15.000, p < .001,  $\eta^2 = .169$ ,  $R^2_{adjusted} =$ .157,  $\Delta R^2_{adjusted} = .08$ , and relational communication quality, F(5, 370) = , p < .001,  $\eta^2 = .253$ ,  $R^2_{adjusted} = .243$ ,  $\Delta R^2_{adjusted} = .064$ . The model also identified statistically significant multivariate effects for message realism, Wilks lambda = .920, F(5,369) = 16.070, p < .01, partial  $\eta^2 = .08$ , and friendship closeness, Wilks lambda = .966, F(5,369) = 6.510, p < .01, partial  $\eta^2 = .034$ . Reexamining H4a and H4b while controlling for message realism ( $M_{adjusted} = 5.58$ ) and friend closeness ( $M_{adjusted} = 6.29$ ), the univariate test for interpersonal engagement now revealed only a marginally statistically significant effect of accessibility with a lower effect size, F(1, 370) =3.228, p = .073,  $\eta^2 = .007$ . The main effect of accessibility on relational communication quality remained non-significant based on the results of the corresponding univariate test, F(1, 370) =.004, p = .947. H4a was no longer supported, and H4b again failed to receive support.

Concerning message personalization, when controlling for message realism ( $M_{adjusted} = 5.58$ ) and friend closeness ( $M_{adjusted} = 6.29$ ), the univariate test for interpersonal engagement (H5a) still showed a statistically significant main effect of message personalization, F(1,370) = 36.410, p < .001,  $\eta^2 = .082$ , as did the univariate test for relational communication quality (H5b), F(1,370) = 101.789, p < .001,  $\eta^2 = .205$ . These tests now also demonstrated a greater effect size of message personalization on both variables compared to the previous test of hypotheses. Thus, H5a and H5b were still supported.

Finally, when controlling for message realism ( $M_{adjusted} = 5.58$ ) and friend closeness ( $M_{adjusted} = 6.29$ ), univariate tests for the interaction effect of personalization and accessibility on interpersonal engagement, F(1, 370) = .555, p = .457, and relationship quality, F(1, 370) = 1.450 p = .229, remained non-significant. Thus, H6a and H6b remained unsupported. A follow up regression analysis with interpersonal engagement set as the dependent variable and personalization condition, accessibility condition, friendship closeness, and message realism set as predictor variables revealed both friendship closeness, t(370) = 3.46, p < .001,  $\beta = .165$ , 95% CI [.153, .552], and message realism, t(370) = 4.34, p < .001,  $\beta = .231$ , 95% CI [.147, .352], had

a significant and positive relationship to interpersonal engagement. A follow up regression analysis with relational communication quality set as the dependent variable and personalization condition, accessibility condition, friendship closeness, and message realism set as predictor variables revealed both friendship closeness, t(370) = 2.40, p < .05,  $\beta = .109$ , 95% CI [.037, .374], and message realism, t(370) = 4.86, p < .001,  $\beta = .223$ , 95% CI [.127, .300], had a significant and positive relationship to relationship communication quality.

### DISCUSSION

Guided by Peters and colleagues' (2018) explication of InterCAP, the present study advances capitalization scholarship by directly addressing identified gaps in the existing body of capitalization research related to responders' perspectives, focusing on how the use of computermediated communication affects this important relational process. A 2x2 experiment manipulating the personalization and accessibility of hypothetical capitalization initiation messages from close friends in computer-mediated contexts resulted in mixed findings pertaining to capitalization response quality, responders' feelings of interpersonal engagement with capitalizers, and the perceived relational communication quality of capitalizers' initial celebratory messages. The results of the main study, with support from the results of stimulus and measurement pre-testing, offer improved understanding of capitalization from perspectives other than those of the capitalizer and successfully extend this line of research into the area of computer-mediated communication. The proceeding section first discusses insights related to the results of H1 through H3 (capitalization response quality) followed by a discussion of results for H4a through H6b (responders' relational evaluations of capitalization attempts). Each section also offers greater clarity concerning the practical and theoretical implications of this study for scholarship investigating capitalization, CMC, and/or the diffusion of responsibility.

### **Capitalization Response Quality**

As predicted, the accessibility of computer-mediated capitalization initiation messages influenced the quality of capitalization responses provided, as did the personalization of those messages. The predicted interaction effect of message personalization and message accessibility on capitalization response quality, however, did not receive support. The available evidence points to several possible explanations for this finding.

First, the main analysis conducted in the present study may be interpreted as message personalization and message accessibility exerting independent and additive influences on message response quality, with the present data suggesting responders anticipate providing the highest quality responses to low accessibility, personalized capitalization messages and the lowest quality responses to highly accessible, non-personalized capitalization messages (see Table 6; Appendix A). Alternatively, the results of two pre-test analyses and the main study manipulation check provide evidence that in one experimental condition (receiving a nonpersonalized, low accessibility message) responders' perceptions of message accessibility and message personalization became intertwined; a finding subsequently discussed in further detail in a section specifically addressing the additional implications of this study for computermediated communication research. Potentially compounding this issue, post hoc hypothesis testing revealed responders' ratings of message realism significantly affected response quality in that higher perceived realism was related to better responses. While all messages were rated as realistic, the high accessibility, personalized message was seen as the least realistic of the messages presented. H3 predicted this condition would benefit from personalization more so than its low accessibility counterpart. While statistically controlling for message realism failed to produce the predicted interaction between personalization and accessibility on response quality, it is possible that employing a more realistic and/or alternatively personalized social media messages as part of future experiments could still produce such an interaction.

Although the proposed interaction of the two factors on capitalization response quality failed to receive support, support for the main effects of accessibility and personalization has important practical and theoretical implications. Considering the motivations of capitalizers to sustain positive affect (Langston, 1994; Gable & Reis, 2010), understanding how to maximize

the quality of capitalization responses has practical utility for capitalizers. The design of the present study does not allow for the measurement of capitalizers' positive affect, nor was this its intended purpose. Even so, based on evidence that higher quality-more active and constructive-responses result in improved positive outcomes for capitalizers (Gable et al., 2004), knowing what capitalization message characteristics can affect the quality of replies that responders anticipate providing is an important first step in understanding how capitalizers themselves might influence the intrapersonal payoff they receive from capitalization interactions. Previous research indicates capitalizing in masspersonal channels is a common response to positive life events (Palmer er al., 2016) and that this masspersonal sharing can generate positive outcomes for capitalizers based on the quantity of responses received (Noon et al., 2023; Zell & Moeller, 2018). However, the results of the present study indicate more interpersonal, computermediated capitalization messages (messages low in accessibility and high in personalization) receive higher quality capitalization responses than fully masspersonal capitalization initiation messages (messages high in accessibility and low in personalization). Thus, at a practical level, the results of the present study suggest capitalizers seeking to maximize the quality of responses received while capitalizing via CMC would do best using private channels and personalized messages when interacting with close friends.

At a theoretical level, these results offer initial empirical support for the proposition that responses to capitalization attempts are influenced by *how* good news is shared, not just by who is sharing it or with whom it is shared—a focal point of previous and proposed research addressing the relationship between capitalization attempts and the responses they receive (Peters et al., 2018). Previous research has addressed the personal characteristics of capitalizers and responders such as self-esteem (MacGregor & Holmes, 2011; Smith & Reis, 2012) and

social anxiety (Kashdan et al., 2013) which contribute to the receipt and provision of effective capitalization responses (Gable et al., 2004; McCullough & Burleson, 2012), but, until now, how this process is affected by the characteristics of capitalization initiation messages themselves has been largely overlooked. The present study illustrates why this may be an important consideration by provoking differences in anticipated response quality through the manipulation of two such characteristics, message personalization and message accessibility, whose salience is enhanced by CMC. The significant main effects identified in testing H1 and H2 support this claim producing lower ratings of responder-reported, anticipated response quality for more accessible and less personalized capitalization initiation messages compared to less accessible and more personalized initiation messages respectively. The importance of this approach is further bolstered by post hoc tests demonstrating the persistence of these effects even when controlling for variations in the reported closeness of friends who were hypothetically sharing good news.

According to Peters et al (2018), in most cases, "capitalizers do not indiscriminately choose their targets" (p. 6), electing to specifically share good news with close others whose responses play a crucial role in the success of capitalization attempts. The results of the present study support why this may be the case as even a small range of variance in the reported closeness of friends was significantly related to differences in responders' anticipated response quality, with closer friends receiving better responses. However, even when accounting for fluctuations in friendship closeness, the way the hypothetical capitalizers chose to share good news still had a measurable effect on the quality of replies that responders anticipated offering. While the present study was limited in the scope of message characteristics it investigated, the

results obtained do indicate that consideration of capitalization initiation messages characteristics is a worthwhile endeavor when studying the antecedents of capitalization response quality.

Moreover, the results of the present study related to message accessibility and message personalization provide new information for research related to the diffusion of responsibility (Darley & Latané, 1968), potentially expanding the contexts to which it might be applied. Although capitalization attempts are far less emergent than the initial requests for assistance that inspired DoR research (Latané & Darley, 1970; Latané & Nida, 1981) and more implicitly prompt assistance than other the social support scenarios to which the framework has been applied (Cutrona & Cole, 2000; Shumaker & Brownell, 1984), DoR was successfully employed in the present study to predict variations in capitalization response quality stemming from variations in the accessibility and personalization of capitalization initiation messages. Despite the utility of the DoR framework in making the predictions forwarded here, other theoretical frameworks might prove equally, if not more, useful for predicting the observed outcomes. Thus, fully understanding the applicability of the DoR framework to mediated capitalization scenarios would necessitate future research directly targeting dependent variables related to responders reasoning for why they chose to respond in the way they did. While this information was not gathered in the present study, the data that are present can be cautiously interpreted as initial evidence supporting the framework's utility in a wider variety of supportive communication scenarios than previously established (Cutrona & Cole, 2000) and as adding to the limited research supporting the usefulness of DoR for predicting the outcomes of some computermediated interactions (Barron & Yechiam, 2002). Aside from future research that might support or contravene the assertions made here, future research is also needed to understand if other

facets of the broader bystander effect might also be applied to mediated capitalization interactions.

#### **Responders' Evaluations of Computer-Mediated Capitalization Attempts**

Aside from the quality of responses responders might provide, the present study was also concerned with examining the impact of capitalization messages' accessibility and personalization on two variables associated with sustaining healthy interpersonal relationships: (a) feelings of interpersonal engagement—or psychological feelings of closeness toward another individual—during computer-mediated exchanges and (b) the relational communication quality of capitalization messages—or the extent to which a sender's message properly conveyed the depth and importance of their relationship with the receiver. Predictions about the effects of message accessibility and message personalization on these variables during computer-mediated capitalization exchanges were formulated based on the contextual and relational information responders might potentially derive from a capitalizer's choice of channel and message content (Mason & Carr, 2022). Contrary to the proposed hypotheses, message accessibility does not appear to exert a significant influence on these variables during mediated capitalization exchanges with close friends, as only one hypothesis (H4a) received qualified support. However, concordant with the proposed hypotheses, personalization was found to have a significant effect on feelings of interpersonal engagement and relational communication quality. The interaction of the two factors also failed to produce significant results on either variable. Unlike the lack of support for H3, the interaction effects proposed in H6a and H6b not receiving support is unsurprising, in and of itself, as these hypotheses relied on personalization differentially altering the main effects of message accessibility (H4a and H4b); main effects which failed to materialize as predicted when accounting for other factors.

### Interpersonal Engagement

Research has shown that despite physical separation, it is possible for individuals to experience psychological closeness akin to that associated with co-present interactions during even simple text-based, computer-mediated exchanges (Biocca, Harms, & Burgoon, 2003; Nowak & Biocca, 2003). The proposed hypothesis concerning the effect of message accessibility on these feelings of engagement during mediated capitalization exchanges (H4a) initially received support with low accessibility messages being rated higher on this construct than high accessibility messages. However, in post hoc tests accounting for the influence of friendship closeness on feelings of interpersonal engagement, the significance and magnitude of accessibility's effect on this variable was substantially attenuated by the revealed positive relationship between friend closeness and engagement. Many plausible scenarios still exist in which message accessibility could affect receivers' in-the-moment experience of psychological closeness to the sender, but the evidence available here does not support this being true of singular instances of computer-mediated capitalization between close friends. To the contrary, these findings suggest that feelings of being connected to a close friend while engaging with the good news they share via CMC only requires that the receiver can access it, not that others are incapable of accessing it.

Consistent with predictions, message personalization produced an effect on ratings of interpersonal engagement (H5a) where non-personalized messages received lower ratings on this construct than personalized messages. This effect persisted when statistically controlling for friendship closeness and message realism. These results may be interpreted as personalized messages evoking greater feelings of interpersonal engagement when reading a friend's capitalization initiation message or as impersonal messages evoking feelings of psychological

distance between partners in the same scenario. These interpretations are not mutually exclusive, and both may have occurred to some extent. Even so, the results of stimulus pre-testing provide some insight as to which interpretation is most plausible. In the present study, personalization was accomplished by adding participants' names to the hypothetical capitalization messages they received. However, pre-testing revealed inducing the same perception of personalization was possible using a low accessibility direct message and simply removing the target's name—a message lacking personalization but also devoid of verbal information signaling its impersonal nature. In other words, by avoiding explicit de-personalization, the impersonal message appears to have implied it was written by the capitalizer with the receiver and their relationship in mind or was at least interpreted this way by responders. On the other hand, replacing the target's name with a reference to a broader audience appeared to convey the intended impersonal tone of the message more accurately, effectively eliminating any implication that would allow receivers to regard the message as personalized. These results do not refute the ability of message personalization to produce increased feelings of in-the-moment psychological engagement when engaging with close friends' mediated capitalization attempts, but they do implicate the potentially prominent, negative impact of identifiably impersonal message content on such ratings.

### **Relational Communication Quality**

For mediated capitalization attempts, a null finding for the effect of message accessibility on evaluations of relational communication quality illuminates the contextual information individuals failed to derive from message accessibility alone. Knowing that a message was only privately accessible or publicly accessible was insufficient for inducing evaluations of the message as anything other than consistent with the depth of communication one might expect

from close friends (Burgoon & Hale, 1987). In other words, people expect close friends to share news of success (Argyle & Henderson, 1984), and, whether that news is accessible to only one friend or to many friends simultaneously, the message fulfills that basic expectation. Importantly, the accessibility of a computer-mediated message does provide relational information external to its verbal content that is, ostensibly, interpersonally important (Mason & Carr, 2022). Receivers *could* use this information to evaluate if the exchange meets the quality of relational communication they would expect from a close friend, but, as demonstrated here with mediated capitalization attempts, it does not guarantee that they *will* use it in any given situation.

Conversely, a message being personal or impersonal did significantly affect the perceived relational communication quality of close friends' capitalization attempts (H6b) with impersonal messages receiving lower ratings of relational communication quality than personalized messages. Much like the findings for personalization's effect on interpersonal engagement, the results may support the ability of personalization to boost perceptions of a message's relational communication quality and/or the ability of de-personalization to negatively impact such ratings. By including the responder's name in the capitalization message or explicitly referencing a broad group of which the responder is a part, participants evaluations of the messages were altered such that personalized messages were seen as higher in relational communication quality and impersonal messages were seen as lower in relational communication quality. Regardless of the accessibility of the capitalization message inferred by the channel used to communicate it, providing the responder textual information denoting personalization (or lack thereof) affected the extent to which they believed the message was reflective of the depth of relational communication expected from a close friend (Burgoon & Hale, 1987) on matters of capitalization.

When taken together, the findings for both interpersonal engagement and relational communication quality elucidate the mechanisms through which computer-mediated capitalization can contribute to interpersonal outcomes of these interactions for responders (Gabel & Reis, 2010; Peters et al., 2018). For capitalizers, response quality understandably and demonstrably impacts evaluations of their relationship with responders (Fivecoat et al., 2015; Gable et al., 2006; Logan & Cobb, 2013), i.e., "my friend enthusiastically helped me celebrate, so we are closer" versus "my friend did not adequately help me celebrate, so we are not as close". But what is it about sharing good news that helps receivers define, sustain, and differentiate the closeness of their friendships (Argyle & Henderson, 1984) with capitalizers? The findings of the present study help answer this question by considering the relational information generated from CMC enhanced message qualities (Mason & Carr, 2022; O'Sullivan & Carr, 2018) and how that information is evaluated by capitalization responders. Overall, message personalization appears to play a more vital role in satisfying the multiple relational functions of capitalization (Argyle & Henderson, 1984) than does the accessibility of computermediated capitalization attempts.

Even in non-mediated capitalization interactions the approach demonstrated here can be helpful in studying responders' evaluations of capitalization attempts. Message accessibility and message personalization are not exclusively the purview of relational CMC research. In many cases, the factors which have become important to CMC research are not unique to CMC, but rather the ability to readily access, control, and evaluate these factors is accentuated by the process of computer-mediation (Carr, 2020). For example, the salience of message personalization when using CMC (O'Sullivan & Carr, 2018) is the product of increased exposure to personalized and non-personalized message content made possible by communication

technologies. The increased salience now does not mean people were previously incapable of assessing message personalization in face-to-face interaction or that they were oblivious to its importance.

However, when studying dyadic, face-to-face interactions-the predominant focus of extant capitalization research (Peters et al., 2018)—the personalization of exchanges from one partner to another is an easy assumption to make. Taking for granted that messages are uniquely personalized, verbally and nonverbally, to a single receiver in traditional interpersonal interactions is not out of line because they are occurring in the confines of a unique and isolated dyadic exchange. Consider two capitalization messages that might be shared between friends catching up over a cup of coffee: "Hey, friend, remember when I told you about that new job I applied for? I think you might be excited to know, I got it!" and "Fun update about my life: I got a new job!" Each of these messages might receive similar enthusiastic replies from a close friend, leading the capitalizer to walk away feeling good about their job and the friendship. Yet, as the responder evaluates their relationship with the capitalizer, one of these messages is much more likely to be seen by the responder as tailored to them and their unique relationship with the capitalizer. Future responder-focused capitalization research, even when centered on traditional face-to-face exchanges, could benefit from the consideration of the initiation message characteristics most likely to stoke the scrutiny of the responder.

Finally, by successfully using CMC theory to investigate how the process of capitalization is altered by the expanded use of communication technology in sharing good news, the present study supports a re-conceptualization of capitalization from an inherently interpersonal process (Gable & Reis, 2010; Peters et al., 2018) to an inherently *interactive* process, evaluated personally and interpersonally by both capitalizers and responders. This

distinction is important when considering the growing body of mediated capitalization research, including the present study, which examines the intrapersonal impacts and interpersonal evaluations of a process to which assumptions of one-on-one communication and reciprocated, synchronous interaction no longer automatically apply. Zell and Moeller (2018) demonstrated that sharing good news masspersonally can generate the positive intrapersonal outcomes sought by capitalizers (Langston, 1994), but Noon et al. (2023) provided evidence that these outcomes may be short-lived. And, as a first step in responder-focused, computer-mediated capitalization research, the present study reveals at least one path through which the personal or impersonal sharing of good news (whether interpersonally or masspersonally conducted) could impact responders' relationships with capitalizers given time.

#### **Limitations and Directions for Future Research**

One notable limitation of the present study is an artifact of its intended, purposeful focus on responders rather than capitalizers. Although it provides a needed step in further understanding the process of capitalization from responders' perspectives, the capitalizers in the present study were a hypothetical reference point, making it impossible to know for sure how they might react to the types of replies responders anticipated providing. The quality of anticipated responses, as measured here, was based on previous measures of active/constructive response messages (Gable et al., 2004) and communication behaviors that demonstrate care and enthusiasm. Additionally, the present study targeted the potential relational impacts of how one receives good news from a friend and how they would likely respond as variables of interest. Despite fluctuations in anticipated response quality and perceived relational communication quality as a consequence of how good news is shared, the evidence available here is not enough to definitively establish what effect, if any, this amount of fluctuation has on capitalizers' positive

affect—an important component of their purpose for initiating capitalization in the first place or their perceptions of relational communication quality based on the responder's reply. Nor does it allow for a full understanding of the intrapersonal consequences for responders, such as the positive (or negative) affect they might feel related to what good news is being shared, how it is shared, and by whom. Future studies should address these shortcomings by investigating a broader range of interpersonal and intrapersonal variables of interest from the perspective of responders and incorporating methods that allow for measuring both responder and capitalizer outcomes in dyadic pairs.

External to its focus on capitalization, the present study is also a functional test of the masspersonal communication model (MPCM; O'Sullivan & Carr, 2018), extending understanding of the model through its experimental application to a defined communication phenomenon. In the present study, simultaneous manipulation of low message accessibility and low message personalization proved difficult, highlighting a potential issue with the model first broached by its authors. O'Sullivan and Carr (2018) directly address their explication of three quadrants of the MPCM where theoretically there should be four, noting "although our illustration of the MPCM presently omits a fourth quadrant [private, impersonal messages], the model conceptually suggests Quadrant IV exists and future scholars may identify communicative episodes exemplifying this currently obfuscated concept" (p. 1174). Without negating the reality that such a quadrant may emerge, the present study (a) supports O'Sullivan & Carr's (2018) assertion that a cleanly-demarcated quadrant of messages low in both personalization and accessibility is not readily present at the contemporary intersection of traditional and computermediated forms of communication (O'Sullivan & Carr, 2018) and (b) offers empirical support for *why* concrete examples of this quadrant remain elusive.

When pre-testing stimulus messages, using a private channel to communicate a message which itself was not personalized but was also not de-personalized (low accessibility, low personalization), appeared to influence interpretations of message personalization such that the message was seen as personalized to the same degree as a message explicitly including the responder's name. In this instance, the medium seemed to embed an important piece of relational information into the message, effectively compensating for its non-personalized verbal content. However, in a similar instance wherein a private, interpersonal channel (low accessibility, direct message) was used to communicate an intentionally de-personalized message, the message's verbal content negated perceptions of personalization (as intended) but also negated perceptions of low accessibility. In other words, when the message's verbal content clearly demonstrated it was not personalized, responders appeared to interpret it also as highly accessible in contradiction to the technical accessibility of a private communication channel. These results suggest the MPCM might benefit from the establishment of clearer boundary conditions denoting when message personalization, message accessibility, and/or the message characteristics potentially responsible for transmitting such information are or are not important in receivers' interpretations of different masspersonal and interpersonal exchanges.

Future research involving the MPCM is also likely to benefit from (a) the development and empirical validation of standardized measures to accurately assess the key constructs of the model and (b) subsequent theorization and testing of how messages come to be imbued with variations in personalization and accessibility. First, researchers should prioritize the establishment of a reliable, valid, and standardized measure for the constructs of message personalization and message accessibility. While the present study was ultimately able to induce and measure the desired manipulations, it was not able to do so in a way that supported an

orthogonal intersection of the two factors which would signal a fully optimized experimental manipulation. Relatedly, the manipulations used here offered the experiment strong internal consistency, but they were exceedingly simple and designed to meet only the very basic conceptual requirements of message personalization and message accessibility forwarded in the MPCM. Established measures of these constructs, could alleviate both issues, allowing future researchers to clearly identify any correlation or covariation of these factors as well as observe and manipulate more complex displays of each message characteristic.

Additionally, such measures could provide a clearer path for understanding if/when fluctuations in receivers' perceptions of message personalization and message accessibility are the consequence of message content, channel characteristics, or an interaction of the two. For example, in separate instances of stimulus pre-testing for the present study, high ratings of personalization were achieved both by explicit addition of the participant's name and by transmitting a message sans any personalization or de-personalization through a private channel. Future research is needed to investigate which verbal and nonverbal message characteristics are most strongly and consistently tied to perceived personalization and accessibility as well as any situational or contextual factors that might alter those associations.

Finally, there are many more paths and nodes of the InterCAP model (Peters et al., 2018) which require additional investigation including the interpersonal outcomes of capitalization for responders. While the current study only aimed to manipulate a single hypothetical capitalization exchange between close friends, the process of capitalization is recursive (Peters et al., 2018) like all information exchange related to sustaining relationships (Altman & Taylor, 1973) with each exchange between partners building on the next. As such, it is important to clarify that the findings of the present study are incapable of indicating whether the effects of message
accessibility, message personalization, and friendship closeness observed here are likely to persist across multiple, similar interactions. Longitudinal research like that conducted by Noon et al. (2023) is required to make such determinations.

#### CONCLUSION

This experimental investigation of capitalization in computer-mediated contexts offers valuable insight for two distinct fields of communication scholarship and their overlap. First, the present study contributes to the study of capitalization. The focus of the study on responders' perspectives addresses a presently sparse area of capitalization scholarship (Peters et al., 2018) while still yielding information beneficial to capitalizers. By demonstrating capitalization message characteristics can affect the quality of response messages they receive, the present study provides evidence that capitalizers may stand to benefit the most from limiting the accessibility and boosting the personalization of their capitalization attempts with close relational partners. In turn, these findings open the door for additional research investigating other capitalization initiation message characteristics that may also impact response quality and the relationships in which these message characteristics are more or less likely to exert influence. Additionally, by showing a persistent effect of message personalization on responders' interpretations of interpersonal engagement with and relational communication quality of capitalization attempts, the present study establishes a foundation for understanding the mechanisms through which capitalization might help build closer relationships or, conversely, contribute to a decline in their status.

Next, as a test of the MPCM (O'Sullivan & Carr, 2018), this study holds broader implications for the study of computer-mediated communication. The findings of the present study support much of what is suggested by the MPCM, showing that message characteristics made more conspicuous by the use of CMC do have an observable impact on relational communication processes which were, at one time, primarily the province of interpersonal communication research. Moreover, the results of stimulus pre-testing for manipulations of

68

message personalization and accessibility highlight the need to further refine the model and develop methods for accurately measuring its core constructs.

Finally, the present study found support for multiple predictions derived from a thorough application of CMC theory to the process of capitalization. By evincing the impact of message characteristics central to the MPCM (O'Sullivan & Carr, 2018) on capitalization processes, the present study builds on previous research investigating capitalization in the context of social media—a relatively new forum that allows for the masspersonal sharing of information previously constrained to interpersonal interactions—and shows how future instantiations of this research can be refined. Furthermore, the results of the study, along with its conceptualization and design, provide a roadmap for studying the effects of computer-mediation on capitalization beyond just social media and bespeak the utility of such an approach.

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# **APPENDIX A: TABLES**

Table 1. Pre-Test C	apitalization	Initiation	Stimulus	Messages
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Accessibility Induction	Dynamic Phrasing	Plain Phrasing
Low Accessibility	Personalized: "[Participant	Personalized: "I have some
(Direct Message)	Name]! Do you know who	exciting news [Participant
	just got hired to do their	Name]. I just got hired to
"You receive a notification on	dream job? it's me!!"	do my dream job!
your smart phone. It says you		
have a direct message (e.g., text	Non-Personalized: "Does	Non-Personalized: "I have
message, Messenger® DM,	anyone know who just got	some exciting news for
Chat) from your friend. The	hired to do their dream	everyone. I just got hired
direct message reads:"	Job? it's me!!"	to do my dream job!"
<b>YY</b> , <b>1</b> A <b>11</b> 01 01 0		
High Accessibility	Personalized: "[Participant	Personalized: "I have some
(Social Media Message)	Name]! Do you know who	exciting news [Participant
	just got hired to do their	Name]. I just got hired to
You receive a notification on	dream job? it's me!!"	do my dream job!
your smart phone. It says your		
friend <b>[tagged you in a social</b>	Non-Personalized: "Does	Non-Personalized: "I have
media post OR [posted to	anyone want to know who	some exciting news for
social mediaj. The social media	just got hired to do their	everyone. I just got hired
post reads:	uream job? it's me!!"	to do my dream job!

Measured Construct	Scale Items
Message Personalization	This message is almost identical to something real my friend would
	say when interacting with me personally.
	This message was personalized for me.
	This message was written with our unique relationship as friends in
	mind.
	This message was NOT written distinctly for me as an individual. *
	The message felt like it took into account my previous interactions with the sender.
	The message made me feel like the sender was paying attention to me.
	This was a generic message. *
	The message was crafted with thought and care.
	The message made me feel like the sender cared about our
	relationship specifically.
	The message felt like it was created with me in mind.
Message Accessibility	The ONLY people who can see this message are me and my friend.
	Other people will likely see this message. *
	Only my friend and I have access to this particular message.
	This message was sent exclusively from my friend to me.
	This message is easily accessible to people other than me and my friend. *
	I feel like people other than me were capable of seeing this message.*
	The message seemed like it was meant for only me to see.
	I feel like the message was private between me and my friend.
	This message was sent in a way that excluded people other than me
	from seeing it.
	I felt like I was the only one who had access to this message.
Response Quality	Emojis, or GIFs).
	I would reply to my friend by [writing a direct message of my own] OR [by writing a comment on their post].
	I would wait before responding to this message in any way. *
	I would NOT respond at all to this message. *
	I would put effort into personalizing my response to my friend.
	I would react to my friend's good fortune enthusiastically. **
	I might give my friend the impression that I am even more happy
	and excited than they are. **
	I would ask my friend questions and show genuine concern about
	the good event. **

 Table 2. Scale Items Generated for Study Specific Measures

Note: \* = reverse coded item; \*\* = item revised from PRCA scale (Gable et al., 2004)

Scale (a)	Scale Item	<b>Factor Loading</b>
Message Personalization	This message was personalized for me.	.89
$(\alpha = .92)$		_
	This message was NOT written distinctly for me as an individual.*	.78
	This message made me feel like my friend was paying attention to me.	.83
	This message made me feel like my friend cared about our relationship specifically.	.79
	This message felt like it was created with me in mind.	.89
Message Accessibility $(\alpha = .96)$	Other people will likely see this message.*	.84
	Only my friend and I have access to this particular message.	.92
	This message was sent exclusively from my friend to me.	.89
	I felt like the message was private between me and my friend.	.93
	I felt like I was the only one who had access to this message.	.94
Relationship Closeness (α = .92)	My relationship with my friend is close.	.86
	My friend and I disclose important personal things to each other.	.81
	My friend and I have a strong connection.	.89
	My friend and I want to spend time together.	.82
	My relationship with my friend is important in my life.	.82
Response Quality $(\alpha = .83)$	I would reply to my friend by (writing them a direct message of my own/writing a comment on their post).	.73
	I would NOT respond at all to this message.*	.77
	I would put effort into personalizing my response to my friend.	.66
	I would react to my friend's good fortune enthusiastically.	.84
Message Realism (α = .95)	In general, the message you saw was realistic.	.93
	In general, the message you saw was believable.	.98

**Table 3.** Final Scale Reliabilities and Factor Loadings

Note: \* = reverse coded item.

		Accessibility		lity Personalization	
Factor	Condition	M	SD	M	SD
Personalization	Name $(n = 57)$	<b>3.49</b> *	1.73	$4.69^{*}$	1.29
	Everyone $(n = 58)$	1.84*	.94	$2.66^{*}$	1.06
Accessibility	Low $(n = 56)$	$3.28^{*}$	1.86	3.50	1.56
	High $(n = 59)$	$2.07^{*}$	1.05	3.82	1.55
Personalization x Accessibility	Name/Low (a) $(n = 27)$	4.74 <sup>bcd</sup>	1.41	4.46 <sup>cd</sup>	1.39
5	Name/High (b) $(n = 30)$	2.37ª	2.37	4.89 <sup>cd</sup>	1.18
	Everyone/Low (c) $(n = 29)$	<b>1.92</b> <sup>a</sup>	.99	2.60 <sup>ab</sup>	1.13
	Everyone/High (d) $(n = 29)$	<b>1.76</b> <sup>a</sup>	.90	2.71 <sup>ab</sup>	1.01

 Table 4. Initial Personalization and Accessibility Factor Testing

Note: \* = p < .001; a,b,c,d = p < .001 between corresponding conditions; bold text used to highlight unexpected results in between groups differences.

		Access	Accessibility		lization
Factor	Condition	M	SD	M	SD
Personalization	Name $(n = 57)$	3.49	1.73	$4.69^{*}$	1.29
	No Name $(n = 59)$	3.11	2.14	3.45*	1.64
Accessibility	Low $(n = 56)$	$4.77^{*}$	1.50	4.55*	1.27
	High $(n = 60)$	1.92*	1.15	3.60*	1.74
Personalization x Accessibility	Name/Low (a) $(n = 27)$	4.74 <sup>bd</sup>	1.41	<b>4.46</b> <sup>d</sup>	1.39
·····y	Name/High (b) (n = 30)	2.37 <sup>acd</sup>	1.11	<b>4.89</b> <sup>d</sup>	1.18
	No Name/Low (c) $(n = 29)$	4.79 <sup>bd</sup>	1.61	4.63 <sup>d</sup>	1.16
	No Name/High (d) $(n = 30)$	1.47 <sup>acd</sup>	1.01	2.31 <sup>abc</sup>	1.15

Table 5. Revised Personalization and Accessibility Factor Testing

Note: \* = p < .001,  $^{a,b,c,d} = p < .05$  between corresponding conditions, bold text used to highlight unexpected between group findings.

Scale Item	Message	Message	Message	Friendship
	Personalization	Accessibility	Realism	Closeness
The message stated the name of a single intended recipient.	.99			
The message indicated I was the intended recipient by using my name.	.98			
The sender personalized the message by using my name.	.98			
The message was sent privately		.95		
The message appeared in a forum where other people could see it. *		.91		
Because of how it was sent, I am the only person with access to this specific message.		.94		
In general, the message was realistic.			.96	
In general, the message was believable.			.94	
My relationship with my friend is close.				.86
My friend and I disclose important personal things to each other.				.71
My friend and I have a strong connection.				.89
My friend and I want to spend time together.				.73
My relationship with my friend is important in my life.				.80

Table 6. Scale Items and Associated Factor Loadings for Manipulation Check Measures

Note: \* = reverse coded item.

Scale Item	Response	Rel. Comm.	Interpersonal
	Quality	Quality	Engagement
I would reply to my friend by	.80		
own / comment on their post.			
I would NOT respond at all to this	.73		
message. *			
I would put effort into	.70		
personalizing my response to my			
I would react to my friend's good	.66		
fortune enthusiastically.			
My friend tried to move		.67	
communication to a deeper level.			
My friend acted like we were good friends.		.82	
My friend seemed to desire further communication.		.81	
My friend seemed to care if I liked		.81	
them.			
Distant / Nearby			.84
Close / Far *			.90
Together / Separate *			.90
Proximal / Distant			.66

Table 7. Scale Items and Associated Factor Loadings for Dependent Variable Measures

Note: = reverse coded item

		Accessibility		Persona	lization
Factor	Condition	M	SD	M	SD
Personalization	Name $(n = 193)$	<b>4.03</b> *	2.53	$6.59^{*}$	.63
	Everyone $(n = 183)$	<b>2.70</b> *	1.94	1.42*	.69
Accessibility	Low $(n = 183)$	5.24*	1.92	4.07	2.68
	High $(n = 193)$	$1.62^{*}$	.97	4.08	2.67
Personalization x Accessibility	Name/Low (a) $(n = 94)$	6.42 <sup>abd</sup>	.78	6.59 <sup>cd</sup>	.63
5	Name/High (b) $(n = 99)$	1.75 <sup>ac</sup>	1.10	6.60 <sup>cd</sup>	.62
	$\frac{(n - yy)}{\text{Everyone/Low (c)}}$	3.99 <sup>abd</sup>	1.98	1.42 <sup>ab</sup>	.75
	$\frac{(n - 69)}{(n - 94)}$ Everyone/High (d) (n = 94)	1.49 <sup>ac</sup>	.79	1.42 <sup>ab</sup>	.63

**Table 8.** Means and Standard Deviations for Main Study Personalization and Accessibility

 Factor Testing

Note: \* = p < .001; a,b,c,d = p < .001 between corresponding conditions; bold text used to highlight unexpected results in between groups differences.

Condition	Resp. Quality	Engagement	Com. Quality
	<i>M</i> (SD)	<i>M(SD</i> )	M(SD)
Personalized, Low Accessibility (a) $(n = 94)$	6.40 <sup>d</sup>	5.45 <sup>bd</sup>	5.38 <sup>bd</sup>
	(.76)	(1.30)	(1.11)
Non-Personalized, Low Accessibility (b) $(n = 89)$	6.18 <sup>d</sup>	4.50 <sup>a</sup>	4.33 <sup>ac</sup>
	(.71)	(1.42)	(1.24)
Personalized, High Accessibility (c) $(n = 99)$	6.07 <sup>d</sup>	4.94 <sup>d</sup>	5.36 <sup>bd</sup>
	(1.06)	(1.38)	(.94)
Non-Personalized, High Accessibility (d) $(n = 94)$	5.68 <sup>abc</sup>	4.39 <sup>ac</sup>	4.22 <sup>ac</sup>
	(1.10)	(1.42)	(1.31)

Table 9. Means and Standard Deviations by Condition for each Dependent Variable

Note: <sup>a, b, c, d</sup> = significantly different than the corresponding condition at the p < .001 level based on Tukey HSD post-hoc test of between group differences following the results of a one-way ANOVA.

Condition	Message Realism <i>M</i> (SD)	Friendship Closeness <i>M</i> (SD)
Personalized, Low Accessibility (a)	5.75°	6.30
(n = 94)	(1.20)	(.62)
Non-Personalized, Low Accessibility (b)	5.67°	6.29
(n = 89)	(1.35)	(.69)
Personalized, High Accessibility (c)	5.08 <sup>abd</sup>	6.30
(n = 99)	(1.57)	(.72)
Non-Personalized, High Accessibility (d)	5.86 <sup>c</sup>	6.26
(n = 94)	(1.01)	(.67)

Table 10. Means and Standard Deviations by Condition for Covariates

Note: <sup>a, b, c, d</sup> = significantly different than the corresponding condition at the p < .001 level based on Tukey HSD post-hoc test of between group differences following the results of a one-way ANOVA.

# **APPENDIX B: STIMULI & MEASURES**

## **Main Study**

## **Participant Prompts and Procedures**

After providing informed consent and agreeing to participate in the online study via Qualtrics, participants were guided through the prompts described below. Direct prompts provided to participants appear in quotations and the placement of response items and measures throughout the survey is indicated by brackets. Measures and instructions for their use provided to participants are located in the section following prompts and procedures.

"To help focus your attention on a proposed interaction between yourself and a specific target individual, you will be asked to provide the first names of yourself and a close friend. This information is NOT used to identify participants and will be deleted prior to researchers storing and analyzing survey data.

To generate messages for each participant, we request that you enter **YOUR** first name **(ONLY first name)** in the space provided below."

[Text Box: participant first name]

"Now, please take a moment to think of someone you consider a close friend from whom you might receive a celebratory message. By close friend we mean a non-romantic relational partner with whom you exchange a great deal of personal information, who is ready and willing to provide support when needed and is someone with whom you share multiple interests. This should also be someone you have had conversations with about how close your friendship is<sup>2</sup>. After identifying this person, please enter THEIR first name (ONLY first name) in the space provided below."

[Text Box: first name of close friend]

[Friend Closeness Measure; Unidimensional Relational Closeness Scale (Dibble et al., 2012)]

"Scenario: Imagine your close friend, \**close friend's name inserted her*\*, has recently talked to you about applying for new jobs (related to their current or desired career) which they would find very rewarding.

On the next page a situation will be described in which you see a message written by *\*close friend's name inserted her\** involving good news about one of these jobs."

[Random Assignment to Message Condition]

<sup>&</sup>lt;sup>2</sup> The preceding sentences offer participants a description of "close friend" written by the author and based on findings from Parks and Floyd's (1996) qualitative investigation of how people distinguish close friendships from other friendships.

Personalized/Low Accessibility Message

"You receive a notification on your smart phone. It says you have a **direct message (e.g., text message, Messenger**® **DM, Chat)** from *\*close friend's name inserted her\**. The **direct message** reads:

"I have some exciting news *\*participant's name inserted here\**. I just got hired to do my dream job!"

Non-Personalized/Low Accessibility Message

"You receive a notification on your smart phone. It says you have a **direct message (e.g., text message, Messenger® DM, Chat)** from *\*close friend's name inserted her\**. The **direct message** reads:

"I have some exciting news for everyone. I just got hired to do my dream job!"

Personalized/High Accessibility Message

"You receive a notification on your smart phone. It says *\*close friend's name inserted her\** tagged you in a social media post. The social media post reads:

"I have some exciting news *\*participant's name inserted here\**. I just got hired to do my dream job!"

Non-Personalized/High Accessibility Message

"You receive a notification on your smart phone. It says *\*close friend's name inserted her\** **posted something on social media**. The **social media post** reads:

"I have some exciting news for everyone. I just got hired to do my dream job!"

[Message Personalization Measure]

[Message Accessibility Measure]

[Message Realism Measure]

[Anticipated Response Measure]

[Relational Communication Quality Measure; RCS Subscale Items (Burgoon & Hale, 1987)]

[Interpersonal Engagement Measure; Electronic Propinquity Scale (Walther & Bazarova, 2008)]

"Finally, please take a moment to answer 3 standard demographic questions."

[Demographic Items]

# Measures and Related Instructions

Each of the measures used in the main study are provided here. The instructions provided to participants with each measure are presented prior to corresponding scale items. The order of scale items on all multi-item measures was randomized for each participant.

### Friend Closeness (URCS; Dibble et al., 2012)

"Instructions: The following questions refer to your relationship with the close friend you just identified. Please think about your relationship with \**close friend's name inserted her*\* when responding to the following statements using the scale provided." (1 = strongly disagree to 7 = strongly agree)

- 1. My relationship with my friend is close.
- 2. My friend and I disclose important personal things to each other.
- 3. My friend and I have a strong connection.
- 4. My friend and I want to spend time together.
- 5. My relationship with my friend is important in my life.

#### Message Personalization

"**Instructions:** Using the scale provided, please evaluate each of the following statements about the message you saw written by *\*close friend's name inserted her\**." (1 = *strongly disagree* to 7 = *strongly agree*)

- 1. The message stated the name of a single intended recipient.
- 2. The message indicated I was the intended recipient by using my name.
- 3. The sender personalized the message by using my name.

### Message Accessibility

"**Instructions:** Using the scale provided, please evaluate each of the following statements about the message you saw written by *\*close friend's name inserted her\**." (1 = strongly disagree to 7 = strongly agree)

- 1. The message was sent privately.
- 2. The message appeared in a forum where other people could see it.
- 3. Because of how it was sent, I am the only person with access to this specific message.

#### Message realism

"In general, the message was..." (evaluate each item; 1 = *strongly disagree* to 7 = *strongly agree*)

- 1. Realistic
- 2. Believable

## Anticipated Response Quality

"**Instructions:** Using the scale provided, please evaluate each of the following statements about your potential response to the message you saw written by *\*close friend's name inserted her\**" 1 = *strongly disagree* to 7 = *strongly agree*)

- 1. I would reply to my friend by [writing them a direct message of my own / writing a comment on their post].
- 2. I would NOT respond at all to this message.
- 3. I would put effort into personalizing my response to my friend.
- 4. I would react to my friend's good fortune enthusiastically.

<u>Relational Communication Quality</u> (RCS – Intimacy/Depth Subscale; Burgoon & Hale, 1987) "Instructions: Using the scale provided, please evaluate each of the following statements concerning how you would feel following this exchange of messages (*\*close friend's name inserted her\**'s message and your response)." (1 = *strongly disagree* to 7 = *strongly agree*)

- 1. My friend tried to move the communication to a deeper level.
- 2. My friend acted like we were good friends.
- 3. My friend seemed to desire further communication.
- 4. My friend seemed to care if I liked them.
- 5. My friend made the exchange superficial<sup>3</sup>

# Interpersonal Engagement (EPS; Walther & Bazarova, 2008)

"Instructions: Below you will be presented with several opposing adjective pairs and selection points representing a continuum between the two terms. Please select the point for each adjective pair that best describes how you felt in relation to your friend during the hypothetical capitalization exchange (your friend's message and your response)."

- 1. Distant \_\_\_\_\_ Nearby
- 2. Close \_\_\_\_\_ Far
- 3. Together \_\_\_\_\_ Separate
- 4. Proximal \_\_\_\_\_ Remote
- 5. Disconnected \_\_\_\_ Connected<sup>4</sup>

# Demographic Items

- 1. Sex "Which of the following most closely aligns with how you identify?" [Male, Female, Non-Binary, Prefer not to respond, Prefer to self-describe]
- 2. Age "Using only numerals, please indicate your current age. (example: 24)"
- 3. Race/Ethnicity Which race/ethnicity below aligns with how you identify (please select all that apply)[White, Black or African American, Latinx, Asian/Pacific Islander/Desi-American, Other, Prefer not to respond, Prefer to Self-Describe.]

<sup>&</sup>lt;sup>3</sup> Item presented to participants, but based on measurement model testing, was excluded from final analysis.

<sup>&</sup>lt;sup>4</sup> Item presented to participants, but based on measurement model testing, was excluded from final analysis.