UNIVERSITY OF CALIFORNIA

Santa Barbara

An Intergroup Approach to Understanding Multiple Social Identities in Online Social Networking Contexts

A dissertation submitted in partial satisfaction of the

requirements for the degree Doctor of Philosophy

in Communication

by

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March 2022

The dissertation of Spencer Byron Nicholls is approved.

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December 2021

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Acknowledgements

If I were to thank every person that has helped me along the past several years with this dissertation, the length of this document would likely double. I have been so blessed with a supportive, caring community over the past several years as I have revised, fretted over, and finally finished this dissertation. So, in the spirit of multiple salient group identification:

Thank you to all the amazing faculty, staff, and students in the Department of Communication. I always knew that I was welcome, valued, and encouraged by being in this department and surrounded by such intelligent, thoughtful people. Special thanks to my committee members, Drs. Howie Giles and Jenn Gibbs for your theoretical and methodological expertise and kindness over the years. And, without a doubt, my advisor Dr. Ron Rice. Were it not for you and your steadfast support, encouragement, inspiration, occasional nagging, patience, and genuine kindness I most certainly wouldn't be here. You have shown me such support through the ups and downs of my time in graduate school. Thank you from the bottom of my heart.

Additional thanks to all those from UCSB and my academic family who helped me (implicitly and explicitly) with my dissertation. My phenomenal research assistants who spent so many hours coding and working with me to make these studies a reality: Hallie Bayer, Allison van Dorsten, Angelica Goetzen, and Michele Skinner. Thanks to Ben Smith, for his statistical expertise and friendship. Thanks to Avi McClelland-Cohen, Nicole Zamanzadeh, Shawn Warner, Katie Harrison, Audrey Abeyta, Drea Figueroa-Caballero, Callie Parrish, Matt Giles, Traci Gillig, Lauren Keblusek, Ruby Callahan, and all the other

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It really does take the support and steadfast caring of all these groups—and more—to make this dissertation a reality. I am forever grateful to everyone that helped me along this journey.

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December 2021

Education

PhD *University of California, Santa Barbara,* 2021
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Dissertation Title: *An Intergroup Approach to Understanding Multiple Social Identities in Online Social Networking Contexts*
Doctoral Committee: Ronald E. Rice (Chair), Jennifer Gibbs, Howard Giles

MA *University of California Santa Barbara*, 2016
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BA *University of Arizona*, 2012
Communication

Appointments

University of California Santa Barbara, Writing Program
Graduate Teaching Assistant September 2018–March 2018

University of California Santa Barbara, Department of Communication
Graduate Teaching Associate August–September 2017, April–June 2018, 2019

University of California Santa Barbara, Department of Communication
Graduate Teaching Assistant August 2013–September 2018

Research

Research Interests

My research areas of interest are broadly situated around the use of new media technologies and identity—particularly social or group identities. Specifically, I take a theoretical approach to understanding the interplay between group and personal identity online, and how those identities affect communicative processes such as accommodation and message processing.

Publications

Nabi, R. L., Huskey, R., **Nicholls, S. B.**, Keblusek, L., & Reed, M. (2019). When audiences become advocates: Dissonance-driven behavior change through health message posting in social media. *Computers in Human Behavior, 99*: 260–267. https://doi.org/10.1016/j.chb.2019.05.030

Miller, C., Dunbar, N. E., Jensen, M. L., Massey, Z. B., **Nicholls, S. B.,** Lee, Y-. H., Anderson, C. E., Adams, A. S., Elizondo Cecena, F. J., Thompson, W. M., Wilson, S. N. (2019). Training law enforcement officers to identify reliable deception cues with an interactive digital game.

International Journal of Game-Based Learning, 9(3): 1–22. https://doi.org/10.4018/ijgbl.2019070101

Dunbar, N. E., Miller, C., Lee, Y-. H., Jensen, M. L., Anderson, C., Adams, A. S., Elizondo Cecena, F. J., Thompson, W., Massey, Z., **Nicholls, S. B.**, Ralston, R., Donovan, J., Mathews, E., Roper, B., & Wilson, S. (2018). Reliable deception cues training in an interactive video game. *Computers in Human Behavior, 85*: 74–85. https://doi.org/10.1016/j.chb.2018.03.027

Nicholls, S. B., & Rice, R. E. (2017). A dual-identity model of responses to deviance in online groups: Integrating social identity theory and expectancy violations theory. *Communication Theory, 27*(3): 243–268. https://doi.org/10.1111/comt.12113

Conference Papers (Refereed)

Nicholls, S. B. (2018, November). *Group co-presence on social media and its effects on social movement mobilization.* Paper presented at the 104th annual conference of the National Communication Association, Salt Lake City, UT.

Nicholls, S. B. (2018, May). *An extension and application of intergroup principles to multiple co-present online social identities.* Paper presented at the 68th annual conference of the International Communication Association. Prague, Czech Republic. **Top Student Paper in the Intergroup Communication Interest Group.**

Nabi, R. L., **Nicholls, S. B.**, Huskey, R., Keblusek, L., & Reed, M. (2017, May). *When audiences become advocates: Dissonance-driven behavior change through health message posting in social media*. Paper presented at the 67th annual conference of the International Communication Association, San Diego, CA.

Nicholls, S. B., & Rice, R. E. (2016, November). *Integrating social identity theory and expectancy violations theory to understand responses to deviance in online communities.* Paper presented at the 102nd annual conference of the National Communication Association, Philadelphia, PA.

Nicholls, S. B. (2015, November). *Advancing expectancy violations theory to online mediated environments*. Poster presented at the 101st annual conference of the National Communication Association, Las Vegas, NV.

Conference Panels and Presentations

Dunbar, N. E., Adams, A., **Nicholls, S. B.,** Miller, C. Jensen, M. L., Anderson, C., Massey, Z, Lee, Y., Elizondo Cecena, F. J., Thompson, W., & Wilson, S., (2017, May). *VERITAS: The gamification of deception training*. Invited talk presented at the 67th annual conference of the International Communication Association, San Diego, CA.

Adams, A., Jensen, M. L., Dunbar, N. E., Miller, C. H., Wilson, S. N., Lee, Y., **Nicholls, S. B.**, Anderson, C. E., Massey, Z. B., Elizondo, J., Thompson, W., & Ralston, R. (2017, January). *Exploring learner-centered factors in the development of a digital deception detection training game.* Invited talk presented at the Credibility Assessment & Screening Technologies Symposium at the 50th Hawaii International Conference on System Sciences, Waikoloa, HI.

Dunbar, N. E., Adams, A., **Nicholls, S. B.,** Miller, C. Jensen, M. L., Elizondo Cecena, F. J., Thompson, W., Wilson, S., & Lee, Y. (2016, November). *VERITAS: Designing a digital game to train law enforcement about nonverbal cues to deception*. Invited talk presented at the 102nd annual conference of the National Communication Association, Philadelphia, PA.

Research Appointments

Graduate Student Researcher, University of California Santa Barbara, Department of Communication (Summer, Fall 2016; Summer 2017) Principal investigator: Norah Dunbar

Undergraduate Research Assistant, University of Arizona, Department of Communication. (2012) Principal investigator: Kevin Coe

Honors and Awards

Top Student Paper, Intergroup Communication Interest Group, ICA	2018
UCSB Doctoral Student Travel Grant, *$1350*	2018
UCSB Department of Communication Edwin Schoell Award for Excellence in Teaching	2016
UCSB Department of Communication Outstanding Graduate Student Service Award	2016

Teaching

Teaching Associate (Instructor of Record)- UCSB

Lower Division (Communication)

Communication Theory (COMM 89). Served as instructor of record that provided students an introduction to theoretical perspectives in the communication discipline. Summer 2017.

Upper Division (Communication)

Nonverbal Communication (COMM 111). Served as instructor of record for upper division course on nonverbal communication. The course focused on how nonverbal codes influence and alter communicative processes, both in-person and online. Spring 2018, Spring 2019.

Lower Division (Writing Program)

Academic Writing (WRIT 2). Developed a course designed to provide genre awareness and analysis of writing conventions to undergraduate students. Major focus on revision and analysis of writing style, identification of academic discourse communities, and writing in response to rhetorical situations. Fall 2018, Winter 2019.

Teaching Assistant- UCSB

Lower Division (Communication)

Introduction to Communication (COMM 1). Led 3 discussion sections each week that furthered topics and issues discussed in lecture. Responsible for implementing course activities, grading assignments, keeping records of attendance, and assigning grades. Fall 2013, Winter 2014, Winter 2015, Fall 2016, Winter 2017, Summer 2018.

Communication Research Methods (COMM 88). Led 3 discussion sections each week that gave students an introduction to the research process. Worked closely with students as they developed and implemented their own research project during the quarter. Responsible for managing in-class study results, grading assignments, keeping records of attendance, and assigning grades. Spring 2014, Spring 2016.

Communication Theory (COMM 89). Led 3 discussion sections each week that gave students an introduction to theoretical perspectives in the communication discipline. Responsible for grading oral presentations and written assignments, keeping records of attendance, and assigning grades. Spring 2015.

Statistical Analysis for Communication (COMM 87). Led three discussion sections and three lab sections each week that introduced students to conceptual statistical principles, data analysis, and SPSS. Fall 2017.

Upper Division (Communication)

Interactive Media (COMM 115). Worked with students to develop proposal for alterations and additions to smart devices and forwarded top papers to CEO. Responsible for developing test questions, maintaining course management site, proctoring exams, and giving feedback on paper assignments. Fall 2014.

Social Networks (COMM 169). Worked with students on project to understand and apply social networking principles to news events. Responsible for grading assignments and exams, creating test questions, and maintaining course management site. Fall 2015.

Communication and Conflict (COMM 121). Worked with students on several iterations of a project that applied academic and nonacademic conflict management strategies to existing conflicts. Responsible for grading assignments and exams, developing test questions, and keeping records of attendance and class participation. Winter 2016.

Communication and Emotion (COMM 139). Worked with students on theory application paper that applies theories of emotion to life events. Responsible for grading assignments and exams, creating test questions, and maintaining course management site. Spring 2017.

Nonverbal Communication (COMM 111). Worked with students to apply nonverbal communication concepts and principles toward analyzing a social group that is not familiar to them. Guided students on finding and analyzing academic literature, culminating in writing an APA style research paper. Winter 2018.

Invited Lectures

Factorial ANOVA. Statistical Analysis for Communication (COMM 87). University of California, Santa Barbara. May 22, 2019.

Impression Management. Nonverbal Communication (COMM 111). University of California, Santa Barbara. March 8, 2018.

Vocalics. Nonverbal Communication (COMM 111). University of California, Santa Barbara. January 25, 2018.

Measurement. Statistical Analysis for Communication (COMM 87). University of California, Santa Barbara. October 6, 2018.

Intergroup Conflict. Communication and Conflict (COMM 121). University of California, Santa Barbara. March 25, 2016.

The First Day of Class. UCSB Campus-Wide Teaching Assistant Training. University of California, Santa Barbara. September 22, 2016.

Expectancy Violations Theory. Communication Theory (COMM 89). University of California, Santa Barbara. May 14, 2015.

Effective Persuasion in Public Speaking. Public Speaking (COM 015-2). Westmont College. April 9, 2015.

Dual Screens in Interactive Media Use. Interactive Media (COMM 115). University of California, Santa Barbara. December 1, 2015.

Service

Department Service

Panelist; UCSB Department of Communication Recruitment Weekend (2016, 2018). Presented on a panel to prospective graduate students discussing expectations of the program.

Panelist; Lambda Pi Eta Fall Grad School Panel, UCSB (2017). Presented on a Q&A panel about graduate school, the application process, GREs, and choosing a graduate program to honors students in the Department of Communication.

All-Grad Representative; Graduate Student Advisory Committee to the Chair, UCSB (2016–2017). Served as the all-grad representative and de-facto chair of a committee which presented graduate students' concerns and issues to the department faculty. Duties include: attending faculty meetings, coordinating and running board meetings and department graduate student body meetings, coordinating alumni speakers and brown-bag discussions.

Researcher; Program Learning Outcome Evaluation for the Department of Communication, UCSB (2015-2016). Worked with other faculty and graduate students on an evaluation of program learning outcomes being met in department courses. Analyzed and coded syllabi and course papers, assisted in creating curriculum map of current course offerings and their emphases.

Committee Member; CommTech, UCSB (2015–). Member of a committee that solves technological issues for department members, recommends upgrades and purchases, and supports department personnel.

Lead TA/TA Liaison; Graduate Student Advisory Committee to the Chair, UCSB (2015–2016). Served as a member of committee which presented graduate students' concerns and issues to the department chair as a liaison for all department TAs. Assisted faculty TA coordinator in appropriately placing TAs to their respective classes. Addressed concerns from TAs about placement in classes, and facilitated discussion about improvements to classes via feedback from current TAs.

Graduate Representative; Spring Insight, UCSB (2015, 2017, 2018). Promoted the department at UCSB's annual undergraduate recruitment weekend. Discussed benefits of being a communication major with potential students, as well as avenues of employment using a degree in communication. Advised potential students on courses which best reflect their interests (both academically and professionally), and how to succeed should they declare communication as their major.

Graduate Student Advisor; Lambda Pi Eta Honors Society, UCSB (2014–2019). Advise undergraduate honors association members in preparing for tutoring sessions, applying to graduate school, professional development, and community service.

Coordinator; Lambda Pi Eta Choice Scholar Lecture, UCSB (2015, 2016, 2017, 2018, 2019). Assisted undergraduate honors association members in setting up and hosting the annual choice scholar lecture, as well as the reception following the event. Met with students prior to the lecture to determine how best to be of assistance and coordinate with leadership.

Volunteer; Graduate Recruitment Weekend Reception, UCSB (2015, 2016, 2018). Assisted in preparing and coordinating a reception for department recruits following a presentation of graduate research. Met and connected with recruits to discuss benefits of joining the graduate program at UCSB.

Panelist; TA Veterans Panel in COMM 500, UCSB (2014, 2015, 2016, 2017). Discussed various issues with new department TAs about how to best enhance their pedagogical ability, choose classes that align with interests, and addressed concerns about TAing in the department.

University Service

Participant; Graduate Student Teaching Symposium, Teaching and Learning Excellence Series (TALES), UCSB (May, 2018). Participated in a two-day intensive workshop designed to increase pedagogical effectiveness as well as provide teaching strategies and innovations.

Associate, Summer Teaching Institute for Associates, UCSB (June – October, 2017). Participated in an intensive summer-long workshop designed to help first-time teaching associates succeed in the classroom.

Panelist and breakout session chair; Campus Teaching Assistant Orientation, UCSB (September, 2015). Presented on a campus wide panel for incoming university TAs. Organized and ran two hour-and-fifteen-minute workshops on strategies to succeed in the classroom on the first day of class.

Participant; Lead TA Institute, UCSB (August, 2015). Participated in a two-day intensive workshop for lead TAs led by the Office of Instructional Development.

Professional Service

Ad-hoc Reviewer, Social Media + Society. (2019)
Ad-hoc Reviewer, Journal of Computer Mediated Communication. (2018)
Reviewer, International Communication Association, Intergroup Division (2018).
Reviewer, International Communication Association, Communication and Technology Division (2015, 2016, 2017, 2018).
Reviewer, International Communication Association, Mass Communication Division (2016).
Reviewer, National Communication Association, Communication and the Future Division (2015).

Association Memberships

International Communication Association
National Communication Association
Lambda Pi Eta

ABSTRACT

An Intergroup Approach to Understanding Multiple Social Identities in Online Social Networking Contexts

by

Spencer Byron Nicholls

Interaction on social networking sites (SNS) occurs in an environment that is rife with a multitude of cues that can prime interpersonal and/or group identities. While many studies on intergroup phenomena have looked at how SNS alter theoretical processes such as group identity salience and communication accommodation, the role of multiple identities in this environment remains underexplored. One area of study that implicitly addresses this multiple identity salience—context collapse—often does so from the perspective of selective self-presentation and privacy concerns but does not address how those multiple co-present groups affect information processing and interpretation. This dissertation attempts to integrate the two frameworks—noting areas that context collapse and intergroup communication can mutually inform each other. I then present two studies that attempt to close this theoretical gap.

The first study tests the boundary conditions of identity salience in SNS (specifically, Facebook), and how group identity may be present and serve as a cue for memory/engagement with posts in a Facebook News Feed. Using a novel browsing task to

capture participants' unique social networks, results from Study 1 show that participants do tend to think of their Facebook "friends" in terms of distinct identities (such as temporal and spatial grouping, among others), though multiple identity salience is not particularly common. Additionally, while there are a myriad of reasons participants engage or remember specific posts on a Facebook News Feed, group identity does not seem to be a particularly strong cue for message processing.

The second study was an experimental test of how multiple co-present group identities affect accommodation intention and perceptions of the interactants. Participants were randomly assigned to a condition where two fabricated interactants were presented as either from the same identity (Communication student) or multiple identities (Communication student and student from the participant's high school). The interactants from single or multiple groups commented upon scenarios designed to match with two common identities: Communication students and High School students. Participants then answered items related to accommodation intention and perception of the interactants. Results from Study 2 show that multiple identity salience—alone or in concert with relevant scenarios—do not predict accommodation intention but do have effects on perceptions of the interactants. Implications for both studies are discussed regarding the role of group identity salience, multiple group identification, and accommodation.

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INTRODUCTION

Research on interaction in online contexts has expanded in recent years, as the Internet and social networking sites (SNS) become ubiquitous and commonplace forms of mediated interaction. Within this online environment considerable attention has been paid to how online groups function and relate to their members and to their relevant outgroups, as well as to the ability of social media to facilitate and constrain intergroup contact and communication (Carr et al., 2016). While this research often takes an intergroup approach (i.e., how group identities motivate communication between and among individuals; Gallois et al., 2018), social media present an additional challenge for researchers interested in studying group dynamics due to the co-presence of multiple (often overlapping) social groups in an individual's network. This phenomenon of overlapping groups has been examined in relation to its effects on self-presentation and privacy—dubbed "context collapse" (Marwick & boyd, 2010)—however, there is a notable lack of integration between long-established principles of intergroup communication and context collapse research.

Particularly, while context collapse focuses on outward behaviors (e.g., impression management, self-presentation strategies), a yet unexplored facet of this multiple group environment afforded by social media is how users navigate those multiple contexts from an inward perspective—how do users interpret information that is being disseminated *to them* from members of different ingroups, and how do they manage their membership in *multiple* social groups when those groups overlap in various communicative channels online?

Similarly, complex identity environments exemplified by SNS challenge classic intergroup principles and theories that are often studied with a single clear in/outgroup distinction. In these online environments, with a multitude of cues that can prime both

(multiple) group and personal identities, this single in/outgroup experimental paradigm often does not fully explain the complex processes and considerations that exemplify the social networking landscape.

Thus, integrating context collapse into existing intergroup frameworks presents a novel and timely extension of both areas of study. In other words, because of the co-presence of many different individuals who represent different social identities in the same online environments, intergroup principles must be altered and extended to account for new behaviors and attitudes associated with multiple groups, and research on context collapse would benefit by more explicitly integrating intergroup principles. SNS present a uniquely suited venue for this exploration, as multiple social identities are naturally (and, indeed, foundationally) represented and fostered in this environment, allowing for a rigorous and somewhat more naturalistic examination of the underlying intergroup processes that occur.

This integration is the focus of this dissertation. I first discuss intergroup/social identity frameworks that are relevant to interactions on SNS: interpersonal/social identity salience, identity salience online, communication accommodation, and multiple social identity salience. Next, I address context collapse and its tenets, with particular focus on its implicit (though not explicated) reliance on social identities. I then propose several areas where a more explicit focus on intergroup processes and social identity can inform and extend knowledge and research on context collapse and its effects on online interactions, as well as how context collapse challenges and extends intergroup principles.

Finally, two studies initiate this line of research. The studies expand understanding of how individuals using SNS experience and enact these multiple social identities (Study 1; emphasizing context collapse and multiple identity salience), and explain how users of SNS

communicatively navigate and constrain their multiple identities when faced with situations where members from a user's multiple groups are interacting online (Study 2; emphasizing intergroup communication via accommodation).

LITERATURE REVIEW

Intergroup Communication

The thrust of the intergroup approach to communication is that interactions are often based not only on personal identities but on social identities—those identities that are marked by group membership—as well. A group is "a collection of people who have a perception of shared characteristics, interests, goals, history, or activity" (Giles et al., 2010, p. 2). The intergroup approach to communication is strongly rooted in social psychology, and specifically the social identity approach (SIA)—made up of social identity theory (SIT; Tajfel & Turner, 1979) and self-categorization theory (SCT; Turner et al., 1987). Briefly, SIA suggests that our membership in social groups influences our perceptions and behaviors toward relevant outgroups and is primarily concerned with keeping the social (in)group perceived positively—at least from the perspective of the group members. Work focused on intergroup communication, however, does not have to occur only *between* groups but also when group memberships influence message understanding and transmission (Harwood et al., 2005). In other words, it is not necessarily the presence of an out-group that drives (inter)group communicative encounters, but simply that group identity is a lens through which communication occurs. This latter view is the stance I take in this dissertation: group identity can affect communication processes regardless of if there is an outgroup present.

Intergroup/Interpersonal Identity Salience

An important element of SIA is when personal or social identities are salient and affect perception and behavior. Scholars who closely follow SCT principles argue that there is an inherent conflict between personal and social identities: only one can be salient and affect communication at a time (i.e., *functional antagonism*). The saliences of these social

identities, according to SCT, are dependent on accessibility and fit. *Accessibility* refers to the social identities that are readily available and valued, as well as self-evident and perceptually salient in the interaction. For instance, in an online discussion about *Star Wars* an identity as a *Star Trek* fan may be accessible in that interaction as they are both science fiction media.

There are some identities that may be "chronically accessible" (e.g., gender, race)—they are used so often that they become a core anchor for social identification (Hogg & Reid, 2006; Hogg & Tindale, 2005). *Fit* refers to how well the identity can predict and explain behavior and is further subdivided into structural or normative fit. Structural (or comparative) fit refers to how well the categorization accounts for similarities and differences among people (e.g., political orientation in a presidential debate). Normative fit refers to how well the prototypes account for behavior (e.g., members of one political party holding to the principles of that party). If a social identity does not fit the given interaction, individuals will change their identification to an accessible identity that best fits the situation, which may include a different group or even a personal identity. This fit process happens nearly instantaneously, and changes depending on the context of the interaction, conversational topic, and other factors (Hogg & Reid, 2006).

So, returning to the above example, if there is an online discussion about *Star Wars* an identity as a *Dune* fan may be accessible (in that they are both science fiction) but might not (necessarily) fit the interaction itself because it doesn't account for similarities/differences or prototypes of behavior. However, a *Star Trek* fan identity may fit because it provides a structural comparison point even if it isn't distinctly about *Star Wars*.

Moving away from the functional antagonism approach to identity, other scholars argue for the orthogonal and possibly overlapping nature of various identities. This can

include multiple social identities as well as personal identities that may be salient at the same time (e.g., Dragojevic & Giles, 2014; Harwood et al., 2005), which I refer to in this dissertation as *overlapping identity salience*. As an example, interactions with an opposite sex significant other may be both interpersonal *and* intergroup simultaneously. Gangi and Soliz (2016), for instance, suggest that interpersonal interactions are often made up of a "constellation" of social identities. These constellations reflect "an awareness of how those combined ideas create a 'world of meaning' for the conversational or relational partner" (p. 40). The divisions between group and personal identity, then, are a function of how much those various social identities are recognized (either individually or in concert) by the actors in conversation. Similarly, Sim and colleagues (2014) found that individual self-concept is cognitively salient even when ingroup identity is also salient—particularly when the ingroup has high psychological utility (a composite measure of an ingroup's perceived value, identification, and entitativity). Additionally, interactional partners may often take mental shortcuts (i.e., heuristics) to make sense of their partner's communication, and those shortcuts may be predicated upon a social identity. If one interactant, for example, knows the political identification of their partner, it is easier to understand conversations that deal with political issues even though those conversations may be interpersonal in nature.

Thus, while the *functional antagonism* principle of SCT suggests that only one identity (either personal or a single social identity) is salient at a time, I take the stance that interactions can involve some *combination of both personal and social identities, as well as personal identities with multiple social identities*.

Identity Salience Online

In the online context, early research on the social identification model of deindividuation effects (SIDE; Postmes et al., 2000; Reicher et al., 1995) posed that in instances of visual anonymity communicators are likely to relate to other members in terms of their group, not personal, identities if a social group (such as an online forum) is present and salient. This visually anonymous environment, as well as the ability for individuals to easily edit and alter their online personas (see Walther & Parks, 2002), leads to users of online media being sensitive to small cues such as network affiliations, email signatures, and others (Walther & Carr, 2010). SIDE has been successfully applied in more recent online contexts such as social networking despite the lack of visual anonymity in some SNS (Carr et al., 2016). This is especially useful in the presence of small cues and environmental cues (e.g., expectations of professional sites such as LinkedIn to prime professional social identity). These cues are paramount when discussing whether personal or group identity (or some combination of the two) is salient, especially when considering the interactions that may take place in the online context. Carr and colleagues' (2013) research, for instance, supported SIDE effects in social media, finding that strength of group cues was a significant predictor of how individuals viewed ingroup members (with ingroup members who presented stronger cues being rated as more attractive). However, they primed the participants before the experiment with the social identity used in the study, which may not necessarily provide a robust test of how (or if) these group identities naturally manifest in SNS without prompting.

This personal/social identity salience is especially important when studying the complex social identity landscape of SNS. Digital media and intergroup researchers disagree to some extent on the conditions under which social versus personal identities are salient in

this medium. The features of SNS such as name, profile pictures, personal bio, and others mimic the personal identity salience condition in early tests of SIDE, and thus may render group identities less important, or at least less observable, in a research context (Walther, 2009). Thus, as these are "individuating cues," users may be more inclined to see their connections as more interpersonal (rather than social/group-based connections). However, there may also be other cues that prime a social identity embedded within certain "individuating" cues. For instance, a profile picture in early SIDE studies would be an individuating cue, but if the person in the picture is wearing something that primes social identities, such as a university t-shirt, that may allow social identities to become more salient (potentially in concert with increased personal identity salience, as discussed above). Further complicating this issue, it is likely that the different SNS prime personal or social identities in different ways—for example, LinkedIn may prime a general professional identity, while named Twitter feeds may prime a specific professional identity (see, e.g., Walton & Rice, 2013). This has not yet been tested, though there are calls to broaden the scope of research away from just one platform (Rains & Brunner, 2015).

Carr et al. (2016) note, however, that group effects still occur on SNS, despite SIDE predictions about the weak potential for group identity salience (due to individuating visual cues)—particularly in instances where users of SNS voluntarily join explicit groups such as fandom pages. However, research into context collapse and group co-presence (discussed below) asserts that implicit groups (i.e., those not voluntarily joined by users, but rather reflective of how their network and social ties are structured in a given medium, such as family members and work ties) are also predictive of group effects.

To summarize: many scholars attest that even interpersonal interactions can have intergroup components, and that these group effects occur with frequency online in general and on SNS specifically. Depending on the conscious awareness of those identities, this may alter communication with—and evaluation of—the interactant(s) and their messages. Two key questions, then, are: 1) what types of cues in the social networking environment foster group identification, and 2) to what extent do those cues integrate or supersede individuating or personal cues? As these questions occur in what I term a *complex identity environment*, it is quite possible there are multiple cues, some of which stimulate individuation, others that stimulate social identification, and some that may stimulate both.

Communication Accommodation

An additional area of research germane to this dissertation is communication accommodation theory (CAT; Giles et al., 1991). CAT provides a framework for looking at how individuals shift aspects of their communication across different intergroup encounters—either towards (convergence) or away from (divergence) their conversational partner(s)' anticipated or perceived communication style. This shift either aids or hinders identity maintenance goals (affective concerns) and message comprehension/efficacy (cognitive concerns) (Dragojevic et al., 2016). For instance, using current slang with students may signal that you are "young" and "hip" (affective) while aiding comprehension of messages by the youthful receivers (cognitive).

As noted by Dragojevic et al., interlocutors come into a conversation with an initial orientation based on interpersonal, group, and normative considerations. Motivated by affective and cognitive concerns, those initial considerations combine to shape one's psychological accommodative stance (PAS; i.e., immediate and ongoing intentions to

accommodate or not), which in turn predicts psychological intentions and actual accommodative behavior. That behavior then affects positive and negative perceptions of likability, attractiveness, status, and credibility, to name a few. Returning to the above example, by a teacher's using slang, students may find that the teacher is more relatable, which elevates their perceptions of the teacher's attractiveness and status. This may backfire into *over*accommodation, however, where one accommodates too far and produces a boomerang effect (e.g., using too much slang while teaching may be seen as "trying too hard" or as insincere or clueless). While some accommodation is conscious (such as using slang when talking to students), much of accommodation is automatic and relatively sub-conscious, with interlocutors often unaware that they are accommodating at all (e.g., matching rate of speech with people who are excited).

Additionally, accommodation has been treated as both an antecedent and an outcome variable for intergroup communication encounters, with accommodation being both a mechanism for, and a result of, intergroup encounters (Palomares et al., 2016). This is particularly important for this dissertation, as accommodation will be treated as an outcome variable for social identities (and multiple social identities, discussed below) online. However, it is important to mention that the act of (non)accommodation can *itself* lead to differences in group perceptions, which may be a confound in this dissertation study. As an example, a professor who chooses not to accommodate to their students may cause students to see professors in general as credible and professional in a professional role, but perhaps distant and unable to relate to the students.

While CAT has been broadly and prolifically applied in offline contexts (for a meta-analysis, see Soliz & Giles, 2014) it has been shown to have utility when examining online

interactions as well (Gasiorek et al., 2015). In social media, users have been shown to linguistically accommodate toward other users on Twitter (Danescu-Niculescu-Mizil et al., 2011) and toward salient groups' language characteristics, especially when that group is with whom they predominantly interact (Tamburrini et al., 2015). The results from Tamburrini and colleagues suggest that salient social identities online, even in a relatively lean medium such as Twitter, are enough to change one's communicative style (i.e., stimulate accommodation)—and appear to favor affective over cognitive concerns in this environment. In other words, it would appear that for certain Twitter users social identities serve as a way to mark common group membership, as opposed to helping to understand the message itself.

Accommodation to linguistic style is evident in other forms of online communication as well. Members of online travel sites, for instance, have been shown to linguistically accommodate toward other users' styles in reviews (Michael & Otterbacher, 2014), and interactants in instant messaging accommodate temporally (i.e., message length and duration; Riordan et al., 2012) and linguistically (i.e., structural and stylistic message features; Scissors et al., 2009) to their conversational partner. In a recent study, Muir and colleagues (2017) also found evidence that individuals match linguistic style of more powerful individuals in instant-messaging CMC contexts. Similarly, Adams et al. (2018) found accommodation toward *textisms* ("non-standard textual cues such as emoticons, intentional misspellings, and exaggerated capitalizations," p. 474) in text messaging conversations as a function of interpersonal likability and gender (females were more likely to converge in the amount of textisms used).

Accommodating toward in- or outgroup members becomes much more complicated when there are multiple groups that may be more or less salient in a given context, and more

or less frequently engaged. Research on accommodation in and among multiple groups is scant, despite calls to extend this work (Gallois et al., 2005). Hajek (2015) interviewed gay men ages 40 to 53 years old to discuss accommodative tendencies in light of both homosexual and intergenerational group identities simultaneously. He found a predominantly negative midlife gay identity that resulted in both convergence and divergence strategies between potential romantic partners of differing ages to fulfill both approval by younger romantic partners as well as to establish a positive midlife gay identity. Jones and colleagues (1999), in their analysis of dyadic interactions amongst individuals who varied by student/faculty status, race, and gender, found that combinations of social categories produced differing results in interpretability and accommodation strategies (e.g., vocal and nonverbal changes during interaction). The next section on multiple identity salience further explores how multiple identities can be used to guide and constrain interaction from a socio-psychological approach.

Multiple Social Identity Salience

While SCT has been prolifically applied in the area of intergroup communication, the presence of individuals from multiple social identities interacting in the same space online challenges the functional antagonism assumption of the theory, as SCT is often studied in the context of a single (usually primed) identity. Two additional theoretical perspectives further the above discussion regarding challenges to functional antagonism: *social identity complexity theory* and the *multiple self-aspects framework*.

Social identity complexity theory (SIC; Roccas & Brewer, 2002) suggests that identities vary in their *overlap* complexity and *similarity* complexity in contexts with multiple group identifications. Overlap complexity refers to the perception of shared

membership between members of multiple ingroups (e.g., Italians and Catholics often share membership in both categories). Similarity complexity refers to the perceptions of shared prototypes and prototypical attributes across multiple ingroups (e.g., "civil rights activist" and "animal rights activist" may share prototypical attributes such as care for others and desire for social change, but this does not imply that members of one belong to the other, as would the overlap complexity concept). The perceptions of overlap and similarity complexity combine to determine a person's SIC, which ranges on a continuum from simple to complex. Roccas and Brewer use these two complexity types to suggest four ways (intersectional, dominant, cross-cutting, merging) that identities may be salient at different times (see Table 1). Referring back to the argument made by Gangi and Soliz (2016), their notion of "constellation of identities" is likely most represented by the intersection and compartmentalization quadrants of the SIC framework. Functional antagonism, in this sense, may only be compatible with the dominant and compartmentalization quadrants of SIC.

Table 1

Forms of Multiple Identity Salience from SIC (Roccas & Brewer, 2002)

Identity Label	Conceptualization	Fits with SCT?
Intersectional (i.e., cross-cutting)	Reclassify salient social identity as intersection of multiple identities simultaneously	No
Dominant	Other social identities subordinated in comparison to one primary identity	Yes
Compartmentalization	Different identities salient in different contexts	Yes
Merging	Multiple identities simultaneously embraced in inclusive manner, with distinctions between identities becoming virtually indistinguishable	No

Note: SIC is "social identity complexity theory" and SCT is "self-categorization theory"

With regard to this dissertation, these multiple groups are primarily of interest in their more separate two conceptualizations (overlap and similarity) rather than the four-fold categories. Further, while overlap and similarity complexity may both be of use in this environment, overlap complexity is likely the construct for which these multiple group identities in an online SNS context is the most visible. There may be similarity between the groups to which an individual belongs, but for this dissertation I am focusing on distinct (though possibly overlapping) group entities and am less concerned with the merging of possibly similar identities in this environment.

Similarly, the work by McConnell (2011) on *multiple self-aspects framework* (MSF) argues that, broadly, the self is composed of multiple context-dependent self-aspects which cause associated self-attributes to become more accessible when a particular self-aspect is salient. Certain contexts can evoke relevant self-aspects: studying in the library, for instance, might activate a "student" self-aspect which, in turn, causes a "studious" attribute to become salient. However, being with parents activates a "son/daughter" self-aspect, and may cause

other attributes to become salient (e.g., being respectful, helpful, or disobedient). The MSF is less concerned with the context that activates those identities than with how the self-aspect relates to internal attributes. However, the conceptualization of the "self" as having many different aspects that are, typically, brought on by roles and group identity serves to support the notion of presence of multiple identities that can be salient in different contexts. The MSF also notes that the relationship between attributes and self-aspect is bidirectional—activation of self-relevant attributes also can activate certain self-concepts.

Nearly all of the research on multiple identities in social psychology focuses on social categories such as race, gender, nationality, and other stable demographic traits of individuals (for reviews see Kang & Bodenhausen, 2014; Nicolas et al., 2017). This has provided much insight into how people categorize or are categorized across these dimensions and revealed potential avenues individuals may take to resolve identity conflicts (see Hirsh & Kang, 2016). However, these are not the only meaningful group memberships that people hold. Indeed, SIA was initially (and often still is; e.g., Wang et al., 2009) based on the minimal group paradigm framework, arbitrarily assigning participants to teams or groups along with minimal cues such as a group name, and then observing intergroup behaviors. Other researchers have found that group membership produces effects on the basis of university affiliation (Carr et al., 2013), online community membership and participation (Hale, 2017; Mikal et al., 2014), and vocation (Mou et al., 2015), to name a few. While these identities may not be as chronically accessible (or visible) as demographic traits, they are often more pronounced in online interactions—especially when those interactions are anonymous or pseudonymous, which reduces the presence or identifiability of demographic factors. These

identities are made salient, at times, through small cues such as network affiliations, email signatures, avatars/icons, and others (Walther & Carr, 2010; addressed above).

SNS in particular present unique environments to study these multiple identities and their evaluative and communicative effects. While offline social networks grow and change in size and type as individuals meet new contacts and join new groups, it is rare if not impossible that these groups will all meet in-person—especially if the groups are separated by geographical distance. The Internet, however, allows for those interactions to occur with a frequency and ease that is nearly impossible in offline contexts, as the geographical and temporal constraints are removed. Thus, it is quite possible in this medium that one encounters situations where multiple social identities can be (more or less) salient at the same time. Context collapse, discussed in the next section, elucidates the opportunities and pitfalls associated with this implication of SNS.

Context Collapse

The concept of *context collapse* (boyd, 2008; Marwick & boyd, 2010) was developed initially for social media research concerning self-presentation and disclosure. Broadly, it refers to "how people, information, and norms from one context seep into the bounds of another" (Davis & Jurgenson, 2014, p. 477). While this literature is steadily growing, there is still definitional ambiguity surrounding context collapse. Davis and Jurgenson (2014) suggest that *context* elicits a broad array of definitions. However, the authors land on context as a portrayal of "role identities and their related networks" (p. 477). This definition allows for the network structures of one's social media to constitute what "contexts" are present, important, and affected when considering self-presentation. Collapse, then, is "the overlapping of role identities through the intermingling of distinct networks" (p. 477). This

phenomenon also has been referred to as an online multiple audience problem (Marder et al., 2016), problem of conflicting social spheres (Binder et al., 2009), group co-presence (Lampinen et al., 2009), and bridging across multiple, heterogeneous social communities (Dimicco & Millen, 2007).

It is important to note that researchers in social network analysis here often refer to network *multiplexity*: how many different clusters to which the ego (i.e., focal node) and alter (i.e., another node) both belong. Context collapse researchers have not addressed this form of overlap in roles, but there are conceptual differences between the two concepts. While network multiplexity deals with the *number of shared or overlapping relationships between two individuals*, context collapse is focused less on the number of relationships between an individual and groups that are possible in SNS, and more on the *expectations and outcomes of the various groups*. Thus, while certain nodes have multiplex ties with the focal individual, context collapse does not really address this point—choosing instead to conceptualize roles as distinct for each connection and, in effect, eschewing any meaningful notion of overlap across multiple (i.e., multiplex) group memberships. These multiplex ties present interesting future work for this extension of context collapse and intergroup behavior; however, this will not be directly addressed in this dissertation.

Network overlap in SNS is increasingly common as individuals conform to the norms of the media they are using. Facebook, for instance, has a norm that users accept connections between individuals even though they might not be relationally close or important (see McLaughlin & Vitak, 2012). As a result of these norms, users of Facebook and other social networking sites often have a multitude of "friends" that they could (though do not always or consciously) classify into distinct heterogeneous groups (though, of course, some "friends"

may be involved in, or represent, multiplex ties, as discussed above). Kelley et al. (2011) had college students create groups based on their friend lists on Facebook and found that participants grouped their friends based predominantly on when or where they met them, or other specific contexts such as “family members”. Using semi-structured interviews, the authors asked participants to sort their friends using four different methods, with some allowing grouping of friends into multiple categories. The participants, after some initial hesitation, grouped their friends into many different categories. For instance, 79% of participants sorted their friends into a general college category (e.g., college, undergraduate friends, university friends), and 33% of participants sorted that category further into clubs or groups (e.g., dancing club, fraternity, freshman hall). Interestingly the researchers explicitly found that none of the participants put individuals into more than one group despite the ability to do so in the study. Similarly, Lampinen and colleagues (2009) used interviews and on-site observation to conclude that participants group their personal networks into categories (e.g., classmates, friends, colleagues), often even before they were asked to describe their personal networks; that is, participants categorize their network members into groups, without prompting, as part of their normal practice. These categories were distinct (i.e., not overlapping), though that may be due to the protocol asked of the participants, and not necessarily to how they approach their personal networks as a whole. The authors coined the term “group co-presence”, which they define as “A situation in which many groups important to an individual are simultaneously present in one context and their presence is salient for the individual” (p. 281). They also draw a distinction between temporal multiplicity—groups from different stages of the individual’s life—and spatial multiplicity—those that are physically nearby or in a more distant location. It is possible other categories

than these two central ones (temporal and spatial) of group membership multiplicity may emerge in the current dissertation.

Context collapse is primarily an online phenomenon with very few offline correlates. In offline interaction, individuals are typically communicating among one social group (i.e., context) at a time. Certainly, there are notable exceptions, such as weddings, chance encounters, and community gatherings where many different social groups mingle simultaneously. Online, however, these interactions become commonplace and are, indeed, built into the functionality and affordances of many SNS. Through SNS that allow us to represent our social connections in an online database, we send (and receive, as discussed below) messages and information transmitted to us from a wide variety of (members of) our social groups—untethered by temporal or spatial constraints. An important caveat is recent work by Costa (2018), who suggests that this use of one social media profile to communicate with all groups/contexts (such as the work discussed above) may not necessarily hold in some contexts (especially in non-US international contexts) where it is more common to have multiple profiles (or accounts) for different purposes (e.g., work, family; identified, anonymous). Thus, researchers using international samples should take care to determine whether or not the usage patterns (such as one or multiple profiles or accounts) of their sample are similar to those which are typically studied when exploring context collapse.

Context Collapse and the Imagined Audience

The focus on "masspersonal communication" (i.e., interpersonal messages disseminated to a wide audience; see Carr & Hayes, 2015; French & Bazarova, 2017; O'Sullivan & Carr, 2017) has led to a boom of research looking at the impression management and self-presentation strategies of online communicators. Indeed, the seminal

work on context collapse (Marwick & boyd, 2010) focuses heavily on the "imagined audience" of a user's message: that is, "a mental conceptualization of the people with whom we are communicating" (Litt, 2012, p. 331). This imagined audience is important, as it is one way in which users seek to make sense of and understand their message dissemination in a context with multiple potential audiences. A novel mixed-methods study (the use of a diary study and follow-up interviews) by Litt and Hargittai (2016) examined how these audiences are constructed and thought about. The diary study consisted of recorded posts from participants' social media accounts, from which the three most recent posts were sent to the participants themselves in a survey asking them to whom they were directing the post. From these data, the researchers found that users envisioned an abstract audience roughly half the time (i.e., not thinking about anyone specifically as they shared a post), and a more specific targeted audience the other half of the time. These targeted audiences were a priori conceptualized as personal ties, communal ties, professional ties, and phantasmal ties. While the majority of these targeted audiences were personal ties (70.2%), analysis of these data allowed for these personal ties to be operationalized as generic "friendship" or "family", which sometimes were qualified with particular specific contexts (e.g., Boston friends). Taking into account communal and professional ties, these results suggest that specific social identities (not just *roles*) do play a part when users imagine an audience to whom their message is directed. The authors also note that people fluctuate between abstract and targeted audiences, and that the participants occasionally indicated an abstract audience but, when prompted in follow-up interviews, actually had a targeted audience in mind at the time.

More recently, Zillich and Müeller (2019) qualitatively examined how norms of self-disclosure on Facebook varies among different reference groups in Germany. Participants

suggested several salient reference groups when considering disclosure behavior: those that were relationally close, family/relatives, friends with whom they haven't had contact for an extended period of time (former classmates, travelling companions), and friends from their professional network (coworkers, fellow students, teachers). Using an injunctive norms approach, they argue that these reference groups guide and constrain behaviors of the users while simultaneously informing their understanding of appropriate behavior.

Triggs et al. (2019) also examined the use of another social site, Reddit.com, and how individuals who identify as LGBTQ use that site to help constrain and present the different self-aspects of their identity that may not be seen as normative in their everyday lives. They suggest that using both technological (i.e., having different accounts and email addresses) and psychological (i.e., separating out into friends/family and online/offline contacts) allow those LGBTQ individuals to present multiple facets of themselves in different contexts. Thus, these audiences with various normative expectations are kept separate from each other through the SNS itself—allowing these individuals to portray their various identities in ways that are perceived as safer.

To summarize, users of social media—at least when prompted—are typically aware of their groups and their ties with members of various social identities. Awareness of these groups, according to Lampinen et al. (2009), leads to tensions with having multiple groups online, specifically involving self-disclosure and privacy. Having to consider to whom the message will be communicated and how those different groups will (differentially) interpret the message affects the self-disclosure and self-presentation strategies of the users (see, e.g., Walton & Rice, 2013). That is, communication privacy management is more difficult and

permeable online than in face-to-face contexts (see Mclaughlin & Vitak, 2012; Petronio, 2002)

Context Collapse and Message Processing

An area that has remained unexplored with regard to group co-presence and multiple audiences is the processing by the user of diverse information from the various groups in their network—what I term *content collapse*. While this dissertation is not explicitly looking at the cognitive and psychological factors of message processing (see Gasiorek & Aune, 2018), the ability to understand and comprehend messages in an information-saturated and context-collapsed medium is paramount to the ability to use—and produce—messages in that medium.

One recent study does look at information in context collapse by Pearson (2021): assessing what he calls *informational context collapse*: having both informational and social information in the same feed. This study focused on the type of content—as opposed to the audience of that content—and how the different content types impede information processing. Pearson found that when informational news content is collapsed with personal content users, fail to accurately process source cues for informational content. While Pearson gets closer to discussing content collapse, he is still focused on the information itself and not the multiple identities that are present in a single network.

Despite this welcome addition, most of the extant research in this area, to this author's knowledge, focuses on the output of messages from an individual to their network, and the resulting concerns about multi-group reception. An equally important process, however, is the processing of content *from* multiple groups coming *into* the user's feed. Thus, content collapse focuses on the interpretation of message content from many diverse groups

entering a feed in an online environment, as well as how users interpret and process that information effectively. It is quite possible that messages sent to the receiver also get processed by the receiver relative to the group identity of the sender, similar to the cognitive process they encounter when encoding (i.e., sending, disseminating) messages to a diverse audience via a public SNS channel such as a status update. As noted above by Gangi and Soliz (2016), social identities may serve as a mental shortcut for understanding communication from multiple individuals. Especially when users of SNS must process a large and rapid amount of information (such as status feeds from multiple "friends"), the social identity of the message communicator may serve a useful heuristic function in efficiently understanding and categorizing the information presented by the user's "friends."

This reliance on mental shortcuts (i.e., heuristics) in message processing has received considerable attention in a variety of online and offline contexts. Heuristic cues—and social identities in particular—are used to evaluate the large amounts of information available online (see, e.g., Metzger et al., 2010). Group identity also affects motivation to contribute to, and the perceived credibility of messages in, online information pools (Flanagin et al., 2014). While group identification has been shown to have measurable effects experimentally when subjects were heuristically processing messages online, these effects have not yet been extended into complex identity environments such as SNS. In the next section, the intergroup approach and context collapse are considered together, and avenues for future research in the intersection of these two areas is discussed—providing the foundations for Studies 1 and 2.

Intergroup Communication and Context Collapse

It is important to note that context collapse, while not explicitly operating under the perspective of social identity, is conceptually tied to the social identity approach to

communication (cf. Lampinen et al., 2009). While typically discussed as the co-mingling of "role identities," the presence of multiple "contexts" of life, each with more or less different normative values, appears to be frequently conceptualized and operationalized as multiple group identities. For instance, privacy concerns with context collapse have to do not typically with the strength of the ties individuals have online, but with the expectations that they think those ties hold (Carr et al., 2013). Given the ability of users to engage with these multiple audiences online, it would appear that group identity functions in this context as a useful (although not necessarily always accurate) way to categorize individuals and their expectations—which would be constructed, maintained, and reinforced through communication of normative behavior (online and offline).

In essence, SNS present a unique complex identity environment where users have the opportunity (or misfortune) of experiencing any one, or more, subset(s) of their entire online network at any given time, thus making salient combinations of various social and personal identities. While intergroup tension has been frequently studied in social networking contexts, and especially in political communication (see, e.g., Marder, 2018), I propose that interesting and challenging questions in SNS also revolve not just around intergroup tension between two parties, but opportunities and tensions a user experiences while evaluating their own complex identity landscape. In other words, how do users' existing social/group identities provide a "lens" with which to evaluate information and guide behavior, such as diverse online content from multiple groups? While SCT theorists would argue that the salience of identities switches (functional antagonism), the other perspectives discussed above allow for combinations of social and personal identities that the user participates in to guide, constrain, and interpret behaviors, which may prove more fruitful in this complex

identity environment. The following sections address how the intersection of social identities may be relevant and salient and may affect communicative processes such as accommodation. This topic will provide a springboard with which to further explore this complex online identity environment from a multiple group perspective.

Communication Accommodation in Online Multi-Group Interaction

As discussed previously, users may accommodate their language (both psychologically and linguistically) to members of other groups online (Tamburrini et al., 2015). The ability to respond publicly to status updates and tweets can create a space where dialogue from many different contexts combine in one area (i.e., context *and* content collapse). If a status update or blog post was disseminated to a network group, those in the network have the ability to respond to that update via publicly viewable comments and replies. This, in essence, creates a miniature "public sphere" where debate and dialogue can take place. While the poster knows these individuals from different contexts (i.e., different ingroups), it is likely that those individuals are unaware of each other and their (dis)similar group memberships, as the network structure linking the individuals and the groups is known idiosyncratically (and likely at a level below discursive consciousness) by the poster. As an example, if two people who do not know each other comment on a status update from a mutual college friend, they share a common group identity (college) even though that shared identity may not be initially known to the interactants. This may emerge, however, during the discussion as one of the members replies with something normative for that group, such as a comment on the positive experience of attending that college or the use of a well-known college slogan. Thus, the other commenter in that conversation may recognize their common

group membership and subsequently accommodate, more or less consciously, toward that newfound shared identity.

Conversely, the two commenters on the status may not be in the same ingroup, and may be at odds with one another due to the conversational topic or presence of what is now (perceived) as an outgroup member. Hajek (2015) provides some evidence that multiple salient identities may, at times, conflict and result in convergence, divergence, or maintenance as a function of the perceived positive group distinctiveness of the identities themselves (in terms of the intersection of age and sexual orientation). Similarly, for the original user who posted the status, both of those individuals who comment on the status are members of the original user's network, even though they appear to be outgroup members to each other. How, then, does the common ingroup member (i.e., the one who posted the status) account for those divergent expectations and norms? One tactic consistent with CAT and Carr et al. (2013) is that the more salient (i.e., strongest) group identity is given priority in the interaction. Alternatively, the user may also adopt a superordinate identity that encompasses both groups in which this conflict takes place, as suggested by Lampinen et al. (2009). For example, if the group members are from two rival colleges located in the same state, the user could reconceptualize the interaction as members of the same state, or as college students in general, instead of rival colleges. This may be a situation that is particularly relevant when it comes to opposing viewpoints on highly divisive topics such as political issues and deserves further study.

Summary

Overall, while considerable work has examined how group identity functions in an online context, there is still a lack of understanding about how multiple identities function in

online spaces, as well as the boundary conditions of identity salience and combinations of identities. This clarity is important to understanding more fully how various social identities function in this context—especially within the complex identity environment of SNS. Furthermore, the communicative effects of those identities are similarly unknown when examining these online interactions. While many scholars studying context collapse have started to understand how and to whom individuals self-present in these complex identity environments, they have not yet begun to assess how users examine the messages entering a user's SNS, nor how intergroup principles such as (multiple) identity salience, communication accommodation, and prototypicality may affect self-presentation strategies. Table 2 provides an overview of concepts discussed above, how they may change depending on identity salience, and related research questions and hypotheses in this dissertation.

Table 2

Concepts Related to Identity Salience

		Identity Type			
		Personal	**Single Group**	**Multiple Group**	**Relevant Hypotheses/ Questions**
Intergroup Comm	**Identity Salience**	Individuating Cues	Functional Antagonism/ Dominant and Compartmentalized Identities	Constellation of Identities, Intersectional/Merging Identities, Self-Aspect	Study 1: RQ1, RQ2, RQ3, RQ4 Study 2: H1, H2, H3
	CAT				
	Initial Orientation	Interpersonal History	Sociocultural Norms	Sociocultural Norms, Intergroup relations	Study 1: RQ4 Study 2: H1, H2, RQ6
	Psychological Accommodative Stance (PAS)	PAS based on partner's motives	PAS based on Salience of Social Identity and Partner's Motives	PAS is dynamic and shifts based on interlocutors' behaviors, needs, and motives (Genesee & Bourhis, 1982)	Study 2: H1, RQ6
	Affective	Convergence increases personal liking, divergence reinforces distinctiveness	Convergence increases social liking, signals common group identities	How do multiple groups alter the affective concerns of the interactant? Which affective concerns get prioritized?	Study 1: RQ5 Study 2: H1, RQ6
	Cognitive	Interactants converge/ diverge to aid in message comprehension	Interactants converge/ diverge to aid in message comprehension	Interactants converge/ diverge to aid in message comprehension	Study 1: RQ5 Study 2: H1, RQ6, H3
Context Collapse	**Imagined Audience**	N/A	Users typically have an audience in mind when crafting messages	To what extent are users writing for multiple audiences?	Study 1: RQ1, RQ3 Study 2: H1, RQ6

	Strongest Audience	N/A	Users tend to self-present based on the consideration of the strongest audience	How do the other less strong audiences affect message creation?	Study 1: RQ2, RQ3 Study 2: H1, H3
Environmental Factors	**Small Cues**	What cues are individuating?	What cues promote group identification?	How do users react in the presence of multiple cues?	Study 1: RQ1 Study 2: H1, H2, RQ6
	Norms	Norms of behavior may guide interpersonal interaction	Sociocultural norms shape Initial Orientation in CAT	How do users navigate competing normative expectations?	Study 1: RQ4, Study 2: H1, RQ6

Two studies will begin this line of research. While ultimately the goal of this dissertation is to better understand how multiple groups affect communicative (accommodation) actions in SNS, it is necessary to first understand whether and how the cues in that environment activate the perception of context collapse and activation of (multiple) group identities, and how individuals use those group identities to process information (i.e., content collapse). As the extant research in this area is scant, this is an important first step in establishing this research agenda. Once we understand the identity salience and activation component from the first study, the second study will provide a clearer picture of how these identities affect communicative processes. While these two studies are conceptually different—one focuses on the identity activation processes while the other focuses on the communicative effects of those identities—they are both necessary for advancing understanding of these complex identity environments. Without first understanding the mechanisms behind the activation and salience of (multiple) identities, it would be difficult to parse the communicative patterns behind much of the online interaction observed.

Thus *Study 1* will explore one's unique network makeup, how identities function, and how those identities affect processing of messages. As mentioned above, the antecedent conditions for identity salience are a point of contention amongst intergroup researchers. Especially in these complex identity environments, with a variety of individuating and group cues, as well as cues that may signal multiple group memberships simultaneously, it is necessary to begin to define the boundary conditions of online, multi-group identity salience.

To further understand the specific communicative processes in how individuals craft messages in this environment, *Study 2* (discussed later in this dissertation) will explore the

(non)accommodative tendencies of users in SNS. Specifically, it will assess how these complex identity environments affect the accommodative strategies of the users, and how multiple groups in the same online environment alter accommodation intention. In other words, Study 2 tests the boundary conditions of when and to whom users accommodate in online environments where multiple group identities are present. Together, the two studies will advance understanding of how intergroup theory can be applied in multiple-group (online) contexts where extant identities are made salient.

The particular SNS used in both Study 1 and Study 2 is Facebook. While there are calls to broaden research away from Facebook as a specific medium (Rains & Brunner, 2015), it is still a useful context in this dissertation for two reasons. First, the use of Facebook is pervasive. At the time the data for these two studies were collected, Smith and Anderson (2018) show that 68% of adults use Facebook (higher in younger populations), with the majority using the platform every day. This number has remained quite consistent over the years, with the most recent report showing 69% of US adults using Facebook (Auxier & Anderson, 2021). Second, many users of Facebook have had their accounts for a long span of time, and thus are likely to have garnered "friends" from different aspects of their lives. This longevity and diversity in groups of friends provide a somewhat naturalistic environment to begin to understand how individuals interact with multiple salient, and likely overlapping, groups in SNS.

STUDY 1: CONTEXT COLLAPSE AND MESSAGE PROCESSING USING GROUP IDENTITIES

The first study concerns the makeup of users' friend-groups, how these group identities are activated, and how those groups affect the ways in which users process information from other members of each group. Thus, Study 1 will be testing boundary conditions for identity salience in SNS environments, as well as how the user labels and identifies members of those groups. Once the groups are identified, Study 1 will then explore content collapse and how group identities may function as a heuristic to process information.

A challenge that must be considered in this dissertation has to do with the idiosyncratic nature of each user's network makeup. Given the unique groups into which individuals may categorize their "friends" on a particular SNS, it is important to solicit the user's *unique* network makeup and not collapse their social identities into simple, even if widely and traditionally used, categories (e.g., work, school, family) as these may not be salient enough to the user to see any effects or meaningful distinctions (although this is certainly an empirical question for future research). Therefore, Study 1 will have participants identify and make explicit their groups and the relationships of various individuals (i.e., those included on their account as "friends") to those groups. Drawing from the results found by Kelley et al. (2011), Lampinen et al. (2009), and Litt and Hargittai (2016), we would expect individuals to readily classify (at least most of) their network into distinct groups—groups that are recognizable to the individual and able to be differentiated from other groups (e.g., university friends or members of a particular club). While these studies did not find evidence of overlap of individuals across these groups (i.e., individuals who are categorized as

members of more than one group), we know that multiplex relationships are certainly possible (see, e.g., Hajek, 2015). Thus,

RQ1: How will participants identify (a) distinct as well as (b) overlapping groups associated with individuals in their SNS network?

However, given the diverse makeup of each individual's grouping of their friends, it is worthwhile to determine the types of groups these individuals identify, and how they are related to each other. The groups that individuals identify may differ in how much individuals perceive the *group as a distinct entity* (entitativity). In other words, while they can identify a group, it is additionally useful to understand how much an individual thinks the group itself is distinct from other groups (entitativity) that the individual may come across on SNS. Additionally, as there are certainly groups with which individuals feel more or less strongly identified, it is useful to determine varying levels (strength) of identification with individuals' groups. This is an important step in understanding this phenomenon, as studies that examine multiple group identities typically aggregate groups into common, and by default equally weighted, categories and use those for manipulation. In other words, the *strength of group identification* itself may play a role in how those identities affect message processing and communicative effects (see Marder et al., 2016). Utilizing an individual's self-reported group identities instead of generic categories may increase identification and its associated effects. Thus, the following research questions are posed:

RQ2: How does a) entitativity and b) strength of identification differ with each participant-labeled SNS group?

Given the results provided by Kelly et al. (2011) and Lampinen et al. (2009), as well as classic studies on social networks (Killworth & Bernard, 1978), group members should

categorize individuals into "types" of groups in a variety of fundamental ways, both *spatially* (i.e., those who live in different physical locations than the member) and *temporally* (i.e., from different stages of an individual's life). Thus,

RQ3: Will participants group individuals on SNS into a) temporally and/or b) spatially distinct clusters?

While users will likely not explicitly mention these terms, the researcher and trained RAs will code their named groups into these types, while also allowing for additional types of groups (see below). These coding categories will not be mutually exclusive, but instead will allow for coding that encompasses both temporal and spatial—for example, *Desert Mountain High School* would be both temporal (high school as a time in one's life) and spatial (a high school as a distinct entity located in a specific place). Thus, coders will be trained to determine based on the context of the response whether one of the two codes is more appropriate, or if it is a combination and warrants both codes being present.

There may be other meaningful groups to which individuals belong which are not necessarily represented within these two categories (e.g., an online forum). Similarly, the broad categories may be broken down into more meaningful groups when individuals are allowed to distinguish between those existing categories (e.g., *an online forum for woodworking* and *an online forum for social support and mental health* as opposed to *internet friends*). Thus, a related research question follows:

RQ4: What are some characteristics, other than spatial and temporal, (if any) that individuals use to group others with whom they have recently interacted on SNS?

Given the extant work on Facebook friend grouping from Kelley et al. (2011) and Lampinen et al. (2009), the codebook used to answer these hypotheses and research

questions is based largely on this body of work. However, a category "other" will be open-coded to determine the other characteristics individuals use to group their friends, and frequent terms in this "other' category will be separated to indicate other distinct groups.

Finally, an important element to understanding individuals' group identifications online is how those identifications affect understanding of messages that are disseminated from group members to the focal user. Given the large amount of information that needs to be processed, often rapidly, when viewing and engaging with various social networking platforms, how does social identity function in this context to aid in message comprehension? Furthermore, is social identity mentioned as a processing cue without any a priori priming by researchers? As group identity serves an important function in heuristic processing of other information and small cues can increase group identity salience, the following research question is posed:

> **RQ5**: Is group identity an indicator (out of many others) for why participants remembered or engaged with a post when processing posts in a threaded format with multiple members on SNS?

While we expect individuals to use group identity (i.e., not primed by the researcher, but as referred to by the user) as a heuristic cue, it is unlikely that they will specifically say "group-" or "social identity" when discussing why they decided to engage with a post. However, social identification has been shown to aid in message processing in previous work (Flanagin et al, 2014; Metzger et al., 2010), and it may be that information that is highly normative or deviant from the group will be readily processed through the lens of group identity/identities (Nicholls & Rice, 2017). Therefore, when analyzing data for these hypotheses care will be taken in training coders to look not just for manifest indicators of

group identity (e.g., explicit mention of a group name), but latent ones as well (e.g., discussion of normative values for a specific set of people).

The overarching goal of the first study is to determine how users of SNS identify (multiple) group identities in a complex identity environment the SNS environment, and how these identities are used by individuals as sensemaking and heuristic tools for processing information. Returning to Table 2, RQ1 assesses the ability of individuals to identify groups in their network, with particular attention to multiplex relationships. From there, RQ2, RQ3, and RQ4 further define those groups and how individuals choose to classify their "friends" with regard to group identities. Finally, RQ5 begins to determine if group identity serves as a useful heuristic tool when processing information, and additionally if identity is salient without priming by researchers in this environment. For discussion of related evidence collected in the dissertation see Table 3.

Table 3

Evidence and Support for Study 1 Hypotheses and research Questions

RQ	Evidence	Positive/Supported	Negative/Not Supported
RQ1: How will participants identify (a) distinct as well as (b) overlapping groups associated with individuals in their SNS network?	Names of groups to which they belong Coding of "Other" in Friend_Assoc Thematic analysis of "other" friend group names	a) Coding indicating group identity from analysis of "Other" and thematic analysis b) Multiple codes in the same category	a) Lack of codes from "Other" category that indicate group membership b) Single codes as primary outcome from categorization
RQ2: How does a) strength of identification and b) entitativity differ with each	Group entitativity and identity measures correlated with overarching categories of groups		

participant-labeled SNS group?	identified in TG/SG/Other		
RQ3: Will participants group their individuals on SNS into a) temporally and b) spatially distinct clusters?	TG/SG coding of Friend_Assoc	Significant chi-squared test	Non-significant chi-squared test
RQ4: What are some characteristics, other than spatial and temporal (if any), that individuals use to group others with whom they have recently interacted on SNS?	Coding of "Other" and RC_P/RC_N		
RQ5: Is group identity an indicator (out of many others) for why participants remembered or engaged with a post when processing posts in a threaded format with multiple members on SNS?	Coding of Engagement/Memory Post Rationale (likely not useful) Thematic analysis of rationale for engagement Correlation with actual post itself?	Significant chi-squared test for group identity markers in Engagement/Memory Post Rationale Thematic analysis indicating group membership	Non-significant chi-squared test test for group identity markers in Engagement/Memory Post Rationale Thematic analysis not finding many results

STUDY 1 METHOD

Participants

Participants ($N = 89$) were recruited from the SONA undergraduate research pool in Spring of 2019 and given a nominal amount of course credit for their participation. All participants were required to have an active Facebook account to participate in the study. Those participants who did not pass attention check measures ($n = 11$) were dropped from further analysis, resulting in a final $N = 78$ participants.

Demographics

Participants identified as female (59, 75.6% of the final sample), male (16, 20.5% of the final sample), or did not answer (3, 3.8% of the final sample). Age was primarily 19-21 years old, with a few outliers (see table 4) and a median age of 20. Participants predominantly identified as white and Asian (see table 5).

Table 4

Age of Study 1 Participants

Age	Frequency	Percent
19	27	34.6
20	21	26.9
21	15	19.2
22	4	5.1
23-29	4	5.1
Did not answer	7	9.0

Table 5

Reported Race of Study 1 Particpants

Race	Frequency	Percent
White	28	35.9

Black or African American	0	-
Hispanic/Latino	6	7.7
American Indian or Alaskan Native	0	-
Asian	30	38.5
Other	2	2.6
Multiracial	7	9.0
Did not answer	3	3.8

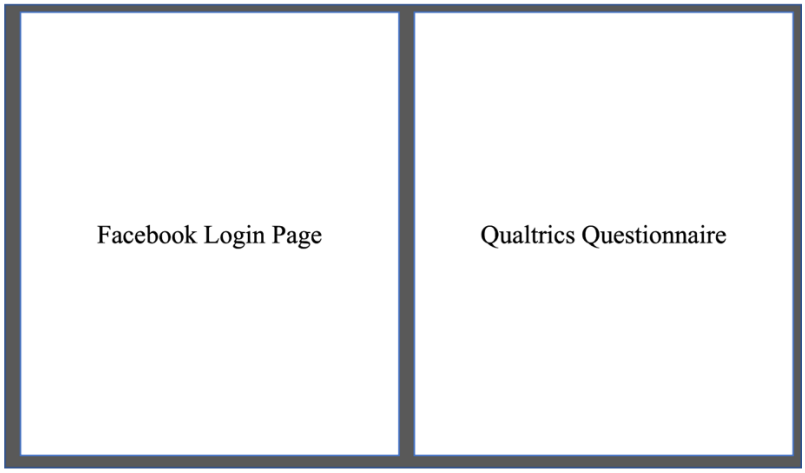
Procedure

For the complete researcher protocol see Appendix A. Participants entered the lab and sat down at the computer with a single screen. On the right side of the screen was an online questionnaire distributed through Qualtrics and on the left side of the screen was a separate browser window opened to Facebook (see Figure 1). The participants agreed to the informed consent on the right side of the screen and were then instructed to log in to their Facebook account. Once successfully logged in, they called the researcher to start the screen capture software (OBS Studio[1]). This screen capture software only recorded the left side of the screen (i.e., the Facebook browser) and did not record their questionnaire responses on the right side of the screen. Researchers entered the participant ID and then informed the participants to follow the instructions on the screen. The researcher then left the room for the participant to complete the first section of the protocol.

Figure 1

[1] Open Broadcast Studio (OBS, https://obsproject.com/) is a free, open-source software installed locally on a computer that does not transmit information across the Internet. It also allows capture of only sections of the screen, ensuring the questionnaire was not recorded.

Graphic of Initial Computer Setup for Study 1



Part 1: Group identification.

Participants were asked to navigate to their Facebook "friends" list, look at the first "friend" on their list, and told to enter the person's initials into a text box. They were then asked to identify how relationally close they felt to the "friend" using the Inclusion of Others in Self Scale (discussed below) and instructed to discuss their relationship(s) with them into a text box. Specifically, participants were instructed:

> "Please write briefly about how are you associated with your friend? In other words, what is your relationship to this person and/or from where do you know them? If you know them in multiple ways, please explain each way you know them. Please try and write at least three to four sentences and be as specific as possible."

Unlike previous studies, this wording explicitly allows for multiplex relationships of the participant to their "friend". That entry was then shown back to the respective participants, and they were asked to summarize in no more than five words the primary way in which they knew that "friend." This summary was then used as piped text in the group entitativity and group identity scales below.

Once they completed this task, they were then asked to type into the Qualtrics survey the initials of two other Facebook "friends" (not necessarily from the first five "friends" on the list) who they know from the same group or context as the first friend, and look them up on their Facebook account. They were then asked to fill out the same measure of relational closeness as above.

Using participants' responses to the group summary, they were asked to fill out scales of group entitativity and group identity of the first "friend," for the first (i.e., primary) group identity which they summarized above. Qualtrics automatically piped in the summary of their identification into the questions itself, which led to some confusion and syntactical errors discovered in the pretest (see pretest and results section for Study 1 on "change codes"). Thus, a follow-up question was asked "Thinking about your responses to all of the previous questions, did you change the name of this group in your head as you were answering?"

Participants were then asked to navigate back to their friend list and instructed to select the fifth "friend" on the list and repeat the process above.

Part 2: Message processing.

Once participants completed the first part of this study, they were then instructed via Qualtrics to go to their Facebook *News Feed* on the left side of the screen. This is an aggregation of posts, comments, links, and videos that are created and shared by "friends" in the participant's network. While the algorithm used to rank and order what gets priority in the feed is proprietary to Facebook and, thus, not easily discernable, the site provides an endless stream of content for users to scroll and observe, and ample opportunities to interact such as 1) pressing PDA reaction "buttons" such as "like", 2) commenting on a status in a

threaded format, 3) sharing the status to their own network, or 4) indicating interest in a scheduled event (e.g., concert).

Participants were asked to put on headphones attached to the computer and scroll through the feed for 5 minutes. During this time, they were instructed that they were free to interact with the site as they normally would (e.g., commenting, "liking" posts, clicking on links) but must not actually leave the feed to do other tasks (i.e., browsing pictures, reading articles posted, etc.) (for full instructions, see Appendix B). During this scrolling, the Qualtrics questionnaire would not allow the participant to advance and kept the instructions on screen, with the additional instruction that "The next page will tell you to stop when the timer is up. You will not be able to advance this page."

Once the five-minute session was up, Qualtrics automatically advanced to the next page and informed the participants to stop browsing and inform the researcher (see Appendix B). The researcher then stopped the recording session and asked the participants to log out of their Facebook profile. They then opened the recorded video and instructed the participants to follow along with the prompts on the questionnaire. The researcher also demonstrated to the participants how to use the video player and asked for confirmation that the participants understood the instructions. The researcher also emphasized that the first part of this questionnaire should be from memory only, and not using the video player. They then instructed the participants to follow along with the prompts on the screen, and left the room.

The questionnaire asked the participants write down three posts they remembered seeing from the scrolling session into three separate free-response boxes on Qualtrics. It was again emphasized that this first section should be from memory only—they should not use the video to aid in their recall. Once they completed the recall task, they were instructed to

find the three posts they remembered in the recorded browsing session on the left-hand side of the screen. The questionnaire presented their response to them to aid in retrieval of the post itself. When they came across one of the posts, participants wrote down the timestamp of the post in the video (to aid in researcher retrieval and coding), and then were asked a series of questions about that post (e.g., how well did the description of the post match with what they wrote down, did they feel they understood the post better based on how they knew that poster).

Once complete, participants informed the researcher and left the lab. The researcher renamed the browsing video to match the participant ID, saved the video to a Box.com folder, and awarded participants course credit for participation. For a description of the data collected from participants and how they relate to the hypotheses for Study 1, see Table 3 above.

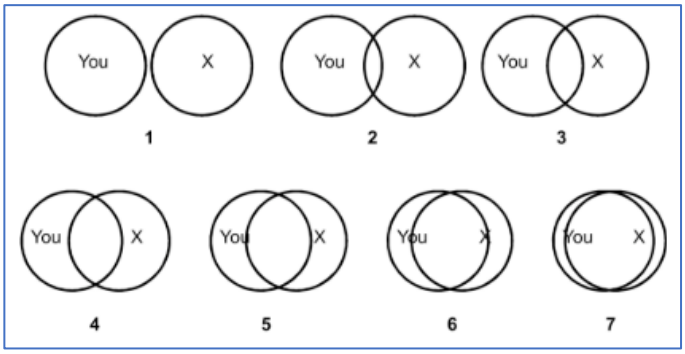
Measures

Part 1.

Measures of **relational closeness** were adopted using the Inclusion of Others in Self (IOS) scale used to measure perceived relational closeness (Gächter, Starmer, & Tufano, 2015). This single-item measure uses a series of seven increasingly overlapping circles to pictorially represent the relationship between the respondent and a specified other (see Figure 2). Participants are then instructed to select a specific picture to indicate how close they feel to the other—in this case the specified Facebook friends. These closeness measures were not used in the analysis, as the primary focus of this study was on group identity. However, the inclusion and presentation order of this scale may have had an effect on the outcome of the coding (see discussion section).

Figure 2

Inclusion of Others in Self (IOS) Scale



Measures for **group entitativity** were adapted from Spencer-Rodgers, Hamilton, and Sherman (2007) and consist of eight items, all measured on a scale of: (1) *not at all* to (7) *extremely*. For example, "To what extent do you think the members of [the group] feel that they are part of their group?", or "How important is [the group] to its members?". Higher scores indicate a more entitative group (α = .94). See Appendix C.

Measures for **group identification** were adapted from Hogg, Hains, and Mason (1998). Eight items (e.g., "I am glad to be a member of this group" and "This group is important to me") were measured on a 7 point Likert-type scale, with answer choices ranging from (1) *strongly disagree* to (7) *strongly agree.* Higher scores indicate a greater feeling of group identification (α = .96). See Appendix D.

Part 2.

Responses were collected to two open-ended qualitative questions: "What made you remember this post out of all the others that you saw?" and "How do you know the individual

who posted the update?" These questions were then coded by trained coders (see sections on codebook construction and coder training).

Participants also were asked to respond to quantitative items designed to assess how well participants remembered the post: "What I wrote down and the actual content of the post up on the left matched well." Understood the post: "I felt like I understood the post better because of how I know that person." Expected the post: "I would expect this kind of content from the person who wrote this post." Felt close to the poster: "I am not very close to the person who wrote this post." Knew the post from a specific group: "I know the person who wrote this post from a specific group, club, or collective of people." and felt the post was unique to a specific group: "People who do not know this person might not get the real meaning of this post."

All quantitative responses were measured on a 7 point Likert-type scale, with answer choices ranging from (1) *strongly disagree* to (7) *strongly agree*.

Study 1 Pretest for Coder Training

Due to the complex nature of the protocol, and the need to train coders on a separate dataset, a pretest for Study 1 was run in in early March 2019. Participants ($N = 65$) were recruited from undergraduate Communication students for a nominal amount of course credit and completed the same protocol described above. This pretest revealed five interesting points that were clarified in the final version of the protocol as well as the codebook.

First, while relational closeness was not initially intended to be coded by RAs due to the focus on group identification in the study, the responses given by participants in the pretest showed that many of the participants did in fact discuss relational closeness as a dimension of how they knew that Facebook "friend". This emerged quite prominently in

coder training with this dataset and resulted in discussions with coders about what to do with this finding. As this was also identified by Zillich and Mueller (2019) in regards to context collapse in this environment; it would appear that for context collapse this is an important variable. Thus, the coding team decided to include relational closeness as a dimension that was coded in the codebook itself.

Second, an issue that participants anecdotally brought up after the study protocol finished was that the summary name they gave the group of "friends" did not always lend itself well to being inserted into the scales of group entitativity and group identity. For example, if a participant listed "these are my best friends from dance class" that entire response would be piped into the scale itself. This resulted in some participants seeing items like "How cohesive is '*these are my best friends from dance class*'?" To try and more accurately capture the group dimensions while allowing for participants to still enter their own summary names, those items were changed to include "the group you called" before the piped answers.

Participants in the final data collection were also asked questions about whether they had "changed the name of the group in their head" and provided an additional text box with which they could discuss how they changed that name. The results of these "change codes" are discussed in the section on Coder Training below.

Additionally, during the post recall task some participants did not pay attention to the instructions on screen that asked them to first recall posts from memory, so an additional step of the researcher informing them verbally that this recall should be from memory was added to the lab protocol.

Finally, and somewhat humorously, some participants reported that during the browsing session for Part 2, they did not see the instruction to stop browsing and inform the researcher—resulting in several participants browsing for an extended period. To ensure that participants stopped appropriately in the final protocol, a large red "Stop" sign was added to the instructions after browsing time had finished, which solved this issue (see Appendix B).

Content Analysis Codebook Construction

A codebook was devised and iterated upon in coder training (discussed in the next section) to measure for markers of group identification in Study 1. This codebook was used for both how participants are associated with each "Friend" in Part 1 and in the rationale for engagement/memory of a post—as well as the post itself—in Part 2. For full codebook, see Appendix E.

Friend Associations

Two categories measured the absence/presence of relational closeness—one **positive** and one **negative**. This was a common theme that emerged from the pretest of the Study 1 protocol in terms of how they described their "friend". While this may be an artifact of the protocol itself (as discussed later), given its prominence in the pretest data coders were instructed to code for if the participant mentioned relational closeness.

The work by Kelley et al. (2011) revealed two themes that consistently emerged from their participants when asked to group their Facebook Friends using a card-sorting task. The first is mentions of **temporal groupings** (i.e., discussion of time and "periods of life"), and the second is **spatial groupings** (i.e., discussion of a physical or spatial location). These two codes may overlap (and thus are coded separately).

Finally, to capture additional groups that may not fit with positive or negative relational closeness, or spatial or temporal groupings, a comprehensive **other** category was also coded. This is a latent code that represents a group identity that is not accounted for in the above categories. This may include things such as race, cultural identity, online groups, or other associations that, in the best judgment of the coder, signals a salient group (or multiple groups) as opposed to simply a feature of an interpersonal relationship.

Posts

Codes for the post itself were mainly manifest content that discussed the source of the post and its contents. Each post was anonymized per IRB requirements by placing black boxes over any identifying information (such as a photo of a person whose face is showing). The post's source were then (separately) coded as to whether it was from an **explicit group** (e.g., "Free and For Sale UCSB"), or a Facebook **"friend"** of the participant. The post itself was also coded for if it contained a **picture** or **video**, and if the participant had engaged with the post by either using **PDA** (paralinguistic digital affordances) such as the "Like" button, or **commented** upon the post. Thus, while some of these categories (e.g., explicit group) match the categories below, these codes are about the post, specifically, and the codes below are about the response the participant gave when asked why they remembered or engaged with the post.

One form of latent content coded from the post itself was if the participant mentioned a group by name that was *not* an explicit group on Facebook (e.g., Arizona Diamondbacks) but the **group was mentioned in the post**. That is, a social group/collection of people to which group identity could be ascribed was present in the post but it was not from a group

that Facebook labeled a "group". Thus, it may be that the origin of the post came from a friend, but still referenced a group identity.

Post Engagement/Memory Rationale

Explicit mention of a group.

While there are both explicit and implicit group identities that may be present on SNS, the first code for engagement/memory is simply that participants name a group, organization, or collective of people that influenced their decision to remember/engage with a post (i.e., write down why they remembered or engaged with the post in the text box). These may include groups like "my sorority", "Gauchos", or the name of a specific club on campus. Thus, **explicit mention of a group** was one code for this study.

Implicit mention of a group.

While it would be nice if participants simply named every group explicitly, these identities may not necessarily be at the level of discursive consciousness when they are browsing. Therefore, it is important to assess not only explicit mentions of group identification but also markers of group identity that do not explicitly mention a named group as well. The notion of group identity has been explored under different names in different fields (e.g., collective identity, social identity, group identification). Howard and Magee (2013) define it as "awareness of belonging and psychological attachment to the group". More useful to the present study, Abdelal et al. (2009) define it as "a social category that varies along two dimensions–content and contestation" (p. 19). Content describes the meaning of a collective identity (i.e., the rules, goals, comparisons, and mental models that the individual members feel are the defining characteristics of the group itself). Contestation

refers to the degree of agreement within a group over the content of shared identity (i.e., how many of the group members feel the same way).

Using Abdelal and colleagues' conceptualization of content and contestation yields four different categories of implicit grouping to further assess the presence of group identity that may be influencing engagement/memory apart from an explicit mention of a group: constitutive norms, social purposes and goals, relational comparisons, and collective language. These four categories make up the more theoretical mechanisms of content (constitutive norms and social purposes and goals), and contestation (relational comparison and collective language) and should signal that a group identity (or identities) are active and may be affecting behavior.

Constitutive norms are the practices and rules that define a group identity and lead others to recognize it. They serve to inform members of appropriate standards, collective expectations, and individual obligations. They also serve as rules that, when broken, cause other group members to sanction the inappropriate behavior and correct the group member (Marques & Yzerbyt, 1988).

The **social purposes and goals** of common identity are the specific goals that groups attach to their collective identity. For instance, social movements often have specific goals to achieve (e.g., recognition of gay marriage by the supreme court) that are only achievable by the collective group itself, and not individuals. Presence of those goals—either generally or with specific goals in mind—may signal that a group identity is being used to justify engagement/memory. While these comparisons to out-groups may not necessarily be particularly present in a relationally-minded SNS such as Facebook, it is possible that certain posts may have general or specific goals that evoke a group identity that is salient.

Relational comparisons of common identity are the comparison by group members of their in-group to relevant out-groups and "others" who are not members of the in-group. Explicit in the social identity approach, the creation of an in-group identity will produce comparative and competitive behavior with out-groups. Group members try and maintain in-group positivity, often by referencing out-groups in a negative manner. Similarly, in-group members will be referenced positively so as to keep the overall group positively high. Thus, we coded for both **positive** and **negative** relational comparison.

Finally, **collective language** is the use of "depersonalizing" language when group identity is salient. Carr et al (2013) suggests that individuals communicate a common identity by showing public signs (e.g., wearing a team jersey), which may manifest itself online as direct references to the group and depersonalization of the individual. Therefore, one marker that may be present in the discussion of engagement is depersonalizing or collective language. Individuals who have a common identity that is salient may (potentially, though not always) depersonalize from their individual identities, meaning that they do not think of themselves as individuals but rather as group members. Thus, they are more likely to use collective language (e.g., "we") than personal language (e.g., "I, you") in reference to a common group identity. Importantly, this is coded not for uses where there are simply multiple individuals present (such as two friends saying "we are going to the store"), but rather uses where, in the coder's best judgment, they are referring specifically toward a group collective identity.

Coder Training and Reliability

Three undergraduate research assistants were trained as coders to assess the qualitative responses to items in Study 1, as well as analyze the posts that were taken from

the screen capture session. All reliability was assessed using Krippendorff's Alpha (Hayes & Krippendorff, 2007) through the program ReCal[2], which calculates reliability statistics for multiple coders (Freelon, 2010, 2013). For all reliabilities from training sessions see table 6, and for all reliabilities from the final dataset see table 7.

Coder Training

Coders were trained on a separate dataset collected as a pretest of the Study 1 protocol collected in March 2019 (discussed above). Training of the coders involved iterations of roughly 10–15 units of analysis for a weekly (or, at times, bi-weekly) hour-long meeting. Coder training took approximately four weeks. Each coder was given an initial copy of the codebook, which was then clarified throughout the training process—adding exceptions, clarification, and additional conceptual and operational definitions throughout (for final codebook, see Appendix E).

Regarding **friend associations**, coders showed high levels of agreement across the training (all final training $\alpha > .87$), with the exception of "other" codes ($\alpha = .43$). This low reliability was due to the lack of specific direction regarding this variable, despite repeated attempts to clarify instances where an "other" code was appropriate. During the training, coders remained unsure about if "other" codes were appropriate for anything outside of specific examples agreed upon during the training. For instance, during training meetings we decided that family, religion, and cultural/racial identity were acceptable "other" codes, and those appear to be consistently coded as "other" in the dataset. However, coders were

[2] http://dfreelon.org/utils/recalfront/

inconsistent with "other" codes for potential groups outside of these categories (e.g., "gym buddies") and (occasionally) within the categories themselves.

Regarding the **posts**, reliability was generally high during training (all final training $\alpha > .82$), with the exception of "Group Mentioned in Post" ($\alpha = .43$). As most of the coding for this section contained manifest (as opposed to latent) content, deviations that were discussed in coder meetings tended to be due to coder fatigue or time constraints with the coding, as opposed to a misunderstanding of what is acceptable to code. The code "group that was mentioned in the post" produced more mixed results from the coding and was difficult to code with acceptable reliability despite many rounds of meeting to clarify, train, and practice. This is likely due to the latent nature of this code—similar to the "other" codes in the analysis of friend associations above.

Regarding **post engagement/memory rationale**, training proved to be difficult due to a lack of codable units. Several of the iterations during training had no occurrences of certain variables and when the variables were present in the training dataset (such as "Explicit Mention of a Group") they were typically infrequent. For instance, sanctioning of group members was never present in the training sample, nor was negative relational comparison to other group members. This absence of codes in Post Memory also occurred in the final dataset (discussed below). Despite the paucity of codable units, when they did appear the coders appeared fairly reliable during training on the remainder of the codes (all final training $\alpha > .60$).

Table 6

Inter-Coder Reliabilities (Krippendorff's Alpha) from Coder Training with Pretest Dataset

		4/29	5/1	5/6	5/8	5/18	5/20	5/24
Friend Associations	Relational Closeness – Positive	1.0	1.0	.82	1.0	1.0	.93	1.0
	Relational Closeness – Negative	1.0	-.07	.72	.85	1.0	1.0	.87
	Temporal Grouping	.71	.60	.86	1.0	.91	1.0	1.0
	Spatial Grouping	1.0	.86	.72	1.0	1.0	1.0	.87
	Other	*	.17	-.07	.26	-.16	.17	.60
Posts	Explicit Group	–	–	–	1.0	.77	.86	1.0
	Friend	–	–	–	.53	.75	.85	.86
	Group Mentioned in Post	–	–	–	1.0	.54	.79	.43
	Picture	–	–	–	.75	.93	.96	.82
	Video	–	–	–	.77	.93	.95	.89
	Paralinguistic Digital Affordances	–	–	–	.69	.84	.81	.95
	Comment	–	–	–	-.03	.87	1.0	1.0
Post Memories	Explicit Mention of a Group	–	–	–	1.0	.96	1.0	.89
	Non-Normative Behavior	–	–	–	1.0	1.0	*	.74
	Normative Behavior	–	–	–	*	.92	*	1.0
	Sanctioning	–	–	–	*	*	*	*
	Social Purposes and Goals – General	–	–	–	1.0	.78	*	1.0
	Social Purposes and Goals – Specific	–	–	–	1.0	.79	*	*
	Relational Comparison – Positive	–	–	–	*	*	1.0	1.0
	Relational Comparison – Negative	–	–	–	*	*	*	*
	Collective Language	–	–	–	1.0	1.0	.49	*

Note:
Column headings are the date of the coder meeting
– indicates that code was not assigned for that training date.
* indicates zero observed units and therefore an undefined Krippendorff's Alpha.

Reliability for Final Dataset

Reliability checks on the final dataset was mixed for **Friend Association** and **Posts**. Some of the non-reliable coding matched issues in the training (i.e., lack of clarity on latent variables such as "other" codes), but there was considerable degradation in codes that had been reliable during training.

As discussed above, during the pretest some participants' self-reported answer became nonsensical when piped into the group identification and entitativity measures. For example, some participants indicated specific roles (e.g., "mom") as their response to the question that asks about the "group to which this friend belongs". This caused issues with the additional measures, as "mom" does not appropriately indicate a social group to which entitativity and group identification apply. Thus, to capture this variation in the final dataset, participants were asked after the entitativity and group identity measures if they "changed the group in their head" when responding to the measures. Those who did change the group were presented with an additional text field where they were asked to indicate the new/clarified group name. The coders analyzed those responses in addition to the original response, but typically those "changed" responses were shorter and contained less detail than the original responses—making interpretation difficult. Thus, they are not included in the results for Study 1 but are reported below. Those "changed" responses are reported separately in the reliability table for Friend Associations.

Post Memories overall also drifted from acceptable reliability in the final dataset. This may be due to the paucity of codable units, as mentioned above, which exacerbate the disagreement amongst coders and result in a considerably lower Krippendorff's Alpha.

Table 7

Inter-Coder Reliabilities (Krippendorff's Alpha) from Final Dataset

Friend Associations	Original Cases (n = 16, 10.3% overlap)	Relational Closeness – Positive	.40
		Relational Closeness – Negative	.32
		Temporal Grouping	.79
		Spatial Grouping	.56
		Other	.15
	Change Cases (n = 26, 36.1% overlap)	Relational Closeness – Positive	.76
		Relational Closeness – Negative	-.00
		Temporal Grouping	.79
		Spatial Grouping	.66
		Other	.53
Posts (n = 10, 6% overlap)		Explicit Group	1.0
		Friend	.82
		Group Mentioned in Post	.03
		Picture	1.0
		Video	1.0
		Paralinguistic Digital Affordances	1.0
		Comment	1.0
Post Memories (n = 16, 7% overlap)		Explicit Mention of a Group	.37
		Non-Normative Behavior	.49
		Normative Behavior	.49
		Sanction	*
		Social Purposes and Goals – General	*
		Social Purposes and Goals – Specific	*
		Relational Comparison – Positive	*
		Relational Comparison – Negative	*
		Collective Language	.19

Note: * indicates zero observed units and an undefined Krippendorff's Alpha

STUDY 1 RESULTS

Study 1 was an exploratory analysis into how individuals perceive their various Facebook "Friends" and the groups to which they assign them. The study was divided in two parts: Part 1 concerned friend associations and perceptions of group identity; Part 2 concerned message processing in complex identity environments.

Study 1 Part 1: Friend Associations and Perceptions of Group Identity

Data Cleaning and Sample Analyzed

During Part 1 of the study (RQ1, RQ2, RQ3, RQ4) 89 participants were asked to identify up to two[3] Facebook "Friends" and answer questions about their association with those "Friends". Once the data were collected, three trained undergraduate coders assessed the statements for one of five possible codes that identified how individuals grouped each of their Facebook "Friends": Relational Closeness – Positive, Relational Closeness – Negative, Temporal Grouping, Spatial Grouping, and Other. The coders analyzed 154 unique "Friends" provided by the 89 participants.

Participants who did not pass attention check measures were dropped from analysis, resulting in excluding 11 participants: 22 of the 154 possible coding units (14.3%) for the first part of the study (RQ1, RQ3, RQ2, and RQ4). This brings the total potential sample to 132 individual "friends" that were identified by 78 participants. Additionally, given the variety in coder agreement for each variable in the final dataset (see section on reliability above), those units that were used to assess reliability were occasionally coded differently by

[3] Due to an issue with the protocol execution, 24 of the 89 participants were only given the opportunity to assess one potential "friend" from their list. Thus, the potential coded "friends" do not add to 178.

the three coders. Statements were excluded from the final dataset unless they were in complete agreement across all codes (excluded n = 12 "Friends" from 11 participants). This provided a final n = 120 units of analysis, from 77 participants. Those codes were then combined back into the dataset with the respective participant's self-report data.

RQ1

RQ1: How will participants identify (a) distinct as well as (b) overlapping groups associated with individuals in their SNS network?

To test RQ1 participants were instructed to "write briefly about how are you associated with your friend who has the initials (Initials)." They were also told "If you know them in multiple ways, please explain each way you know them" and provided an additional entry field. Thus, there is the opportunity for participants to group their "friends" into one or multiple associations.

Distinct Groups

Regarding RQ1a, the majority of participants listed only one association with each listed "friend" (91, 75.8% of the total sample) and did not fill out the text box to indicate that they knew the "friend" in multiple ways. These single groupings were mixed in depth and discussion. Some were straightforward (e.g., "I know him because he is a member of my family") and only provided the minimum response needed to answer the question. Others, however, often went into detail and discussed interpersonal dynamics about how they met, and the length and strength of their relationship.

Summary: Distinct Groups

While these specific types of groupings are discussed elsewhere (see RQ4) the evidence indicates that, in general, people do tend to think of individuals on social media in clear, single groupings when explicitly asked to articulate the relationship.

Overlapping Groups

Regarding RQ1b, 29 (24.2% in the total sample) of the "friends" the participants listed had additional explicit groupings (i.e., filled out the corresponding text box). However, the actual entries tell a much different story. In only six of the 29 cases (5% of the total sample) did the participants appear to be signaling true overlapping group identity relationships. One participant said "In my dorm friend group"/"Sorority", and another mentioned "Went to high school together"/"Cross country team, goes to UCSB".

The remainder of the text entries served to help the participant clarify the initial relationship listed (11 times, 41% of those explicit additional groupings) or discuss the strength of that relationship (10 times, 37% of those explicit additional groupings). For instance, one participant initially listed "Best friend from high school" but in the additional text entry box clarified, "more like a brother than a friend". Similarly, participants noted the strength of the relationship by saying, for example, "A great friend"/"club member", or "my roommate"/"my best friend" which do not indicate multiplex groupings.

This explicit grouping may not be the only way participants signal multiplex relationships, however. In addition to the analyses of self-report measures of individual or multiplex groups, we looked at whether or not three of the five codes most strongly related to group identity (Temporal Grouping, Spatial Grouping, and Other) co-occurred. Positive- and Negative Relational Closeness are the least likely to represent meaningful group identities, so they are discussed below. While these may not necessarily represent overlapping groups per

se (see RQ3), occasionally each of the remaining overlapping codes represented a distinct group entity.

Temporal and spatial grouping are significantly associated with each other ($\chi^2(1, 120) = 20.90$, $p < .001$). There were also 59 instances of an "Other" code—just under half of the total sample (49.2%). These "Other" codes significantly co-occurred with temporal ($\chi^2(1, 120) = 15.88$, $p < .001$) and spatial ($\chi^2(1, 120) = 22.08$, $p < .001$) codes. See Table 8.

Table 8

Omnibus Chi-square Associations between Coder Observations

	RC_P	RC_N	TG	SG	Other
1. Relational Comparison – Positive (RC_P)	—	.89	1.62	3.04	2.16
2. Relational Comparison – Negative (RC_N)		—	.02	0.08	1.08
3. Temporal Group (TG)			—	20.90*	15.88*
4. Spatial Group (SG)				—	22.08*
5. Other					—

Note: * = $p < .001$, all DF = 1, $n = 120$

Thematic analysis of these "Other" codes revealed five common groupings: Family, College/UCSB, Religion, Greek Life (Sorority/Fraternity), and Club/Sport/Hobby. Each of those themes was then quantitized into absent or present (see table 9). Within these codes each of the five "Other" themes co-occurred with at least one "Other" theme in 16 cases (27.1%). Often this was a co-occurrence between UCSB and various other themes that relate to being on campus (e.g., Greek life involvement, sports, or on-campus clubs or activities), which may not necessarily represent *overlapping* groups per se as much as specific grouping contexts. However, within those "Other" themes there were occasionally distinct group

divisions between those co-occurring emergent themes. One participant said that they "knew this person in high school and ran on the cross-country team with them… this person also goes to UCSB now", and another mentioned "We met through an on-campus Christian fellowship… we also both really like sports in general, so we'll talk about baseball and football too."

Table 9

Thematic Analysis of "Other" Codes

Theme	Percentage Present (*n* = 59)	Example
Family	52.5% (31)	"he's my brother"
Club/Sport/Hobby	32.2 (19)	"She is a fellow committee member on the board that is planning Reel Loud, the film festival here at UCSB"
College/UCSB	23.7 (14)	"we are friends from college"
Greek Life (Sorority/Fraternity)	15.3 (9)	"I met this person when I joined a professional business fraternity last year"
Religion	5.1 (3)	"I met BH through an on-campus Christian fellowship"

Note: This thematic analysis could receive multiple themes per coding unit, thus the total percentage is 128.8%

Summary: Distinct vs. Overlapping Groups

Taking all the evidence together, while "overlapping" groups do exist as shown above, they are much less frequent than single group associations, and do not clearly articulate that the multiple groups are distinct yet simultaneously present.

RQ2

RQ2: How does (a) entitativity and (b) strength of identification differ with each participant-labeled SNS group?

Relationships with Group Entitativity and Group Identity

Analyzing the coded and self-report descriptions of group entitativity and group identity revealed some interesting findings. First, Group Entitativity and Group Identity Strength are significantly correlated, $r = .64$, $p < .001$. This makes sense, as the more strongly you identify with a group, the more likely you are to see that group as a distinct entity. Thus, multivariate regression in Mplus version 8 was used to analyze the effects of the five coded Friend Association variables (Relational Closeness – Positive, Relational Closeness – Negative, Temporal Grouping, Spatial Grouping, and Other) on Group Entitativity and Group Identity Strength. Unfortunately, this software does not produce an F-statistic for the overall model fit but constraining all the regression coefficients to zero and comparing with an unconstrained model (i.e., one with all five predictors entered) shows a significantly better fit for the unconstrained model ($\chi^2(1, 10) = 37.57$, $p < .001$). Thus, the overall model fits these data, though it is driven by a few key predictors.

Group entitativity. There were no significant effects for positive relational closeness nor temporal or spatial groupings on group entitativity. However, there is a significant negative effect for negative relational closeness (e.g., "She is a fellow committee member on the board that is planning Reel Loud, the film festival here at UCSB… We are not particularly close and I am not fond of her") (Standardized $\beta = -.19$, $p = .03$). There is also a marginally significant effect with "Other" codes (Standardized $\beta = .18$, $p = .07$). This seems odd as "Other" is a collection of groups that were not captured by the four other codes.

Group identity strength. There was a significant effect of positive relational closeness (e.g., "MW is my roommate…. we are very close friends") (Standardized $\beta = .23$, $p < .01$) on Group Identity Strength. There was also a significant negative effect of negative

relational closeness (Standardized β = -.36, $p < .001$). There were no significant effects for temporal or spatial grouping, and no significant effect of "Other" codes on Group Identity Strength. For full regression results see table 10.

Table 10

Standardized Regression Coefficients for Coding Variables on Entitativity and Group Identity Strength

	Entitativity		Group Identity Strength	
Explanatory Codes	β	SE	β	SE
Relational Closeness – Positive	.08	0.09	.23**	0.08
Relational Closeness – Negative	-.19*	0.09	-.36***	0.08
Temporal Grouping	-.14	0.10	-.11	0.09
Spatial Grouping	-.01	0.10	.03	0.09
Other	.18†	0.10	.15	0.09
Adj R^2	.12	.06	.23	.07

$N = 120$

Note: † = $p < .10$, * = $p < .05$ ** = $p < .01$, *** = $p < .001$

Summary: Relationships with Group Entitativity and Group Identity Strength

Overall, both Group Entitativity and Group Identity Strength appear to be most consistently related to relational closeness. Negative Relational Closeness is a significant negative predictor of both Group Entitativity and Group Identity Strength, which suggests that when participants feel negative or neutral about their relationship with a "friend" they associate less strongly with the group to which that friend belongs. Interestingly, Positive Relational Closeness is a significant predictor of Group Identity Strength but not Group Entitativity. In other words, the closer one feels to a "friend" the more they feel as if that the group to which they both belong is important to them, but it does not mean that their shared

group is seen as more cohesive. As "Other" is a code that has several associated themes (discussed below), it is difficult to interpret its marginal effect on Group Entitativity, nor would it be particularly meaningful to discuss in detail.

Participant-Labeled Groups and Changes in Group Name after Initial Labeling

Early in the questionnaire, participants were asked to provide a short name for their group to which each "friend" belongs, which was then automatically populated into their questionnaire, so they saw that name in the entitativity and identification scale items (e.g., "I think <*provided name of the group*> is unique"). This presented a challenge as some of the groupings people listed were not distinct social groups that would make sense piped into a scale item (e.g., "Reel Loud—a student organization"), but rather collections that were based on other factors such as strength of relationship (e.g., "best friend") or role (e.g., "mother", "roommate"). To solve this, after the entitativity and group identity strength items participants were provided an opportunity to indicate if they "changed the name of the group in their head" (i.e., after first identifying the short name for the initial group of each "friend") on a Likert-type scale ranging from (1) "I did not change it at all" to (4) "I changed it a great amount" (n = 120, M = 1.97, SD = 1.12). Participants indicated for 61 of the 120 analyzed group identities that they did mentally change the name to complete the items (i.e., responses were not "I did not change it at all"), and they were then presented with a text box and given the instructions "You indicated you changed the name of this group you called <*provided name of the group*> in your head. To what did you change it, and why?"

The 120 units/statements analyzed in RQ1a, RQ1b, and RQ2 above do not include these "change" codes—only the initial responses given based on the first provided group name were analyzed. However, as some participants *did* change their answers (even if those

were not included in the analyses) a brief examination of those "change" codes is warranted. Thematic analysis of these "change" codes revealed several types of changes that participants made.

Eighteen of those 61 changed group names (29.5%) were altered due to grammatical or simplification corrections (e.g., "in my dorm friend group" became "dorm friends") and 21 (34.4%) of the group names were changed into somewhat logical extensions of the role that "friend" occupied (e.g., "mother" was changed to "family members"). Ten (16.4%) of the group names were changed to more specific groupings (e.g., "sorority" became "Theta", "my director" became "musical theater friends"). Finally, 18 (29.5%) of the participants changed the group labeling based on relational closeness (e.g., "water polo teammates" became "close friends within water polo"). Because the item that asked if they had mentally changed the group label occurred after the items on entitativity and group identity strength, and because most of the "changes" did not dramatically alter the underlying group to which those "friends" belong, only the original associations the participants listed are used in the following analyses. However, this "change" effect is conceptually, but not much empirically, a limitation of the current study, as discussed in the limitations section.

RQ3

> **RQ3**: Will participants group individuals on SNS into (a) temporally and/or (b) spatially distinct clusters?

Temporal and Spatial Grouping

From the 120 possible friend groupings, *temporal grouping* was present in 45 (37.5%) and *spatial grouping* was present in 48 (40%). These two codes are significantly

associated with each other ($\chi^2(1, 120) = 20.90$, $p < .001$), co-occurring in 30 of the possible 120 units of analysis (25%).

Temporal grouping. Codes that featured only *temporal grouping* and not *spatial grouping* (15) tended to be discussions of long-term friendships or acquaintances. For instance: "She is a girl who I have grown up with since the age of 5", "I have known this individual since 6th grade. We have kept in touch/seen each other until junior year of high school. I have not talked or seen her since", and "we danced with each other when I was six till I was around the age of 14." These temporal codes are also typically associated with current and active relational maintenance strategies. Participants mentioned: "We occasionally get dinner together to talk about our major studies and I go to him when I need advice for anything", "*NF* is one of my best friends, we have known each other for 10 years. We also both tag each other in Facebook comments quite frequently", "I see her every day. We will probably be friends for many years after college and even live together in the future." These strategies seem to use social media to facilitate virtual or physical interaction.

Spatial grouping. Codes that featured only *spatial grouping* and not *temporal grouping* (18) tend to be a discussion of living situations and co-located activities. For instance, many participants mention people who live in the same dorm/apartment. For instance, "He is my immediate roommate and teammate on my track and field team at UCSB." Other participants mention extracurricular activities as spatial grouping mechanisms. For instance, "I met her accidentally *at a club meeting*…", "I know BS *from a musical I was in*.", and "She is on my *track and field team at UCSB*."

Co-Occurrence of Spatial and Temporal Grouping

Codes that overlapped both *temporal* and *spatial* and *grouping* (30) had mainly to do with previous school experiences. Of the 30 possible codes that co-occurred, 20 (66.7%) referred explicitly to schooling when the participant was younger (i.e., elementary, middle, or high school). Interestingly, when temporal and spatial codes co-occur, there were several explicit mentions of *co-present group memberships* that were not present when the codes did not co-occur: these included related transitions, sub-groupings within a particular time of life, or relational closeness and/or distance.

Transitions. These co-occurring groupings often centered around transition periods of the participants' lives. For instance, one participant noted "I met them in middle school and continued to be good friends with them throughout at least half of high school", and another mentioned "We are friends from middle school. We also went to the same high school and community college and at one point worked together." And a third "This is a friend I have known since high school, so approximately six years. She has been my best friend for a while now and attends UCSB just like I do. Therefore, we still talk every day." These transitions, while centered most often around school, seem to suggest that Facebook serves as a tool to keep track of previous relationships but, more specifically, those that are centered around distinct social groupings that may or may not be as salient currently.

Sub-groupings within a particular time of life. Another theme that emerged from this co-occurrence of temporal and spatial characteristics were references to *sub-groupings within a particular time of life*. Participants occasionally mentioned more specific groupings within larger group identities. For instance, one participant said: "She is a close friend that I knew since elementary but got a lot closer through college. We are also a *part of the same*

ministry on campus." Another said: "I always hung out with him in high school after I met him… *we also went to the same church and served there together*." And a third said, "She is one of my really close friends from college. We *met in this Latina organization on campus*. We had a class together last quarter and have bonded ever since and will be roommates next year." It appears that instances where temporal and spatial groupings are both present can elicits a reframing of the relationship into more distinctive sub-groupings.

Relational closeness and/or distance. Finally, co-occurrence of temporal and spatial codes also tends to elicit a discussion of perceived *relational closeness and/or distance*. One participant, after discussing their common Greek life affiliation, mentions "though we see each other a lot, our interactions are *not particularly in-depth*." Another mentions "We still keep in touch and I know about the important goings on in her life. *She will always be one of my best friends, but I haven't seen her in a very long time.*" Finally, another said "… when I went to college *we distanced, because we didn't see each other every day anymore*". This more explicit discussion of relational closeness/distance is not as present in those units that *only* have spatial *or* temporal groupings. While there is some mention of relational closeness in temporal only groupings, those codes have more of a discussion of relational maintenance strategies (e.g., "we chat every day"), whereas the temporal and special co-occurring groupings are more discussing the underlying nature of the relational closeness of the "friend" (e.g., "EWD is one of my closest friends from elementary school. We still keep in touch and I know about the important things going on in her life. She will always be one of my best friends, but I haven't seen her in a very long time.")

Summary: Temporal and Spatial Grouping

There is considerable evidence of temporal (RQ3a) and spatial (RQ3b) grouping, as well as significant co-occurrences between the two codes. Temporal grouping is associated with relational maintenance, and the combination of temporal and spatial grouping produces interesting discussions about when individuals are transitioning into different stages of life, the way in which those individuals more specifically associate(d), and how they are maintaining those relationships.

RQ4

RQ4: What are some characteristics, other than spatial and temporal (if any), that individuals use to group others with whom they have recently interacted on SNS?

Relational Closeness: Positive, Negative, and Co-occurrences

As discussed above, drawing on findings from Zillich and Müeller (2019), research assistants coded for positive and negative relational closeness. Mentions of positive relational closeness occurred in 48 out of 120 possible units (40%). Mentions of negative relational closeness occurred in 15 out of 120 possible units (12.5%). These codes co-occurred with each other in only four instances and thus were not significantly associated with each other ($\chi^2(1, 120) = 1.27$, $p = .26$). As discussed above, relational closeness was, in some cases, a predictor of entitativity and group identification strength.

The presence of considerably more positive as opposed to negative mentions of relational closeness appears to indicate (reasonably) that individuals are most often connected with people who evoke a strong, affirming relationship. For example, “TR is my mother and we have a very strong, close relationship.” Frequently, in the mentions of positive relational closeness, the participants discuss how frequently (or infrequently) they

communicate with their "friend". For example, "PS is my older brother and we are extremely tight. I talk to him almost every day." This is particularly true when discussing how they met—likely an artifact of the instructions given to the participants (see limitations section).

While groupings by (primarily positive) relational closeness are frequent in the data, they do not necessarily indicate a group identity specifically, and are not significantly associated with any other codes (see Table 8 above). They also may be an artifact of the instructions given to the participants, or the order of the study protocol (see limitations section).

Mentions of negative relational closeness were relatively infrequent in the dataset, and a thematic analysis of these codes seems to indicate either a functional role (e.g., "She is a fellow committee member on the board… I'm not particularly fond of her", "We were team members and somewhat acquaintances but nothing more than that"), or that participants lost touch with or involved temporal distance from that "friend" (e.g., "The last time I saw him was one of the times I went back to Iran. I have not spoken to him in years", "I know AM because I did a show with her when I was little. We haven't talked since then, and she lives in New York").

Other: Frequency and Co-occurrences

Of the 120 possible unique options, there were 59 (49.2%) instances of an "Other" code. These "Other" codes had significant co-occurrences with temporal ($\chi^2(1, 120) = 15.88$, $p < .001$), and spatial ($\chi^2(1, 120) = 22.08$, $p < .001$) codes, but not relational closeness—neither positive ($\chi^2(1, 120) = 2.16$, $p = .09$) nor negative ($\chi^2(1, 120) = 1.08$, $p = .49$). Thematic analysis of these "Other" codes revealed five commonalities (also mentioned in RQ1) that were then quantitized into absent or present (see table 9 above): family,

club/hobby/sport, academic activities, and religion. The five commonalities co-occurred with at least one other commonality in 16 cases (27.1%). As mentioned above in RQ1, often this was a co-occurrence between UCSB and various other themes that relate to being on campus (e.g., Greek life involvement, sports, or on-campus clubs or activities).

Family. First, family is the predominant "Other" group for the majority of these commonalities, occurring in 31 out of 59 codes (52.5%). This ranges from short explanations about where in the family these individuals fall: "She's my mom", "MB is married to my older cousin", but also much longer explanations about family dynamics and perceptions of family members. One participant, talking about her sister, mentions "She's 34 years old, so we're at very different points in our lives…. I know she will always be able to support me mentally and financially, even if we do not talk all the time." And another participant, talking about her mother, notes "Even though I am away at college, I interact with her over the phone and messaging every day and sometimes even multiple times a day." These familial groupings suggest that Facebook may predominantly serve as a place through which individuals can maintain core group relationships while physically distanced from their family members.

Club/hobby/sport occurred in 19 out of 59 (32.2%) possible "Other" codes, and co-occurred 9 out of those 19 times with "College/UCSB". Many of these associations are about avocational activities (e.g., "we like playing board games, and we often spend time together with the rest of the friend group outside of class", "we often go to the gym together… we are also in the same friend group") and discuss the specific hobby in the context of a larger group of friends. Several of the associations mention a specific sport, often associated with school in some capacity (e.g., "I ran on the cross-country team with them", "a teammate on the

water polo team"). Other associations are on-campus organizations (e.g., "we met in this Latina organization on campus", "MK is also a colleague and friend from KCSB Sports"), which only occasionally are academically related (e.g., "I met her in a SAT test preparation program").

While **academic activities** are not particularly present, the associations do tend to mention school as a grouping—if not explicitly. For instance, "he and I live in the same dorm" does not explicitly mention UCSB, but considering the participant is a student at this university, and the location is a "dorm," it could be inferred that this is the case. There is an explicit mention of College/UCSB in 14 out of 59 (23.7%) possible codes; however, these were always associated with a club/hobby/sport or Greek Life.

Greek Life occurred in 9 out of the 59 codes (15.3%). Those associations that were associated with Greek life were mixed with discussions of relational closeness. Many of the participants mention closeness explicitly in relation to Greek Life. Interestingly, however, the closeness of the relationship is quite mixed. Some participants are quite close with their friend (e.g., "I met this person when I joined a professional business fraternity last year of Spring quarter. He is like a brother figure to me", "She has been my best friend since the beginning of college. We met at recruitment, are in the same sorority, and see each other every day"), but others appear to use Facebook to transmit group information *without* being relationally close. For instance, one participant said "I do not know this person personally. She is the service director for my sorority, and so she posts important information about service", and another mentioned "It is important to friend the officers in your sorority because they post important information about upcoming events". It appears that, at least for

individuals inside of formal organizations, Facebook serves as an effective tool for disseminating organizational information broadly to the entire group.

Religion is the final commonality to emerge from the "Other" codes, occurring in 3 out of 59 codes (5.1%). While the mention of religion was rare, those three codes all indicated multiple associations with high school/college and another activity (e.g., "We also both really like sports in general so we'll talk about baseball and football too", "BH is an amazing friend and he helps me on my Econ homework a lot as well", "I always hung out with him in high school after I met him… In addition, we went to the same church and served there". These data suggest that religion, while certainly a group identity, is an infrequent identity and even then is not the sole salient aspect of friendships on social networking sites such as Facebook.

Study 1 Part 2 Results: Message Processing in Complex Identity Environments

Data Cleaning and Sample Analyzed

During the second part of the study (concerning RQ5), the 89 participants were instructed to view their News Feed and, after five minutes of browsing, were then asked to describe up to three[4] posts they remembered during that browsing session from memory. Eleven of the initial 89 participants either left the study before completing this section or were unable to complete this section due to technical errors in the protocol. This left an initial $N = 222$ from 76 participants. Removing the additional 11 participants who failed the attention checks (as discussed above) excluded 26 post memories, leaving a $N = 196$. Similar

[4] Like part 1, due to an issue with the protocol execution, 3 of the 76 participants included did not complete all three post memories, therefore the starting *N* does not equal 228 (three per person).

to the data cleaning for the first part of Study 1, codes that were used for reliability were not included unless all coders were in agreement across the codes, removing a further 4 memories ($N = 192$). Finally, due to coder fatigue eight additional memories were not coded, resulting in a final $N = 184$ post memories from 67 participants that were analyzed for RQ5.

Coders analyzed the 184 descriptions of posts that participants remembered from their browsing for a variety of factors that would suggest group identification is playing a role in their processing (see "Post Memories" section of Table 11).

Table 11

Occurrence of Codes from Final Dataset

Type of Code		Specific Code	Present	Percent Present
Friend Association	Single Association Stated (n=91)	Relational Closeness – Positive	36	39.6 %
		Relational Closeness – Negative	11	12.1
		Temporal Grouping	35	38.5
		Spatial Grouping	34	37.4
		Other	43	47.3
	Multiple Association Stated (n=29)	Relational Closeness – Positive	12	41.4 %
		Relational Closeness – Negative	4	13.8
		Temporal Grouping	10	34.5
		Spatial Grouping	14	48.3
		Other	16	55.2
Posts (n=166)		Explicit Group	41	24.7 %
		Friend	72	43.4
		Group Mentioned in Post	28	16.9
		Picture	98	59.0
		Video	48	28.9
		Paralinguistic Digital Affordances	43	25.9
		Comment	12	7.2
Post Memories (n=184)		Explicit Mention of a Group	12	6.5 %
		Non-Normative Behavior	2	1.1
		Normative Behavior	5	2.7
		Sanction	0	–
		Social Purposes and Goals – General	4	2.2
		Social Purposes and Goals – Specific	0	–
		Relational Comparison – Positive	0	–
		Relational Comparison – Negative	0	–
		Collective Language	5	2.7

Note: If coding units were assessed by multiple coders (for reliability checks), only those codes that were in complete agreement are included in this table.

RQ5

RQ5: Is group identity an indicator (out of many others) for why participants remembered or engaged with a post when processing posts in a threaded format with multiple members on SNS?

A priori Group Identification Codes: Frequency

The coders did not find many instances of *a priori* markers of group identification in the responses. Sanctioning, Specific Social Purposes and Goals, Positive Relational Comparison, or Negative Relational Comparison were not present in any of the 184 post memories that were assessed by the coders. However, the other four *a priori* markers were mentioned.

There were Explicit Mentions of a Group in 12 (6.5%) of the post memories (e.g., "It is part of a Facebook group with many of my good friends. Whenever a post comes up from this group I always stop to read it…"). These explicit mentions were usually about a specific Facebook group (e.g., Subtle Asian Dating), or school (e.g., high school).

Normative Behavior was present in 5 (2.7%) of the post memories (e.g., "Typically the group it was posted in has a majority of selling posts with a few angry posts, which made it stick out to me."). Three of the five post memories that contained Normative Behavior also were a part of an Explicit Group. In those instances, the normative behavior was about behaviors such as posting in that group and the correct etiquette to do so. Non-Normative Behavior was present in 2 (1.1%) of the post memories. Both referenced a photo/video that was "cute" and how the poster in that case was surprising or novel in some way.

General Social Purposes and Goals were present in 4 (2.2%) of the post memories (e.g., "This dog group page always share a lot of videos and posts so group member can get

the information from them." Three of the 4 post memories were also coded a part of an Explicit Group.

Collective Language (e.g., "we", "us") was present in 5 (2.7%) of the post memories (e.g., "CC and I are both freshman in college, so it has been cool to see how both of our first years of college have been going…"). The collective group in these instances referred to a band, family, or school.

A priori Group Identification Codes: Thematic Analysis by Frequency or Clustering

Despite achieving acceptable agreement by the end of coder training, intercoder reliability for the *a priori* group identification codes in the study itself were low overall (see table 7 in the coder training section), likely due to the latent nature of the content and the infrequency with which these group identification codes appeared in the data—both during coder training and during the final dataset (see results and Table 11 above).

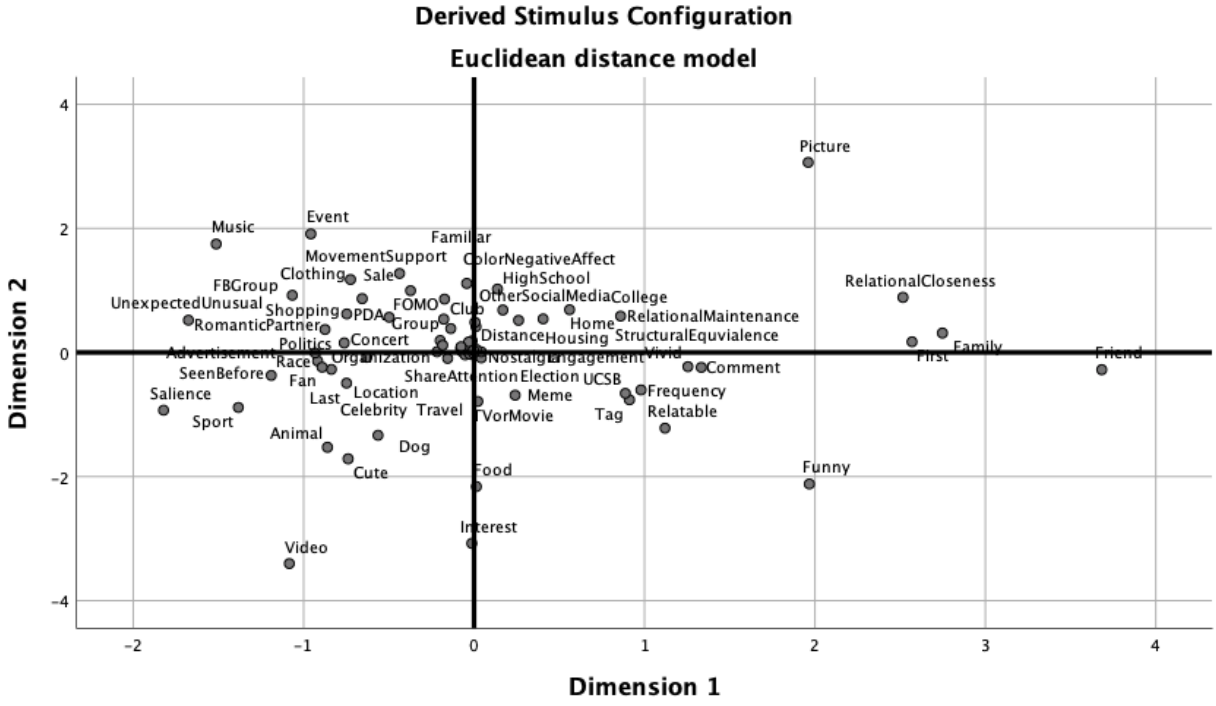
Therefore, we subsequently performed emergent thematic analysis on the text, disregarding group identification issues, to determine any additional factors for why participants engaged with a particular post. Keywords from each response drawn out and written down. For instance, "I love animal posts, especially the ones about dogs. It is a relatable post. My family and I have a two-year-old Akita named Simba. Two years ago, my family didn't want a dog, but now they love Simba to death" received keywords of "Animal" "Dog" "Relatable" and "Family", as the other words in the response were qualifying information. This resulted in 72 emergent keywords/themes from the 209 responses (see Appendix F.

To attempt to identify a small set of more general themes, those 72 themes were quantitized into 0 (absent) and 1 (present), then entered into a hierarchical cluster analysis

and a principal component analysis to see if particular themes clustered with any other themes. These analyses did not reveal any meaningful co-occurrences, clusters, or factors (see Figure 3).

Figure 3

Cluster Analysis of Post Engagement/Memory Rationale



The paucity of *a priori* codes from research assistants, coupled with no discernable pattern in the emergent thematic analysis, indicates that there is no meaningful general set of reasons for why participants decided to engage with the posts. More specifically, group identification does not appear to have a measurable effect on why participants remembered specific posts.

Contextual Analysis of the Remembered Post Itself

Additional analysis of content of the (up to three) posts themselves that were remembered (that is, not the *reasons* for remembering them, as analyzed above) may add context to this finding, however. The same coders analyzed the actual (anonymized) posts from the participants for the seven coding categories: If the origin of the post is from (1) an explicit group or (2) a friend, if (3) a group was named in the post text itself, whether the post was an (4) image or (5) video, and if the participant engaged in some sort of (6) paralinguistic digital affordance or (7) commented on the post.

(1, 2 & 3) Regarding the **origin** of the posts, they predominantly came from friends (43.4%) but nearly a quarter of the posts (24.7%) were from an explicit group on Facebook. This may have to do with the Facebook algorithm. Though the algorithm may display posts from groups or friends, that does not necessarily mean that individuals will remember or engage with those posts at the same rate with which the algorithm feeds those posts. In other words, while we cannot know the algorithm's propensity toward displaying more group- or friend-focused content, memory/engagement may not correspond with the algorithm's feed.

Two main types of **explicit groups** (constituting of 36 of the 209 units) emerged from thematic analysis: *avocational* (i.e., enjoyment or humor; see Howard, 2014) and *functional*. Avocational groups accounted for 21 of the 36 posts (58.3%)—often these were pulled from humorous "meme" pages where the primary purpose is to share images and videos relating to that group. For instance, the Facebook group "Subtle Asian Traits" was listed many times in the responses and portrays humorous videos relating to Asian identity. Functional groups (15 of the 36 posts, 41.7%) were focused more on buying and selling of goods/services, asking for favors, and informing individuals about events. These were typically from the group

"UCSB Free and For Sale", which is specifically focused on UCSB students and community members in Isla Vista (the surrounding town). Several of these functional posts were asking about rideshares to different areas around the state, selling concert tickets, or discussing the student government elections that were taking place when the data was collected. This focus on explicit (as opposed to implicit) groups certainly alludes to a shared group identification (e.g., race, university affiliation), though it does not appear that the driving motivator for engagement with these posts is directly related to those identities.

(4 & 5) Most of the posts had some sort of ***image*** (59%) or ***video*** (28.9%). Interestingly, however, actual *mentions* of the post being a picture or a video did not occur with the same frequency when we asked the participants to describe the post (picture = 13.8%, video = 20%). This would suggest, then, that the medium of the post itself may be a factor in engagement/memory, but may be below the threshold of salience.

(6 & 7) Finally, participants had the opportunity to actively engage with the post by either providing a **paralinguistic digital affordance** (PDA; e.g., "liking" the post) or **commenting**. Participants were much more likely to use PDA (43 posts, 25.9%) over commenting (12 comments, 7.2%). This is likely due to the ease of pressing a "like" button versus typing a message. It may be that by engaging directly with the post you are more likely to remember it as opposed to passively viewing content. While the comments themselves were not coded as a part of this study, anecdotally when anonymizing the data for coders many of the comments did seem to be tagging other individuals—often to share something humorous.

Quantitative Responses to Posts

While the quantitative items related to the posts were not particularly helpful in determining if group identity was a factor in engagement/memory of specific posts, they do provide some additional context. For instance, participants indicated that the posts they remember and recorded matched quite well to the actual posts themselves ($M = 6.02$, $SD = 1.07$). Participants also tended to expect the post from the individual posting it ($M = 5.27$, $SD = 1.61$). Interestingly, however, participants were quite low on the item "people who do not know this person might not get the real meaning of this post." ($M = 2.73$, $SD = 1.73$), which seems to indicate that the identity of the poster itself is of less importance than the content of the post (the implications of which will be discussed later).

Summary: Group Identification in Posts

The posts themselves provide an additional window into engagement with content on social networking sites, and occasionally can indicate a group identity that may be available when browsing. While participants indicated posts that may have evoked a group identification (e.g., from an explicit or avocational group), it does not appear that the group identity plays a role in why individuals remembered or decided to engage. There was no discernable match between the rationale behind their memory/engagement and the post itself, and it appears that overall group identification does not play a detectable role in post memory or engagement.

STUDY 1 (PARTS 1 AND 2) DISCUSSION

While prior research has approached group identification online from a single-group perspective—looking at whether measurable effects occur because of a (usually primed) single group identity—this study sought to assess how SNS users classify friends and process information in a setting that reflects the experience of being virtually surrounded by many different potential groups to which someone may belong. The following sections discuss results and implications concerning group identity salience (RQ1, RQ2), characteristics of group identification (entitativity and group identity strength) (RQ3, RQ4), and group identity as an indicator of engagement and memory (implicit and explicit groups, and information processing) (RQ5).

Group Identity Salience

One area of exploration for the current study was to see if and how group identities that are not primed would surface when individuals are asked to explain relationships in online social networking environments. The results are consistent with prior work (e.g., Kelley et al., 2011; Lampinen et al., 2009; Litt & Hargittai, 2016)—individuals tend to group their friends into distinct clusters. Looking deeper at the five clusters identified in RQ4 (family, club/hobby/sport, academic activities, and religion), this also confirms the types of general clusters identified by Kelley and colleagues (2011) (e.g., college, location, education) and more specific groups such as family and church (see p. 11, Table 2). While the current findings add to that work by identifying more specific activities such as clubs, it supports that these existing categories are the predominant types of groups for a college student sample.

However, adding to those findings, results from RQ1b indicate that respondents in this sample do not typically think initially of overlapping groups for each “friend”. Instead,

they choose to identify those friends either by a *single* group identity (e.g., family, teammate), or by other means such as strength of relationship. Why might this be the case?

Cognitive Load

First, it may be that identifying multiplex relationships is more cognitively taxing than responding with a single relationship. Prior research has shown that (single) group identities is a useful heuristic cue when processing information (Metzger et al., 2010), which suggests that group identity may be *less* taxing than other forms of processing. But for the participants in this study identifying overlapping identities may have actually required more cognitive resources than identifying single groupings. This may, first, be due to the study design itself. As writing additional associations was an added task for undergraduate students receiving a nominal amount of course credit for participation, it may be that the least taxing option was to respond with a single response—despite explicit calls in the instructions to be thorough in their response.

Second, perhaps multiplex identities only arise when those identities are highly salient or, in SCT terms, chronically accessible (i.e., an identity that is so central to one's self-concept that it is constantly used). While the results of this study do not necessarily confirm a *functional antagonism* approach to group identification it does provide evidence that, at least for this sample, a single distinct identity with additional characteristics such as relationship strength is typically what comes to mind.

Finally, it may be that the additional cognitive load that is required to identify multiplex relationships means that individuals do not process those multiple relationships in general outside of being explicitly primed. When individuals identified the single groups to which their "friends" belong, the majority of additional groupings and co-occurrence of

codes such as temporal, spatial, and "other" became more specific about that relationship and group identity.

The one area that may provide the most support for the use of multiplex identities as it relates to cognitive load has to do with transitions in the lives of participants in RQ3. Participants that had co-occurring temporal and spatial groupings discussed those transitions in a way that allows individuals to keep track of the various group identities across their life. This usually meant transitions in terms of school and relational maintenance strategies, or a discussion of how that relationship has changed in the years since they have been friends. Perhaps the function of group identity in this context is simply as a point of connection with "friends" who have lost touch. In this case, remembering the multiple identities that "friend" held may be less cognitively taxing than attempting to remember the interpersonal dynamics across time and space.

Study Protocol

Finally, the lack of multiple overlapping identities may be an artifact of the protocol and instructions given to the participants. When participants began the study, they first were asked to indicate their level of relational closeness with the "friend" using a relational closeness scale (Gächter et al., 2015). Then, they were instructed to "write briefly about how are you associated with your friend who has the initials (Initials). In other words, what is your relationship to this person and/or from where do you know them?" It is possible that the item order and then wording of the instructions was an indicator to the participants that the study was more focused on relational dynamics than group identity. Thus, a bias may have been introduced in the study itself, leading to underemphasis of group identities and memberships.

Summary: Group Identity Salience

Overall, for this sample multiple group memberships were not particularly common, which provides some support for the *functional antagonism* approach discussed by SCT. This lack of multiple group memberships for the "friend" does not necessarily mean that social media do not still facilitate membership overlap for the users. This finding is certainly constrained by the limitations of this study (discussed below). Additionally, while this study found that individuals distinguish between primary group identities or other characteristics, this raises an additional question that will be addressed in Study 2: what is the effect of multiple identities when those "friends" are a part of different identity groups for the participant themselves?

Characteristics of Group Identification

While the results from RQ1 and RQ4 show that individuals do tend to group their friends into single categories, this raises other interesting questions about the nature and characteristics of those groups. Two common measures when discussing group identity are group entitativity and group identity strength. These measures of group identity are often related to how central a group identity is to a person and are important predictors in a variety of additional group variables.

Interpersonal and (Inter)Group Dynamics

Negative Relational Closeness.

In this study, both group entitativity and group identity strength were negatively related to friend associations that were coded for negative relational closeness. This is interesting and speaks to the perceived (inter)group dynamics at play and how they are affected by the interpersonal dynamics of those group members. If participants, unprompted,

explain their relationship with individuals in a non-positive way, they see the *group* to which that individual belongs as less of a coherent social unit (entitativity) and identify less strongly with that group.

It may be that Facebook's propensity toward individuating factors such as names, photos, and personal attributes on a friend's profile page cause relational closeness to stand in for perceptions of the group to which that individual belongs. In other words, these small cues cause people to think about the group itself as it relates to their *interpersonal* dynamics with that particular group member. Even though we asked participants to identify several individuals you "know in the same way as the first friend", it may be that the first friend is seen as the "group" itself. This seems a bit different than prototypicality—in which an individual is seen as "representative" of the group—or SIDE processes—in which group members are seen as *less* individuated with (anonymized) group membership. Perhaps in this case Facebook's focus on interpersonal friendships affects the perception of the overall group itself.

To assess this, future studies could repeat this protocol and, similar to Kelley et al. (2011), have the participants list *every* group member (instead of just two additional members) and have them list the (unprompted) association as well, just like participants in this study did with the primary "friend". This way, the association(s) with the additional friends can be coded and a clearer picture of this phenomenon and its association with group identity and entitativity can emerge.

Positive Relational Closeness.

While negative relational closeness was (negatively) related to both entitativity and group identity strength, associations that contained mentions of positive relational closeness

(e.g., “we’re very close”, “we have a very strong relationship”) is associated with an increase in group identity strength but *not* entitativity. This somewhat echoes the argument above—participants may see their friend as a stand in for that group and want to more closely be associated with that group itself.

Why, then, is entitativity only predicted by negative—not positive—indicators of relational closeness? It may be that the relational dynamics with that “friend” cause that individual to not want to associate as much with the friend and, therefore, avoid the group itself. Perhaps they don’t *want* to see that group as a coherent unit so that they can individuate that friend from the overall group. Similarly, since that friend is a part of the group, they see themselves as less strongly identified with the group because they don’t like that friend. However, if the relationship is more positive, close, etc. that doesn’t necessarily mean that group itself is a more cohesive unit—rather that *particular* member of the group is seen as positive, and they want to be more associated with the group itself.

Temporal and Spatial Grouping

Another characteristic that featured prominently in the associations listed by participants is temporal and spatial grouping. This grouping confirms the results from Kelley et al. (2011) and suggests strongly that Facebook and other SNS serve as a tool in which individuals can maintain their existing connections across time and space. School and school-related extracurricular activities were the primary grouping variable for the participants in this study. This finding may somewhat be due to the sample: as the participants in this study were all college students and (mostly) in the lower classes, it follows that the primary associations they would have would be identities that are associated with schooling. These

are also heavily featured in discussions of temporal and spatial activities as they are both a physical location *and* a distinct time in life.

These characteristics revealed some interesting dynamics—especially when the temporal and spatial codes co-occurred. When individuals knew others across time and space, they tended to discuss the relationship in terms of distinct steps (e.g., "We are friends from middle school. We also went to the same high school and community college and at one point worked together.") and how those steps have altered their relational closeness throughout that time. This wasn't as focused on relational maintenance strategies, as with associations that only featured temporal groupings, but rather simply a discussion of how that relationship has evolved over time.

These temporal and spatial characteristics also may be the types of relationships most likely to elicit a co-present or multiplex identity. While the entitativity and group identity strength measures only measured the primary group identification participants listed, it would be interesting for future studies to see if associations that feature these multiple groups in a transitory space affect the perception of if those groupings are more or less entitative and evoke a stronger/weaker identification. Perhaps as temporal and spatial distance increase (i.e., you get farther away from that point in life), the perception of entitativity and group identity strength change with it.

Summary: Characteristics of Group Identification

While this study found that multiple group identities are not particularly salient (see discussion above), the idea that interpersonal dynamics may alter or supersede group dynamics in complex identity environments such as Facebook and other SNSs has some interesting ramifications for future research in this area.

First, while this study used participants' Facebook "friends" as the start of the protocol (i.e., participants were asked to find their first "friend" and discuss their relationship/group identity with them, then the second, etc.), perhaps there is an order effect with group identification in complex identity environments. In other words, does the actual order of presentation matter? Perhaps thinking about a group identity first and then individuals associated with that identity means that group identity is more salient, whereas thinking of individuals first and asking them to what groups they belong causes the characteristics of those individuals to be more salient.

Next, it may be that characteristics of group dynamics in these complex identity environments are only relevant when the interaction itself is heavily reliant on characteristics that prominently feature that group identity. For instance, much of the extant work in this area focuses on distinctly (inter)group phenomena such as politics, fandoms/sports, and other areas that are clearly focused on that identity. If that's the case, then future research should focus more clearly on not just what characteristics may make those group characteristics prominent, but how the interpersonal relationships with those group members (if present) alter and constrain the group membership of that person. Perhaps SNSs focus on interpersonal characteristics may cause individuals to see intergroup dynamics in ways that reduce the effects of that group identity. Alternatively, it is certainly possible that negative interpersonal characteristics presented on SNS color group perceptions as a whole.

Finally, it may be that SNSs maintain not only the *interpersonal* relationship with those individuals, but the relationship with the group as a whole. This will also be discussed in more detail later as it relates more directly to RQ5. Certainly, the relationships with various groups change over the course of one's life. As an example: university affiliation

may be more or less strong while *attending* that university but can wane over time and distance. If that's the case, what are some of the specific mechanisms for that group identity maintenance and how do interactions with group members change the perceptions of the group as a whole? If interpersonal dynamics affect perceptions of the group as a whole (as was found in this study), perhaps the affiliation with a particular group identity is a process that takes into account the various, multiple group members with whom a person interacts. While this study focused only on a few "friends" and that group, does that association with positive and negative relational markers extend to mere acquaintances? This is a question that will be (somewhat) addressed in Study 2, where the two individuals with whom the participants interact are not close.

Group Identity as an Indicator of Engagement and Memory

The second part of this study (RQ5) used the participants' unique News Feed to determine if group identity is useful as a process in processing information even without experimental priming. As discussed above, both implicit and explicit groups exist on the Facebook platform. This is an important distinction that was examined in study 1 and the ways in which these two types of groupings may influence how individuals see group identification merits additional discussion in the next two sections.

Implicit Groups

Implicit groups on Facebook (Carr et al., 2016) are collections of linked individuals (i.e., friends) that have shared characteristics (e.g., university affiliation) but are not grouped by the platform itself. Rather, they are created mentally by the users of the platform to describe their friends and associations.

The results of RQ5 suggest that these implicit group identities are not particularly salient for individuals under normal conditions (i.e., when they are not primed or made salient in some way). There were very few explicit indicators from the coding scheme that were found in these data. Additionally, thematic analysis of participant responses did not reveal any common themes that were related to salient group identification.

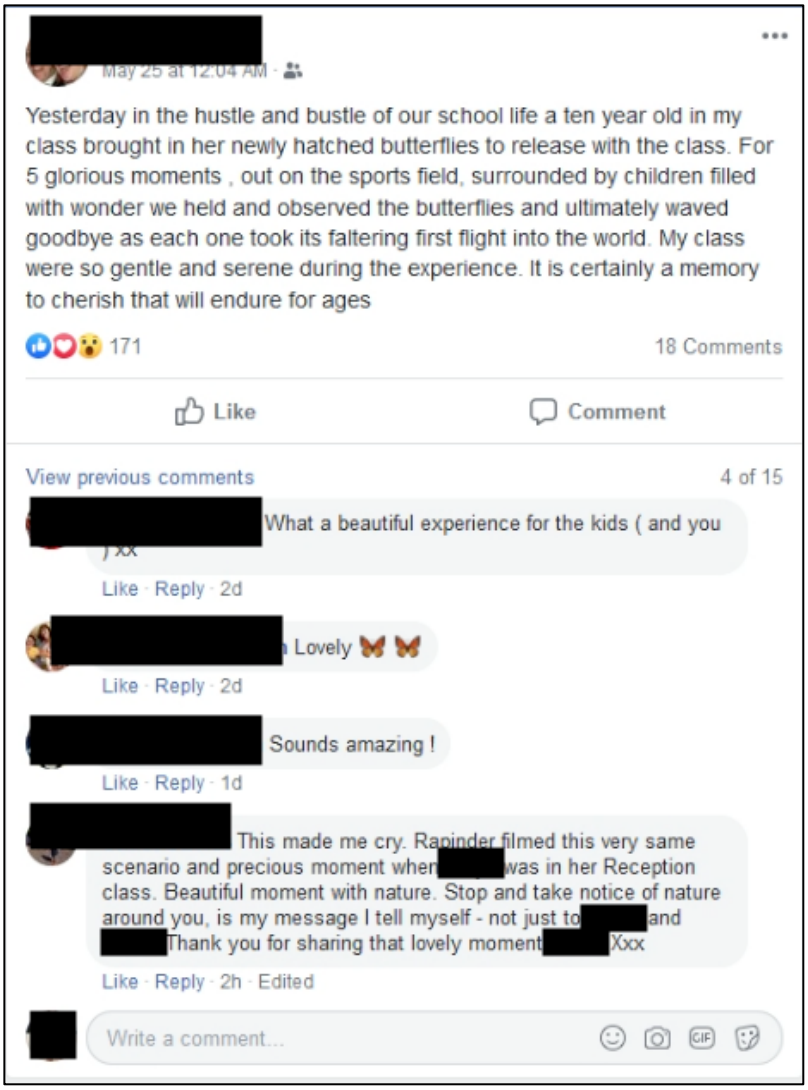
There are several potential reasons why this might be the case. First, it may be that the indicators of group identification used in the coding scheme were not applicable to this context. The coding scheme was adapted from prior literature on group dynamics, which typically uses identified and established groups (e.g., social movements) in a clear (inter)group context. The lack of a clearly identified group with clear normative values makes it difficult to code for traditional markers of group identification like constitutive norms, sanctioning, and group goals. Perhaps the passive consumption of content on this platform, as opposed to more active participation in a group, does not readily lend itself to our coding scheme for this type of content. This does not explain the lack of codes for explicit mention of a group identity, however, nor does it explain the lack of findings from the post-hoc thematic analysis.

Second, it may be that individuating cues outweigh group cues in this environment. There is some support for this in the data—one common linguistic marker of group identification is collective language (e.g., “we”, “us”). Even though participants did mention other friends in the rationale responses, they did not often use collective language in their responses. Instead, when they brought up the poster, they focused on other factors like the relationship or memories associated with the poster themselves. This makes some sense when looking at the posts themselves as well. The way the news feed is structured (see figure

4) shows a picture and name of the poster, but not group information (e.g., university affiliation, etc.) which would likely provide a more salient group identity. Therefore, individuals may be less likely to think about their friends in terms of their group identity when processing information, perhaps due to the emphasis on self-presentation in the creation of online content. If those group cues are not present in this dataset, it would stand to reason that the type of cues that are *more* prevalent in this environment emphasize personal (i.e., individual) identification. This does not, however, explain the lack of findings for explicit groups, which is discussed below.

Figure 4

Sample Screenshot from Cleaned and Anonymized Data



Finally, it may be that group cues simply do not help in processing the *kind* of content that is present on the news feed of (undergraduate) Facebook users. While other studies (e.g., Metzger et al., 2011; Flanagin et al. 2014) have shown effects of group identification on message processing online, the participants in those studies were engaged in more active information seeking behavior. Perhaps in the more social-focused environment of Facebook and other SNS, as in the present study, the group identities do not provide enough explanatory power to efficiently process this type of social (as opposed to informational)

information. Pearson (2021) provides some support for this line of thought, finding that informational context collapse (i.e., news information and personal information together in the same feed) is predictive of source blindness for the informational posts, with a mediation effect of less-effortful processing. While his study was focused on information and news content, the current study raises interesting questions about how exactly people process social—as opposed to informational—content.

Explicit Groups

Explicit groups (Carr et al., 2016) such as fandom pages are commonplace on the Facebook platform. These groups are not simply collections of individuals with similar characteristics, but rather they are named sections on the platform that users need to voluntarily join to see the posts and interact in that sub-community. Importantly, these explicit groups do not necessarily mean that all of the group members are connected on the platform. In other words, you do not need to be "friends" with all of the people in the group—it is the explicit group *itself* that serves as the connection mechanism. This would make it seem, then, that these groups are ripe for association based on group membership and identity (as Carr and colleagues argue).

Nearly a quarter of the posts provided were from explicit groups on Facebook that often are focused on a clear group identity (e.g., race, university affiliation). If that's the case, we should have seen indicators of group identity for these explicit groups—but that was not the case.

It is possible that the explicit groups did not provide enough additional information to bring a group identity to the level of discursive consciousness when discussing why participants engaged or remembered a post. The two types of explicit groups present in the

data were functional and avocational groups. Functional groups were always about UCSB or university-related activities, and avocational groups often indicated specific racial or religious identities (e.g., Subtle Asian Traits). The types of identity shown by participants in the avocational groups are, in many instances, chronically accessible. Similarly, the sample was drawn from a university undergraduate research pool and conducted in an on-campus research lab setting, which match the functional group type. Echoing the discussion above, it may be that the identity *was* made salient but was not particularly useful in helping process the information provided. In other words, the participants do not consider that identity to be a meaningful cue to engage/remember the post because those group identities are such a normal part of their everyday lives. If that's the case, future research should certainly focus on what type of groups online *do* elicit a strong group response. Similarly, from a social identity perspective, does there need to be some sort of intergroup dynamics present to bring those explicit group identities to a level of discursive consciousness?

Second, it may be that the topics or posts themselves did not sufficiently prime an identity. While they may have been posted in an explicit group, many of those posts in the explicit groups did not contain clear markers of group identification. Posts in avocational groups, for instance, were either about hobbies/interests (e.g., baking, animals/dogs) or humor (e.g., memes). Some of these topics could potentially be considered group identification in the right context. One participant, for instance, discussed a cute picture of dogs. This may be a salient group identity when compared to, say, cat owners or non-pet owners. However, when discussing the rationale behind why they remembered it the poster instead focused on the specifics of the post itself, saying "I remembered it because I like corgis."

This focus on explicit groups is certainly one that deserves additional attention by intergroup researchers focusing on SNS.

Group Identity and Information Processing

More generally, the findings from RQ5 indicate that the medium itself creates a propensity toward the consumption of *content* as opposed to the *identity* of the person posting. This can be seen through the lack of group identity markers in the byline of the post itself. It can also be seen in the respective size difference between identifying information (e.g., names, pictures) and the content of the post itself (see figure 4 above). Information about the poster themselves (name, picture, etc.) is smaller and less emphasized than the actual content. This may cause individuals to use heuristic cues that are more focused on the content of the post itself, as opposed to the poster. Some of the data support this notion—many of the posts, for instance, featured video or pictures. Perhaps the addition of multimedia increases the likelihood of engagement and memory for the post. SIDE process would argue that deindividuation might occur from group cues being present, as was the case from explicit groups in the posts. However, we did not find that those explicit groups had any effects on the processing of the content—which somewhat refutes SIDE predictions in this case.

Future research would be wise to more closely examine the relationship between the identity of the poster, the presence of group cues (e.g., explicit groups) and the post itself and determine the conditions in which source—as opposed to content—plays a larger role in processing of social (as opposed to informational) content. Some studies (e.g., Carr et al., 2011) have already begun this line of work as it pertains specifically toward SIDE and outgroup identities, and additional work in this area should continue this as a function of not

only other group processes but the information within the post itself. This could also expand into looking at which of the particular cues in an online environment are likely to evoke responses based on content, interpersonal, or (inter)group relationships.

Limitations

There are several limitations to Study 1 that may have affected the findings. First and foremost is the SNS that was used in this study. While Facebook users comprise a considerable portion of the US population, as discussed above, other sites may have shown different results depending on how centrally (multiple) group identification and sub-grouping play a role in the site itself. When assessing multiple identity salience, for instance, it is certainly possible that sites with more explicit grouping (such as Reddit.com with sub-reddit threads) may present a different view of how identity (or identities) become salient and affect behavior. This need to examine phenomena through multiple SNS echoes calls from Rains and Brunner (2015) and should certainly be examined in future research.

Next, while entitativity and group identity strength were both assessed using established measures, it may be that the groups associated with the measures did not represent traditional groups. Some participants mentioned that they changed their groups after the measures were presented, as the "group" that they provided did not really fit with the measures. For instance, "my best friend" would not likely be a group to which entitativity and group identity strength apply, though since that was the group label piped into the items, those items may not be measuring what we set out to measure. This may lead to a confound in associations with relational (as opposed to group) identity—in other words, participants did not have perceptions of group identity affected by their relational identity. Rather, that relational identity was the primary identity present and the participants used that to attempt to

answer the entitativity and group identity strength items in the questionnaire. Indeed, measures of individual relational closeness with the primary "friend" were significantly associated with the composite measures for entitativity ($r = .24$, $p < .01$) and group identity strength ($r = .52$, $p < .001$). This *may* indicate that those variables were confounded when individuals were responding to the items presented.

This potential confound presents an interesting set of questions that are only somewhat answered by the data gathered in the current study: what is the role of a reference group in answering questions related to that group? More centrally, given the emphasis on individual relationships and content in some SNS such as Facebook (discussed above), does that reference group even exist in this environment without explicit prompting to list groups and associated members? Perhaps those identities come to light only in situations where they reduce cognitive load (as discussed above). If that's the case, these measures may be capturing something different than intended—even if they are reliable and established measures used in previous studies.

An additional limitation was the unreliable coding for RQ5. While this is likely due to the minimal number of codable units available for us in training, it may also be that the coders did not fully understand what cues did and did not count in this environment. Indeed, the cues for RQ5 were drawn from more explicit intergroup literature that focuses on conflict and clear divisions between group- and non-group processes. While experimental work has shown that group identity *does* change the perception of information in online environments, a non-experimental methodology may require additional work in this area to identify the right cues. So, perhaps a reason not many group cues were found for RQ5 are simply because the wrong group cues were used in this environment. If that's the case, the most pertinent

question becomes what *are* the cues that reliably predict information processing based on group identification on SNS? To determine this, much more work will need to be done in online contexts where clear in- and out-group distinctions are not present.

Next, the results of this study are certainly constrained by the sample and age of the participants. Using undergraduate students motivated by course credit does not readily reflect the wider landscape of SNS users and the various ways they may interact with SNS—or Facebook more specifically. Indeed, while these data were collected in 2019, Facebook has consistently remained high in use across age groups (Auxier & Anderson, 2021). These researchers found, however, a predisposition for younger adults to more consistently use other SNS (e.g., Instagram, Pinterest, LinkedIn) in addition to Facebook, whereas older populations tend to predominantly use Facebook as their primary SNS. This does raise interesting questions not addressed in this study as to how other populations outside of this sample may view group identity in this context. Perhaps a sample that is more representative of Facebook users may reveal different findings.

A final limitation worth noting here is that perhaps the specific context of the study itself (i.e., Facebook) predisposes individuals to think about group identity differently than other platforms. Indeed, Facebook is built upon one-to-one interpersonal connection with other individuals, which may supersede any group related effects. While this was a conscious choice in forming the study due to its pervasiveness and length of tenure for the users, perhaps the distinction between interpersonal and group identity—and its associated effects—are more prominent on other platforms. Indeed, SIDE processes are frequently studied on pseudonymous SNSs such as Imgur and Reddit where individuating cues are less present. There are already calls to broaden studies away from single platforms (Rains &

Brunner, 2015), and capturing group identity processes naturalistically may be better suited to platforms that are more explicitly built upon group—as opposed to interpersonal—connection.

STUDY 2: MULTIPLE IDENTITY SALIENCE AND INTERGROUP ACCOMMODATION IN SNS

While the first study assessed the impact of multiple group identities on SNS and how they are used in content collapse settings, the second study has to do with the accommodative tendencies and expectations in this complex identity environment. Accommodation in online spaces has certainly been studied in a variety of contexts, and the multiple groups and identities that are available in SNS provide a unique opportunity to further test and expand research on (non)accommodation online.

One area where these groups are (somewhat naturally) present is the main "feed" of SNS—where users can see messages that are disseminated to them from multiple individuals within their network, likely from multiple group identities (both distinct and overlapping). While Study 1 will provide information on how individuals assess information presented from "friends" in different groups, it cannot show how individuals interact with these messages communicatively.

Interaction in SNS can occur in a variety of channels that vary in publicness and directness (e.g., public/status-update, public direct message via "tagging" to a contact, private message); disclosure goals of the user tend to dictate the channel choice (Bazarova & Choi, 2014). When the channel is public on certain SNS (e.g., Facebook), viewers of the message have the option to interact with the message in two primary ways: a) so-called *click speech* (Pang et al., 2016) or *paralinguistic digital affordances* (PDA; e.g., "liking, " selecting a thumb-up/-down, or rating a post; Hayes et al., 2016); or b) commenting on or replying to the post itself (see, e.g., Oeldorf-Hirsch & Sundar, 2015). Click speech is studied in a variety of contexts including political campaigns (Marder, 2018) and in relation to personality traits

(Hong et al., 2017), but is not informative enough about language choices to be of direct use in this dissertation. Thus, we focus on commenting/replying.

Commenting behavior is often studied in relation to personality traits (Lee et al., 2014; Wang et al., 2012) but primarily receives attention by researchers studying the public sphere and spiral of silence theory (e.g., Gearhart & Zhang, 2014, 2015; Kwon et al., 2014). In general, research on spiral of silence indicates that commenting behavior is related to the perceived opinion-climate of the interaction itself (Gearhart & Zhang, 2015), such that posts receive comments from individuals who view their opinion as agreeing with the overall tenor of the message thread and in conformance with the salient group's norms. In this study, commenting on a post will serve as the context for much of Study 2, as this is a public channel where accommodation can take place on Facebook.

As discussed above, communication accommodation theory argues that individuals enter into an interaction with their initial orientation based on interpersonal, group, and normative considerations. This in turn predicts their psychological accommodative stance (PAS), derived from their affective and cognitive goals for the interaction which, in turn, partially predict (non)accommodation. This PAS is dynamic, and while it would be interesting to see longitudinal studies on accommodation in multiple group environments, only one qualitative study has addressed accommodation in multi-group contexts at all (Hajek, 2015), and thus this dissertation takes a more cross-sectional approach.

Linguistic accommodation has also been shown to increase agreement in multi-party online contexts (i.e., users assigned to groups A, B, or C) where the goal was to have an optimal coalition of members (Huffaker et al., 2011). Future studies should explore the shifting PAS as a result of multiple group identities over time. Tamburrini and colleagues

(2015) found that on Twitter users communicatively accommodate to social identities that are salient in a given interaction. Given the less explicit focus on implicit (i.e., network) groups on Twitter, it is plausible that users of Facebook (the context of this study) would perhaps accommodate in a similar manner (or potentially even more) when group identities are made salient.

Additionally, from work on context collapse, we know that users tend to create messages that are in line with normative expectations from the strongest identified audience (i.e., based on strength of group identity) cognitively available (Marder et al., 2016). Therefore, as users are more able to relate to that individual as a group member (rather than as an individual) the more they tend to view the interaction as a group (as opposed to interpersonal) encounter.

Thus, in comment sections where there is a strong social identification component, we would expect accommodation to the group identity represented by the initial poster or by the topic. Thus,

H1: Strength of social identification of the group will predict accommodation intention in SNS comments.

Whether or not this identification with one group (i.e., not context collapse) is from the post itself (content collapse) or with a group member who strongly represents the identified group (i.e., prototypical), however, is yet unexplored. While the prototypicality of the interactant is an important consideration, for the purposes of this study prototypicality will not be manipulated but rather held constant to explore how multiple identities interact in the online environment. While there is certainly evidence that the topic of conversation (e.g.,

politics) primes identity (see Palomares et al., 2016), the social identity of the interlocutors is also predictive of the interlocutor's PAS. Thus, we can propose the following hypotheses:

H2: For a single salient group, the social identity primed by the topic of conversation will predict accommodation intention in SNS comments.

H3: For multiple groups, the group with the strongest social identification (most salient) will predict accommodation intention in SNS comments.

Topic of conversation and identity have been shown to predict accommodation, but other factors related to accommodation and overlapping identity salience may have additional (and unknown) effects in this complex identity environment. While not the direct focus of this current work, these areas nonetheless provide additional (and related) questions that can be addressed in this dissertation Study 2. Gasiorek and Giles (2012, 2015), for instance, have shown that perceived accommodation mediates the relationship between inferred motive (i.e., "the content, and by extension valence, of perceived intentions when behavior is seen as purposeful," Gasiorek & Giles, 2012, p. 312) and perceptions of the speaker. They also note, importantly, that these three variables might have mutual influence (though argue that the causal order presented above is a better theoretical fit).

Additionally, it is possible that group identity functions as a cue to determine if information or interactants are perceived as credible (as discussed above). Flanagin et al. (2014) showed that in online information pools strong group identification causes information to be seen as more credible and that individuals will accept advice found in that information more readily. While this study was not directly related to SNS, credibility may also be affected by group identity in the SNS environment as well impact other group-related processes, though extant work does not discuss specifically how multiple groups would be

perceived in terms of credibility. Given the novel addition of multiple identity salience in this experiment, and the lack of extant work in this specific area, a research question is posed:

> **RQ6**: What is the relationship between social identity primed by topic of conversation and social identity of the interactant as it relates to a) perceptions of interactants' comments b) inferred motive, c) perceptions of the interactants themselves, and d) perceptions of the interactants' credibility in SNS comments?

For discussion of related evidence for Study 2 see Table 12.

Table 12

Study 2 Hypotheses and Evidence

Hypothesis/RQ	Evidence	Positive/ Supported
H1: Strength of social identification of the group will predict accommodation intention in SNS comments	High School Group Identity Strength Scale Communication Group Identity Strength Scale Accommodation Intention	Significant effect of high school and communication group identity strength
H2: For a single salient group, the social identity primed by the topic of conversation will predict accommodation intention in SNS comments	Scenario Accommodation Intention	(Single group manipulation only) Significant effect of scenario
H3: For multiple groups, the group with the strongest social identification (most salient) will predict accommodation intention in SNS comments.	High School Group Identity Strength Scale Communication Group Identity Strength Scale Accommodation Intention	(Multiple group manipulation only) Significant effect of high school and communication group identity strength

RQ6: What is the relationship between social identity primed by topic of conversation and social identity of the interactant as it relates to a) perceptions of interactants' comments b) inferred motive, c) perceptions of the interactants themselves, and d) perceptions of the interactants' credibility in SNS comments?	Scenario High School Group Identity Strength Scale Communication Group Identity Strength Scale Perceptions of Interactants Comments Inferred Motive Perceptions of Interactants Credibility

STUDY 2 METHOD

Participants

Participants ($N = 216$) for the second study were recruited from the undergraduate Communication major population in Spring and Summer of 2019 via three methods: 1) undergraduate research participation pool for course credit, 2) email to communication major and pre-major listservs, and 3) individual recruitment from a Communication honors association. Those recruited from emailing listerservs (2 & 3) were entered into a lottery to win one $25 Amazon gift card. As a prerequisite to their participation in the study, participants were required to have an active Facebook account.

Those who did not complete the entire protocol ($n = 14$) were dropped from analysis, resulting in a potential sample $N = 202$. Furthermore, those who did not pass three attention checks throughout the protocol ($n = 48$) were also dropped from analyses (new $N = 154$). Finally, from that sample participants who did not pass the manipulation checks (discussed below) to determine if they understood the group identity (or, in the multiple group experimental condition, identities) of the interactants were dropped from the analysis ($n = 21$). This results in a final sample $N = 133$ participants.

Demographics

Participants identified as female (100, 75.2% of the final sample), male (31, 23.3% of the final sample), and gender non-binary (2, 1.5% of the final sample). Age was primarily 19-21 years old, with a few outliers (see table 13) and a median age of 20. Participants predominantly identified as white and Asian (see table 14).

Table 13

Age of Participants in Study 2

Age	Frequency	Percent
18	8	6.0
19	36	27.1
20	40	30.1
21	26	19.5
22	12	9.0
23-29	11	8.3

Table 14

Reported Race of Participants in Study 2

Race	Frequency	Percent
White	54	40.6
Black or African American	1	0.8
Hispanic/Latino	22	16.5
American Indian or Alaskan Native	1	0.8
Asian	41	30.8
Other	14	10.5

Procedure

The protocol was distributed online using Qualtrics. Participants completed the study on their personal computers. Individuals were randomly assigned to one of two conditions: the single group experimental condition and the multiple group experimental condition. Regardless of experimental condition, all participants were initially instructed "Imagine you posted the following status updates on your Facebook and two individuals (Taylor and Jordan) commented on them. While you are not particularly close to **Taylor**, you met in one of your **Communication classes**." The experimental manipulation was then shown as follows: Participants in the single group condition then saw the sentence "You know **Jordan** through **Communication classes** as well and have interacted a few times, though you are

also not very close." Participants in the multiple group condition saw the sentence "Your friend **Jordan** is from your **high school** and does not go to UCSB. You have interacted with Jordan a few times in high school, though you are also not very close." Participants then completed a manipulation check (discussed below).

Participants were then shown three hypothetical Facebook posts (for Scenario 1, see Figure 5; for scenarios 2 and 3 see Appendix G), with the order in which they saw the three posts randomly determined. These posts were designed to be related to communication identity (Scenario 1, see Figure 5), high school identity (Scenario 2), and a neutral third post (Scenario 3). Below each post, there were two randomly ordered comments. The comments on each post were also randomly attributed to either Taylor or Jordan and were context appropriate (see Appendix G). For a visual diagram see Figure 6.

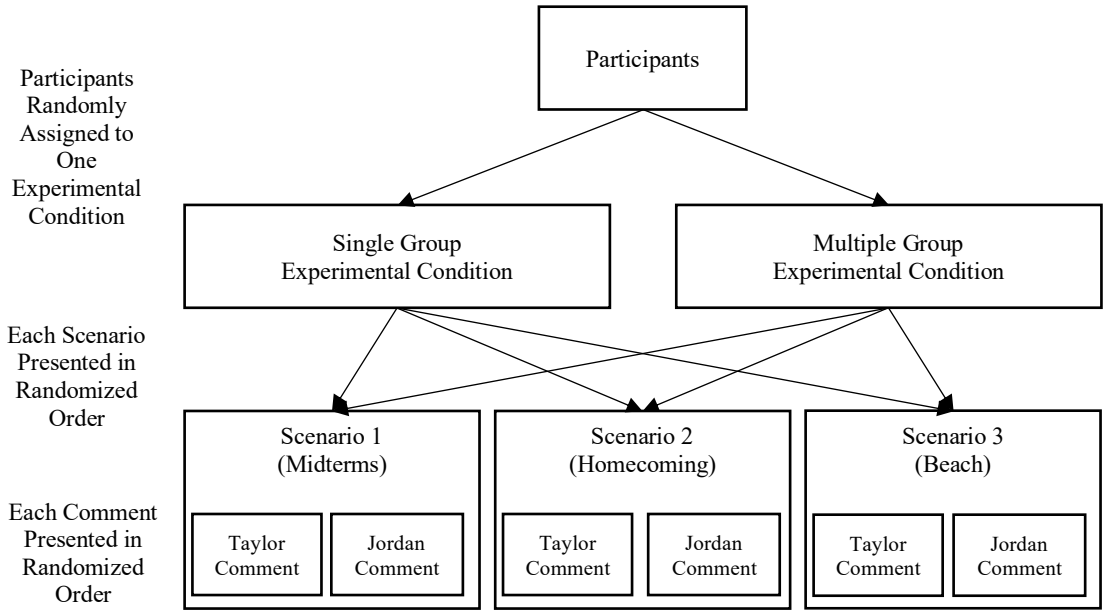
Figure 5

Scenario 1 Post Example


April 5 at 6:06 PM ·
"I'm a little nervous about midterms... I heard the tests were really hard and trying to trick people. Anyone have advice for me?
Taylor, Jordan, and 25 others
2 Comments
Like
Comment
Taylor It's probably good to make sure you think about if there are answer choices that don't make sense. Classes like that usually use a lot of all/none of the above things to try and trick people that haven't really studied.
Like · Reply · 3d
1
Jordan All you have to do is make sure you don't just memorize definitions. You need to also be sure to know how to apply the stuff to examples...
Like · Reply · 3d
1
Write a comment...

Figure 6

Visual Diagram of Study 2 Design



After reading the first post presented to them, participants were asked a series of questions/scales about how they perceived the comments from Taylor and from Jordan, their overall perceptions of Taylor and Jordan, and to what extent they would "accommodate" to Taylor and Jordan. Participants then repeated this protocol with the other two scenarios. The scenarios were presented in randomized order along with the corresponding measures (below) to ensure that there was no order effect.

They then answered a final manipulation check, and questions about the believability of the stimulus, the strength of college and high school group identification.

Manipulations

Single or Multiple Group Identity

As discussed above, participants were randomly assigned to one of two experimental conditions: single or multiple group. Both conditions were told "While you are not particularly close to Taylor, you met in one of your Communication classes." In the single group condition participants were told "you know Jordan through Communication classes as well and have interacted a few times, though you are also not very close." In the multiple group condition participants were told "Your friend Jordan is from your high school and does not go to UCSB. You have interacted with Jordan a few times in high school, though you are also not very close."

Separate from being assigned to either the single or multiple group condition, participants also saw each of the three scenarios presented in random order (also discussed above). So, as an example, a participant could be assigned to the multiple group condition, and then see the scenarios presented in this order: Scenario 2: Homecoming, Scenario 1: Midterm, Scenario 3: Beach. Each participant would see all three scenarios and answer questions about each scenario and the interactants in that scenario before moving on to the next scenario, until all three scenarios were seen, and all items for that scenario (accommodation intention, perception of the comments, inferred motive, perception of the interactant, credibility of the interactant) were answered.

While those two manipulations (Single/Multiple Group Identity, Scenario) were the main manipulated variables of Study 2, Walter and Carr (2010) and Carr et al. (2011) have shown users are sensitive to "small cues" in the SNS environment that may communicate group or personal identity. To ensure these cues would not confound the main variables,

three additional manipulations were added as experimental controls and not modeled: the pictures of Jordan and Taylor, attribution of the agreeing/disagreeing comments to Taylor or Jordan, and order of the comments (see Figure 5 above). These three additional variables were randomly assigned to participants to account for any potential effects of these small cues. Similarly, the target order of all scales (i.e., whether the scale was measuring these variables with Jordan or with Taylor) were also randomly presented to the participants. This allows for a tightly controlled test of the main variables and hypotheses in the study.

Participants were asked a series of **manipulation check questions** immediately following the single or multiple group identity manipulation to strengthen the effect and filter any participants who did not remember or understand the manipulation. Participants saw "Based on the instructions, how do you know Taylor?" and were then asked the same question of Jordan. They were presented with a text entry box. Those that did not have the word "Communication" somewhere in their open-ended response for Taylor and, depending on their assigned condition, had the word "communication" for Jordan (Single group manipulation) or "High school" for Jordan (Multiple group manipulation) were later coded as not passing the manipulation check. Participants were also asked "People from how many different areas of life are going to comment on the hypothetical Facebook statuses?" and given options of 1, 2, or 3. To ensure participants retained this information, these same manipulation check items were repeated after the participants finished the entire protocol (i.e., they had completed all three scenarios and related measures. This resulted in an attrition of 21 participants (13% of the adjusted sample) with a final $N = 133$, as discussed above.

Scenarios

The three posts/scenarios (two experimental, one control) used in the study were all the same style—fabricated from an actual screenshot of a post on Facebook taken in June 2019. Care was taken to exactly match the color, font (to the best of my ability, as Facebook uses a proprietary font), size, and other features.

The first post, designed to stimulate a Communication/College group identity, (see Figure 5 above) showed text that said "I'm a little nervous about midterms… I heard the tests were really hard and trying to trick people. Anyone have advice for me?" The two responses were "Well yeah you need to not just memorize definitions, but it's probably also good to make sure you think about if there are answer choices that don't make sense. I heard the classes like that use a lot of all/none of the above things." Or "All you have to do is make sure you don't just memorize definitions. You need to also be sure to know how to apply the stuff to examples…"

The second post, designed to stimulate a High School group identity, showed text that said "So excited for homecoming this year! Can't wait to be back and see all my old friends from high school!" The two responses were "Woah that's crazy that you're going back! I never went to any of that stuff in high school, so I don't see it as super important. Why do you wanna go back and do it all again?" or "Exciting! What do you think you're gonna do when you get back?".

The third post, the control condition that was designed to not stimulate any identity, said "Still can't believe that I get to live here. Love the California coast! So amazing that this is my backyard!" and showed a picture of the beach by the college. The responses were "That's a super cool pic! It's definitely a pretty place from the photo for sure, but I'm not so

sure about the rent in comparison lol!" and "Love it for sure! <heart emoji> Do you think that you wanna stay when you are done or move somewhere else?"

Manipulation checks for scenarios are discussed in Study 2 Results.

Measures

Comment Perception

Measures of comment perception asked participants to "Indicate your level of agreement with the following statements about Taylor/Jordan". Three items "I thought the comments Jordan/Taylor made were… a) relevant, b) thoughtful, and c) helpful" were measured on a 7-point Likert-type scale, with answer choices ranging from (1) *strongly disagree* to (7) *strongly agree.* Higher scores indicate a more positive perception of the comment ($\alpha = .85$). These measures were then repeated for the other interactant (Jordan).

Respondent Perception

Measures of respondent perception instructed participants that "the following questions are going to ask about overall perceptions of **Jordan**. Please indicate your level of agreement." They were then asked the same questions again about Taylor. These three scales represent inferred motive, perceptions of the speaker, and credibility, and were presented in random order.

Drawing from the measures used by Gasiorek and Giles (2012), inferred motive, perceptions of the speaker, and credibility were measured on a 7-point scale, where 1) *strongly disagree* and 7) *strongly agree*. Two items assessed perceptions of **inferred motive**: how much the participant finds Jordan/Taylor was intending to be a) helpful, and b) good-intentioned ($\alpha = .82$). Four items assessed **perceptions of the speaker**: how much the participant finds Jordan/Taylor a) good-natured, b) warm, c) sincere, d) friendly, and e)

trustworthy (α = .93). Five items assessed perceptions of **credibility**: how much the participant believes Jordan/Taylor a) knew what they were talking about, b) would be a good source of information, and was c) knowledgeable, d) skilled, and e) qualified (α = .91).

Accommodation Intention

Measures of accommodation intention were drawn from Montgomery and Zhang's (2018) scale of accommodation intention, and heavily adapted due to the change in study design and medium (i.e., offline vs. online). Participants were instructed "The following statements ask you to think about communicating with Taylor if you were going to comment on the status. Please read each of the following statements and respond with the degree to which you are willing to do the corresponding behavior. 'If interacting with Taylor on Facebook I would be willing to...'" Eight items (e.g., "carefully focus on the topic that Taylor brought up in our conversation", "put forth more work in writing my comment to make sure Taylor understands me") were measured on a 7-point Likert-type scale, with answer choices ranging from (1) *strongly disagree* to (7) *strongly agree.* Higher scores indicate a greater intention to accommodate in that conversation (α = .83). See appendix H. For scale construction and EFA, see pretest for Study 2 below. These measures were then repeated for Jordan (the other fabricated interactant).

Group Identification

Measures for group identification for both high school (α = .95) and college (α = .94) were taken from Hogg, Hains, and Mason (1998). Eight items (e.g., "I am glad to be a member of this group" and "This group is important to me") were measured on a 7-point Likert-type scale, with answer choices ranging from (1) *strongly disagree* to (7) *strongly agree.* Higher scores indicate a greater feeling of group identification. See appendix D.

Additional Measures

Several measures were included in the protocol but not used in modeling effects or answering hypotheses. These items served as manipulation checks and analytical controls for the protocol and the stimuli themselves.

Two items, "This post seemed a) believable and b) realistic" measured on a 7-point scale, where 1) *strongly disagree* and 7) *strongly agree* were used to measure **believability of the stimulus** for each of the three fabricated Facebook post scenarios (all $\alpha > .94$). Overall, participants found scenario 1 ($M = 5.16$, $SD = 1.36$) and scenario 3 ($M = 5.90$, $SD = 1.04$), to be the most believable, with scenario 2 slightly lower in believability ($M = 4.35$ $SD = 1.74$). These measures served as a check to ensure that the stimuli would be seen as plausible recreations of actual Facebook posts from the perspective of the participants, and that any findings (or lack thereof) were not due to an error in stimulus creation.

To account for **individual differences in posting behavior**, three separate items were used to assess if the posts were similar to things the participants had seen or posted in the past: "The topic of this post would be relevant to me if I were to see it on Facebook," "this post seems like something I would actually write on my Facebook account," and "This post seems like something I have seen on Facebook in the past." Again, these measures served as a check on the believability of the stimulus itself (see more in discussion section for Study 2).

To determine if each scenario was more or less **priming of identity** (either college or high school) and served as a manipulation check for the scenarios, participants were asked to indicate their agreement for each post on *Communication or High School identity relevance* "were this a real post I wrote, my friends from (the communication major in college)/(high school) would likely find this post relevant" and *Communication or High School identity*

Posting "This post seems like something my friends from (the communication major in college)/(high school) might post or comment on if they were to see it."

Study 2 Pretest

A pretest was run on a separate sample sourced from undergraduate Communication students for course participation in Spring 2019 ($N = 73$) to assess the execution of the study protocol to ensure automated processes such as assignment to experimental condition, and randomization of small cues (e.g., profile picture, order of post, text ostensibly posted by each fabricated interactant) functioned effectively. Additionally, this served as a useful pretest to examine and refine the accommodation intention scale. The first scenario (Scenario 1 – Midterms) was used as the scenario stimulus, and all other variables (Target of Accommodation, Multiple Identity Manipulation) were retained. The automated protocol and randomization functioned normally, ensuring that participants were randomly assigned to all conditions and any effects shown would not be the result of different interpretations of the interactants (Taylor/Jordan) due to order effects.

Accommodation Intention Scale Construction

The initial seven-item accommodation intention scale was assessed using exploratory factor analysis in MPlus (for all loadings and fit statistics see table 15. Results showed an acceptable one-factor solution with a single item "use more emoji/emoticons or reaction GIFs that match with (Jordan's/Taylor's) use of emoji/emoticons/Reaction GIFs" that was not loading onto the factor well for either target of accommodation (Taylor or Jordan). When the item was dropped, model fit improved slightly for both targets and factor loadings improved overall. While in the initial scale "respond quickly to a comment" was low for Taylor, the item was acceptable in fit for Jordan. As both targets were being assessed using the same

scale, the "Respond Quickly" item was retained for the final scale. Thus, the final scale, which achieved acceptable though not fantastic fit (see Study 2 Results), consisted of six items.

Table 15

Exploratory Factor Analysis of Online Accommodation Intention Scale from Pretest Data

	Initial Loadings		**Loadings with Emoji Removed**	
Items	Jordan	Taylor	Jordan	Taylor
Focus	.64	.62	.65	.64
Work	.72	.65	.72	.63
Emoji	.33	.30	-	-
Tag	.75	.78	.75	.79
Write More	.83	.70	.82	.68
Quick	.65	.47	.65	.48
Group Cues	.56	.63	.54	.63
Fit Statistics				
χ^2	36.37**	28.46*	17.29*	17.65*
RMSEA	.15	.12	.11	.12
CFI	.87	.89	.95	.93
TLI	.81	.84	.91	.88
SRMR	.07	.07	.05	.06

Note: * = $p < .05$, ** = $p < .001$

STUDY 2 RESULTS

Measurement Model and Scale Reliabilities

As the accommodation intention scale was created for the purposes of this study, confirmatory factor analysis in MPlus version 8 was used to assess the overall scale structure. From the pretest (see Study 2 Pretest above) a six-item scale was appropriate for a one-factor solution and dropped "emoji" from the overall measurement due to low factor loading. The adjusted model had acceptable fit (see Table 16), though RMSEA was slightly higher than desired.

Table 16

Confirmatory Factor Analysis for Online Accommodation Intention Scale

Model	χ^2	RMSEA	CFI	TLI	SRMR
Adjusted Model	180.48*	.155	.938	.897	.042

For the purposes of the results and discussion section, and given the similarity of many concepts and terms, I will be referring throughout to the following:

- Single and Multiple Group are the two experimental conditions.
- The three scenarios (i.e., topics of conversation) will be referred to as Scenario 1 (Midterms), Scenario 2 (Homecoming), and Scenario 3 (Beach Photo).
- Measures of identity strength (which are separate from the single and multiple group experimental manipulation) will be referred to as Communication Identity Strength (referring to the UCSB Communication major) and High School Identity Strength, respectively. These measures have been grand-mean centered. In other words, an individual participant's score is the deviation in the respective identity strength from the

overall sample. This is important as the interpretation of effects in multilevel modeling (data analysis plan discussed below) is highly contingent upon the intercept of the predictor variables (Heck et al., 2013). As it would be unreasonable to argue that there is a meaningful zero point for a Likert-type scale (i.e., there is zero identification), the participant's deviation from the average is a more appropriate measurement.

- Target of Accommodation: CAT assumes that you accommodate toward or away from a conversational partner (Dragojevic et al., 2016); thus it was important to have someone to whom individuals could potentially accommodate. There are two potential (experimental) targets of accommodation: Taylor and Jordan. Taylor is always a fellow Communication student, and Jordan is either a Communication student (in the Single Group condition) or a high school acquaintance (in the Multiple Group condition). Thus, for accommodation, we would expect to only see differences between the two characters in the Multiple Group experimental condition as the two characters have the same group identity in the Single Group experimental condition.

Scenario Difference and Manipulation Checks

A one-way repeated measures ANOVA was conducted as a manipulation check to verify that the three scenarios were significantly different from each other with respect to potential primes of group identity, and related more strongly to either Communication or High School identity. Omnibus tests were significant for all variables (all $p < .001$, see Table 17), and post-hoc analyses indicated that Scenario 2 (Homecoming) differed from both Scenario 1 (Midterms) and Scenario 3 (Beach Photo) in terms of both group relevance and likelihood of engagement from group members for both High School and Communication Identity (see Table 18). Scenarios 1 (Midterms) and 3 (Beach Photo) also differed

significantly on both relevance and likelihood of engagement for high school group members, but not college group members. As the goal of the study was to see how combinations of identities affect perceptions of (potentially multiple) group members, Scenario 1 (Midterms) and Scenario 2 (Homecoming) were used in all further analyses to assess differences in accommodation as it relates to *topic of conversation*, dropping Scenario 3 (Beach) as that scenario did not elicit any group differences (see Figure 7). Additionally, including Scenario 3 caused many of the models to not converge, hindering additional interpretation.

Table 17

Omnibus Tests for Scenario Differences

	df	**F**	**Sig**
Comm ID Relevant	2	591.93	.000
Comm ID Post	2	454.18	.000
HS ID Relevant	2	180.67	.000
HS ID Post	2	203.50	.000

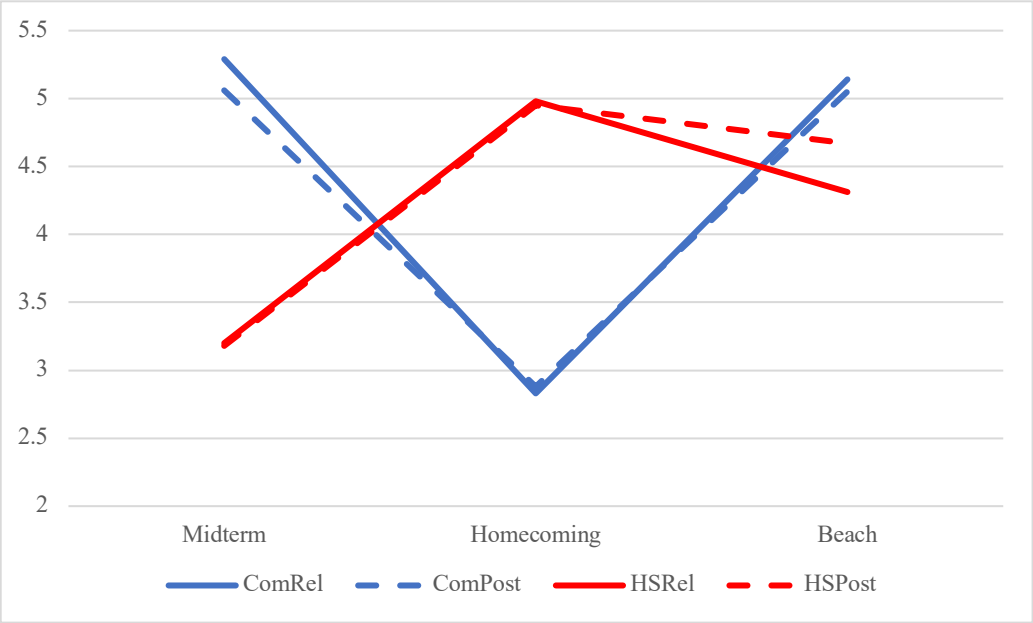
Table 18

Post-Hoc Descriptive Statistics for Scenario Differences

	Comm ID Relevant		**Comm ID Post**		**HS ID Relevant**		**HS ID Post**	
Scenario	M	SD	M	SD	M	SD	M	SD
Midterm	5.29	1.20	5.06	1.40	3.20	1.58	3.18	1.61
Homecoming	2.83	1.46	2.88	1.46	4.98	1.60	4.95	1.60
Beach	5.14	1.25	5.05	1.18	4.31	1.46	4.67	1.39
Total	4.42	1.73	4.33	1.70	4.17	1.71	4.27	1.72

Figure 7

Graphical Comparisons of Scenarios



Note: ComRel = Communication Identity Relevance, ComPost = Communication Identity Posting, HSRel = High School Identity Relevance, HSPost = High School Identity Posting

Data Analysis Plan and Assumptions

Due to the hierarchical and repeated nature of the study design, a mixed model regression in SPSS version 24 was used to assess all hypotheses. This allows for a test of the proposed effects while taking into account nonindependence associated with the repeated measurement across respondents for each scenario and each target of accommodation. Participant was treated as the Level 2 subject grouping, and Scenario and Target of Accommodation were treated as a Level 1 repeated measures grouping variables. A Compound Symmetry covariance structure was used for all analyses. Compound symmetry assumes the variances and covariances are equal within participants but allowed to vary between participants (Heck et al., 2013). This makes sense, as the scenario order and targets of accommodation characteristics were all randomly shown to each participant, so any

within-subjects effects would be consistent. Thus, while it is plausible there is some nonindependence associated with participants' likelihood to accommodate *in general* (i.e., some participants may just be generally more accommodating than others), the overall pattern *within* each participant should remain fairly similar across the sample.

Hypothesis and Research Question Testing

Hypothesis Testing: H1

Hypothesis 1 suggested that strength of social identification of the group will predict accommodation intention in SNS comments.

Experimental condition, scenario, target of accommodation, and the two identity strength measures were entered into the model as predictors of accommodation intention. The model revealed no main effects for Experimental Condition, Target of Accommodation, or Communication Identity Strength. There are marginally significant main effects of Scenario [$F(1, 397.25) = 3.76$, $p = .05$] and High School Identity Strength [$F(1, 134.98) = 3.17$, $p = .08$] on accommodation intention. There is also a marginally significant interaction effect between Target of Accommodation and High School Identity Strength [$F(1, 396.90) = 3.06$, $p = .08$].

Given the lack of significant findings for either Communication Identity Strength or High School Identity Strength as main effects, it is reasonable to conclude that H1 is not supported.

Analyses split by experimental condition. For the next two hypotheses (H2 and H3), we split the dataset by experimental condition (a single salient group, and multiple salient groups), and performed analyses on each condition separately. Thus, scenario, target of accommodation, and the two identity strength measures were all entered into each of two

models (one for the single group condition, H2; and one for the multiple group condition, H3) as predictors of accommodation intention. While there was no significant effect of experimental condition above, it may be that the overall nonsignificant effect was suppressing additional findings. Splitting the analyses, in effect, frees up parameters potentially allowing for additional interpretation of the remaining hypotheses.

Hypothesis Testing: H2

Hypothesis 5 posited, for a single salient group, the social identity primed by the topic of conversation will predict accommodation intention in SNS comments. In other words, for participants who think both targets of accommodation are from the same group, the relevant scenario—Scenario 1 (Midterms) for Communication or Scenario 2 (Homecoming) for High School—will predict accommodation. However, there are no significant main or interaction effects in the model (all $p > .09$, see table 19). More specifically, assessing only participants in the "single" group condition, the model revealed no main effect of Scenario on accommodation intention. As there is no effect of scenario in either main or interaction effects, H2 is not supported.

Table 19

Effects of Scenario, Target of Accommodation, Communication Identity Strength, and High School Identity Strength Split by Multiple Group Experimental Condition

	Single Group Condition		**Multiple Group Condition**	
	Denominator df	F	Denominator df	F
Intercept	65.03	2565.89***	68.95	2779.77***
Scenario	193.74	2.16	203.55	1.62
Target	193.74	0.00	203.77	3.65†
Scenario * Target	65.15	0.91	68.90	0.29
CommGID	64.91	1.80	69.99	1.41

HSGID	193.72	0.01	203.77	3.51†
Scenario * CommGID	193.86	0.11	203.54	0.18
Scenario * HSGID	193.62	0.11	204.44	0.01
Target * CommGID	193.86	1.97	203.70	0.43
Target * HSGID	193.62	0.61	204.84	2.66
CommGID * HSGID	64.68	0.22	69.71	0.02
Scenario * Target * CommGID	193.84	1.03	203.70	0.28
Scenario * Target * HSGID	193.61	0.29	204.84	1.32
Scenario * CommGID * HSGID	193.39	0.30	204.27	0.33
Target * CommGID * HSGID	193.39	1.34	204.51	0.71
Scenario * Target * CommGID * HSGID	193.39	0.65	204.51	3.59†

Note: † = $p < .07$, *** = $p < .001$

Hypothesis Testing: H3

Hypothesis 6 proposed that, for multiple co-present groups, the group with the strongest social identification (most salient) will predict accommodation intention in SNS comments. Assessing only participants in the "multiple group" condition, there is no significant main effect of identity strength on accommodation intention for Communication Identity Strength [$F(1, 68.90) = 0.29$, $p = .59$], nor for High School Identity Strength [$F(1, 69.99) = 1.41$, $p = .23$]. This, then indicates that identity strength on its own does not play a role in accommodation intention in the multiple group experimental condition. Thus, H3 is not supported.

However, there are a few additional effects that are worth noting. There is a marginally significant main effect of Target of Accommodation [$F(1, 203.77) = 3.65$, $p = .05$]. There is also a marginally significant two-way interaction between Scenario and Target of Accommodation [$F(1, 203.77) = 3.51$, $p = .06$]. Looking at the marginal means, it

appears that Taylor in the Scenario 1 (Midterm) condition is significantly more likely to increase accommodation intention than any of the other categories (i.e., Jordan/Midterm, Taylor/Homecoming, Jordan/Homecoming). This is interesting, as for individuals in the Multiple Group experimental condition Taylor is always a communication student, while in this instance those participants would have seen that Jordan is a friend from high school. Perhaps with multiple co-present groups, a relevant scenario, and interactant that is an in-group member does increase accommodation intention toward that in-group interactant, as predicted in H2.

There is also a marginally significant four-way interaction between Scenario, Target of Accommodation, and both Communication and High School Identity Strength [$F(1, 204.51) = 3.59$, $p = .06$]. It appears that High School Identity Strength and Communication Identity Strength together may affect the intention to accommodate in specific scenario-target combinations (as seen above), though it is not a significant effect, nor can we untangle the separate effects of identity strength in this interaction without considerable additional modeling beyond the capabilities of SPSS. Thus, H3 is still not supported.

RQ6

Research question 6 was designed to assess the relationship between social identity primed by topic of conversation and social identity of the interactant as it relates to a) perceptions of interactants' comments b) inferred motive, c) perceptions of the interactants themselves, and d) perceptions of the interactants' credibility in SNS comments. While these are related dependent variables (see table 20), they were treated as separate dependent variables for the following analyses due to the small sample size. For all regression statistics, see Table 21.

Table 20

Correlation of Perception Variables

	1	2	3	4	5
1. Comment Perception	-				
2. Inferred Motive	.74	-			
3. Interactant Perception	.74	.85	-		
4. Credibility	.75	.59	.69	-	
5. Online Accommodation Intention	.55	.50	.58	.51	-

Note: all correlations $p < .001$

Table 21

Effects of Study Variables on Comment Perception, Inferred Motive, Interactant/Target Perception, and Credibility

	Comment Perception		Inferred Motive		Interactant/Target Perception		Credibility	
	D. df	F	D. df	F	D. df	F	D. df	F
Intercept	133	8831.47***	133.18	8094.35***	131.90	9410.97***	128.85	8589.01***
Multiple	133	0.09	133.18	1.37	131.90	2.91	128.85	3.02
Scenario	399	131.99***	398.63	61.59***	397.07	20.88***	391.13	99.54***
Target	399	0.60	398.63	3.65	397.07	2.92	393.87	6.83**
CommGID	133	1.08	133.00	0.40	132.73	0.38	128.00	0.10
HSGID	133	1.13	134.04	0.71	132.34	2.08	130.08	4.94
Multiple * Scenario	399	0.00	398.63	0.03	397.07	0.01	391.13	1.10
Multiple * Target	399	0.08	398.63	1.92	397.07	0.63	393.87	0.33
Multiple * CommGID	133	0.09	133.00	0.09	132.73	0.01	128.00	0.99
Multiple * HSGID	133	0.02	134.04	0.20	132.34	0.36	130.08	0.02
Scenario * Target	399	0.63	398.63	3.43	397.07	0.52	391.13	16.58***
Scenario * CommGID	399	0.01	398.44	2.47	397.90	0.80	390.23	0.20
Scenario * HSGID	399	1.04	399.48	0.35	397.52	0.14	390.75	1.78
Target * CommGID	399	0.79	398.44	0.01	397.90	0.04	393.04	0.22
Target * HSGID	399	6.00*	399.48	0.47	397.52	1.47	398.40	3.88
CommGID * HSGID	133	0.49	133.57	0.06	133.38	0.29	128.92	0.58
Multiple * Scenario * Target	399	7.04**	398.63	0.33	397.07	0.67	391.13	15.99*
Multiple * Scenario * CommGID	399	1.49	398.44	0.22	397.90	0.09	390.23	0.54
Multiple * Scenario * HSGID	399	0.00	399.48	0.64	397.52	0.03	390.75	1.68
Multiple * Target * CommGID	399	4.20*	398.44	2.08	397.90	2.99	393.04	1.14
Multiple * Target * HSGID	399	0.14	399.48	0.47	397.52	0.00	398.40	0.68
Multiple * CommGID * HSGID	133	1.23	133.57	1.87	133.38	0.27	128.92	0.71

Scenario * Target * CommGID	399	0.41	398.44	0.86	397.90	0.68	390.23	0.11
Scenario * Target * HSGID	399	1.95	399.48	0.27	397.52	0.61	390.75	0.56
Scenario * CommGID * HSGID	399	0.19	399.01	0.01	398.56	0.02	390.21	0.00
Target * CommGID * HSGID	399	0.00	399.01	3.39	398.56	0.86	395.92	0.11
Multiple * Scenario * Target * CommGID	399	0.11	398.44	0.42	397.90	0.38	390.23	0.95
Multiple * Scenario * Target * HSGID	399	0.02	399.48	0.98	397.52	0.52	390.75	0.34
Multiple * Scenario * CommGID * HSGID	399	0.61	399.01	0.81	398.56	0.52	390.21	1.44
Multiple * Target * CommGID * HSGID	399	0.66	399.01	0.03	398.56	0.56	395.92	4.45*
Scenario * Target * CommGID * HSGID	399	0.10	399.01	1.76	398.56	0.28	390.21	0.67
Multiple * Scenario * Target * CommGID * HSGID	399	1.94	399.01	0.91	398.56	2.98	390.21	10.51**

Note: All numerator df = 1, Den. = Denominator, Target = Taylor/Jordan
* = $p < .05$, ** = $p < .01$, *** = $p < .001$

Regarding a) **comment perception** there is a significant main effect of scenario [$F(1, 399) = 131.99$, $p < .001$]. Participants saw Scenario 1 (Midterm) (M = 5.61, SE = .08) as more relevant, thoughtful, and helpful than the Scenario 2 (Homecoming) (M = 4.31, SE = .08), independent of any other effects. There is also a significant two-way interaction between Target of Accommodation and High School Identity Strength [$F(1, 399) = 6.00$, $p < .05$]. Finally, there is a significant three-way interaction between Experimental Condition, Scenario, and Target of Accommodation [$F(1, 399) = 7.03$, $p < .001$]. Looking at the marginal means for this interaction (see table 22 and Figure 8), Taylor's comments (the communication student) in the multiple group experimental condition and Scenario 1 (Midterm) are perceived as the most relevant, thoughtful, and helpful compared to the others.

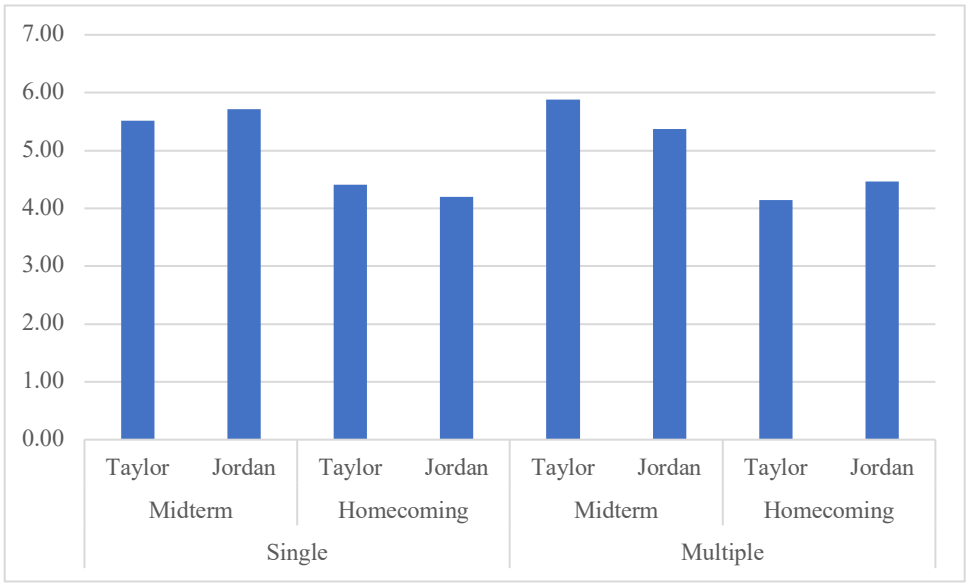
Table 22

Descriptive Statistics for Three-Way Comment Perception Interaction

Experimental Condition	Scenario	Target	Mean	Std. Error
Single	Midterm	Taylor	5.52	.16
		Jordan	5.67	.16
	Homecoming	Taylor	4.43	.16
		Jordan	4.16	.16
Multiple	Midterm	Taylor	5.88	.15
		Jordan	5.37	.15
	Homecoming	Taylor	4.19	.15
		Jordan	4.46	.15

Figure 8

Three-way Interaction Between Experimental Condition, Scenario, and Target of Accommodation on Comment Perception



Regarding b) **inferred motive** there is a significant main effect of scenario [$F(1, 398.63) = 61.58$, $p < .001$]. Participants saw both interactants overall more helpful and good-intentioned in Scenario 1 (Midterm) (M = 5.89, SE = .08) than Scenario 2 (Homecoming) (M = 5.00, SE = .08). There are no additional main or interaction effects.

For c) **interactant perception** there is a significant main effect of scenario [$F(1, 397.07) = 20.88$, $p < .001$]. Participants saw the interactants as more good natured, warm, sincere, friendly, and trustworthy in Scenario 1 (Midterm) (M = 5.28, SE = .08) than in Scenario 2 (Homecoming) (M = 4.75, SE = .08). There are no other significant main or interaction effects.

Regarding perceptions of the target's d) **credibility** there are several significant effects. There is a significant main effect of Scenario [$F(1, 391.13) = 99.54$, $p < .001$]:

participants saw the interactants as more credible overall in Scenario 1 (Midterm) (M = 5.01, SE = .07) than the Scenario 2 (Homecoming) (M = 4.13, SE = .07).

There is also a main effect of Target of Accommodation [$F(1, 393.87) = 6.83$, $p < .001$]: participants saw Taylor (the classmate who is always a communication student) (M = 4.70, SE = .07) as more credible overall than the Jordan (the student who switches identity based upon experimental condition) (M = 4.46, SE = .07). This is interesting, as the target of accommodation was counterbalanced in the protocol itself—participants were presented randomly with text, photo, and order of the posts as it relates to the target of accommodation. Therefore, we would not expect to see any differences in credibility of the target of accommodation as a main effect.

Finally, there is a main effect of High School Identity Strength [$F(1, 130.10) = 4.94$, $p < .05$]. Participants who rated higher in High School Identity Strength were more likely to view both targets as more credible overall.

There is a significant two-way interaction effect of scenario and target of accommodation [$F(1, 391.13) = 16.58$, $p < .001$] such that Taylor in the Multiple Group experimental condition appears to be perceived as more credible ($M = 4.81$, $SE = .09$) than in all of the other three combinations (see table 23). Perhaps as Taylor was in the Communication class (which ranked higher in overall identity strength than High School), he was associated with higher perceived credibility. There is also a significant two-way interaction effect of Target of Accommodation and High School Identity Strength [$F(1, 398.40) = 3.88$, $p < .05$].

Table 23

Descriptive Statistics for Three-Way Credibility Interaction

Identity	Target	Mean	Std. Error
Single	Taylor	4.59	.10
	Jordan	4.40	.10
Multiple	Taylor	4.81	.09
	Jordan	4.52	.09

There is a significant three-way interaction between experimental condition, scenario, and target of accommodation [$F(1, 391.13) = 15.99$, $p < .001$] (see table 24). Analyzing a graphical interpretation of these data (see figure 9) it appears that, for those in the Multiple Group experimental condition, Taylor in Scenario 1 (Midterm) is much more likely to be perceived as credible than in any of the other combinations. This is somewhat expected, as the content of the post itself (midterms) was designed to align with a communication student identity and also is required give the two-way interaction above.

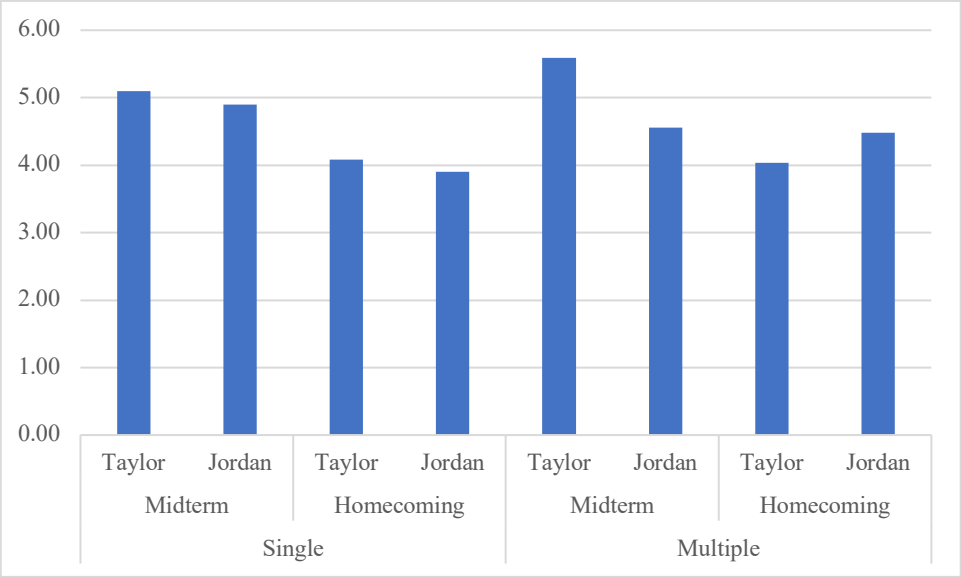
Table 24

Descriptive Statistics for Three-Way Credibility Interaction

Experimental Condition	Scenario	Target	Mean	Std. Error
Single	Midterm	Taylor	5.10	.14
		Jordan	4.90	.14
	Homecoming	Taylor	4.08	.14
		Jordan	3.90	.14
Multiple	Midterm	Taylor	5.59	.13
		Jordan	4.56	.13
	Homecoming	Taylor	4.04	.13
		Jordan	4.48	.13

Figure 9

Three-way Interaction Between Experimental Condition, Scenario, and Target of Accommodation on Credibility



A significant four-way interaction also emerged between experimental condition, target of accommodation, High School Identity Strength and Communication Identity Strength [$F(1, 395.91) = 4.45$, $p < .05$]. Finally, there is a significant five-way interaction involving all model variables [$F(1, 390.21) = 10.51$, $p < .01$]. These results are difficult to interpret, however, and not particularly relevant to the primary results above.

Summary

Taken together, the results of RQ6 suggest that perceptions of the interactant—and particularly the interactant's credibility—are affected by multiple co-present identities in the same space. Across all four variables there were significant main effects of scenario (Scenario 1: Midterm and Scenario 2: Homecoming), indicating that the topic of conversation influences the overall perception of the interaction *and* the interactants themselves. Target perception and inferred motive were two interactant-focused effects that

were significant—which suggests that the topic of conversation influences perceptions of the interactants themselves. When thinking about perceptions of the credibility of the interactants, there is a combined effect of primed identity, topic of conversation, and the group to which that interactant belongs. While identity strength does play a role in perceptions of credibility, it is not a main effect and only works in combination with the topic of conversation and interactant's group identity.

STUDY 2 DISCUSSION

Study 2 set out to experimentally understand how accommodation intention and perceptions of interactants, in different scenarios, are associated with the presence of multiple group identities in an online environment. The following sections discuss the creation of an online accommodation intention scale, the lack of findings in regard to accommodation intention (H1, H2, H3), and significant findings in other perceptions of the interactants (RQ6).

Online Accommodation Intention Scale

The accommodation intention scale created for this study, while based on existing work, needed to be heavily modified to appropriately measure accommodation intention in the online environment. Many of the items in the preexisting scale from Montgomery and Zhang (2018) related to cues that were not applicable online (e.g., “speak slower”, “pause to give her time to process what I am saying”). This revised scale is, to our knowledge, the first to attempt a measure of accommodation intention specifically for online interactions. While not the sole purpose of this study, creation of this scale is an important step in continuing to understand accommodation in the online environment.

The online accommodation intention scale, while acceptable though not fantastic (see RMSEA and Table 16) in fit, may not have been sensitive enough to capture the very small effects that occur during encounters with multiple groups online. This scale was created for the purposes of this study, but accommodation is typically measured as an actual outcome (e.g., did the participants speak more slowly/more quickly) as opposed to a cognitive process as measured here. That said, future work would be wise to consider actual measurement of accommodation *intention*, in addition to accommodation *outcome*.

Additionally, in online environments the ways in which people *can* accommodate may be different than prior work in offline contexts. Future work looking at accommodation online would be wise to not only measure accommodation *intention* (as a potential mediating variable), but also assess more directly the *types* of actions that users can take when they intend to accommodate. For instance, in primarily text-based online media classic vocalic accommodation markers (e.g., rate of speech, accent) are not present. Therefore, the mechanisms by which SNS users accommodate (or not) toward their conversational partner require additional attention. Similarly, depending on the amount of synchronicity that a particular medium affords, outcome measures like "time to respond" may be more or less relevant. For instance, in online synchronous chat that may be a marker of (non)accommodation that would not necessarily be present in a more asynchronous channel such as email. One promising area of research into this area—using large-scale computational linguistic analysis—will be discussed later in this dissertation.

Accommodation Intention and Multiple Identities

Hypotheses 4, 5, and 6 were all concerned with accommodation intention in the online space. In particular: how might the interactions between multiple co-present groups, strength of identification with those groups, and topics of conversation affect the intention to accommodate? The hypotheses around accommodation intention did not reveal any significant findings for any of the main variables (multiple group identity, scenario, target of accommodation, communication identity strength, high school identity strength). There are several possible explanations for these non-effects.

First, simply, is that (multiple) *group identification does not play a particularly large role* in the interpretation of information on relationally-based SNSs such as Facebook. In this

study, the scenario order, targets of accommodation, and any other additional cues (e.g., profile picture, order of comments, text of the comments) were counterbalanced across the sample. The only effects that were tested in the experiment, then, were those group-identity related variables. This was intentional, as small cues have been shown to produce effects (see Walther & Carr, 2010) that would have confounded the experiment. However, these findings show that (multiple) group identities alone (or in combination with topic of conversation) do not affect accommodation intention in online environments. Given that those other small cues *have* shown effects in this environment, perhaps (consistent with SIDE) it is not the group identity but those other cues in that environment that are more likely to affect whether individuals chose to accommodate in the online environment. In other words, because there *are* other cues in this environment, the group identity of the interactants is less important as an interpretive lens than those other, potentially individuating, cues. Thus, even though the manipulations for this study were effective (i.e., participants thought Taylor was always from the Communication classes and Jordan was from High School or Communication classes depending on assignment to experimental condition), the participants individually were still searching for those non-group-related cues—the effects of which were cancelled out due to the counterbalancing within the study design itself. If this is the case, future work should continue to focus on the types, and frequency, of cues in the online environment that might produce group- or interpersonal effects.

This may be seen with the marginal results in H3—the multiple identity condition did see marginal interaction effects of scenario and target of accommodation in the expected direction. For the communication student (Taylor) in the relevant scenario (Midterm) there was a higher intention to accommodate than the other combinations of target and scenario.

This was not the case in the single identity condition, nor were these effects present when all variables were modeled simultaneously (i.e., H1). Perhaps, then, since for those multiple-group condition participants identity was a salient cue in this limited-cue environment individuals used that identity to assess the comments and scenarios. Since it was *not* a salient cue in the single identity condition participants did not know how to assess the comments of those fabricated interactants, as the topic of conversation did not provide enough context alone to know if they intended to accommodate. This raises the question, then: what *types* of cues in SNSs provide enough explanatory or descriptive power to rise to the level of salience and discursive consciousness? This will be expanded upon in a later section of this dissertation.

Second, the lack of significant findings may be a result of *the psychological process of accommodation*. As discussed in the literature review, accommodation is a function of the interactant's affective and cognitive concerns *in the moment* which forms their psychological accommodative stance (PAS). This, in turn, predicts their accommodation intention, and finally the actual accommodative behavior. Given the artificial nature of this experiment, participants likely did not have affective concerns in this simulated interaction—only cognitive concerns. Further, as the process of accommodation is primarily unconscious and momentary—responding to specific situations—perhaps the participants did not have particularly strong cognitive concerns in the moment as they were interpreting and processing the stimuli presented to them. While believability and realism of the stimuli were relatively high across the scenarios (see Table 25) participants in general rated the item "this is something I would actually post on Facebook" as lower overall across the two scenarios that were used in the analyses. It may be that the cognitive concerns, leading to their

accommodation intention, during the study were not particularly high and thus did not produce any significant effects.

Table 25

Scenario Believability Scores

	Scenario 1: Midterm		Scenario 2: Homecoming		Scenario 3: Beach	
Item	**M**	**SD**	**M**	**SD**	**M**	**SD**
Believable	5.37	1.30	4.32	1.77	6.00	1.00
Realistic	5.24	1.33	4.32	1.80	6.02	0.99
Relevant to me	5.21	1.46	3.23	1.78	5.51	1.15
Something I would actually write	2.48	1.60	2.29	1.60	4.59	1.94
Something I've seen in the past	4.51	1.72	3.95	1.75	5.87	1.15

Finally, while there were differences in strength between High School and Communication identities within participants, these *identity differences were typically quite small*. In other words, the participants did not perceive or report large differences in identity strength between the two identities used as the experimental manipulation. This is an unfortunate limitation of the experimental design of this study—by necessity the two identities needed to be strongly distinct as well as equally applicable to all participants. Given the participants available for the study (undergraduate students) the two common identities that were equally applicable across the participant pool (High School and Communication) may not have been strong enough to produce effects that were able to be detected. The mean and standard deviation of the sample, while slightly emphasizing the Communication identity, did not reveal any extreme differences in identity strength overall. In an attempt to compensate for this limitation, the analyses were also performed with

individuals who were one standard deviation above or below the mean score for both High School Identity Strength and Communication Identity Strength. Unfortunately, there were few participants who fell into this category (n = 44), so the resulting model did not converge to allow for meaningful interpretation of those results.

Perceptions of Interactants in Multiple Identity Environments

While there were few instances of communication accommodation, one interesting trend that did emerge from the data, however, was the varying perceptions of the interactants based upon the scenario and group identities to which participants were assigned. With respect to RQ6, participants were asked to rate their perceptions of the comment, the perceptions of the interactant, their inferred motive, and their credibility.

There was a pervasive effect of **scenario** across all these variables. This would suggest, then, that in complex identity environments the driving factor of the perception of interactants is not the interactants themselves but the topic of discussion. This may be due to the experimental nature of this protocol—both targets of accommodation were ostensibly individuals with whom the participants were not particularly close. This was done to avoid additional non-group-based (i.e., individual interpersonal) effects. Given the lack of interpersonal history with the fabricated interactants, the only cues to use in this environment would be about the topic of conversation (i.e., Scenario) or group identity of the interactants themselves. In this case, the topic of conversation itself appears to take precedence over identity.

Regarding **credibility**, the lack of a main effect with the experimental condition shows that it is not simply the presence of multiple groups in SNS that change perceptions of interactant credibility. Rather, when multiple identities are present it appears that the

perception of one's credibility is dependent upon how that identity interacts with the topic of conversation and the identity of the interactants. In this study, Taylor (the communication student) for Scenario 1 (Midterm) in the Multiple Group condition was seen as more credible than any of the other combinations.

One explanation of this effect may be that group identity itself does not provide enough information to help individuals ascertain whether they see an interactant as credible independent of the topic of discussion. This makes sense—why would there be any reason for people to see interactants as credible if the topic of conversation does not directly relate to the identity the interactant holds? However, when that identity is relevant to a particular topic of conversation, there appears to be an inclination to see that interactant who holds that identity as a credible source of information.

This is an important finding for researchers investigating credibility in future studies of SNS. Particularly in more naturalistic studies where the identity of participants is not tightly controlled, it would be beneficial for researchers to account not only for their potential variables of interest, but perhaps also the identity of the interactants themselves and if multiple groups are co-present. Additionally, if perceptions of credibility can be altered based upon not only a specific post or comment, but the shared identity of that interactant, this has implications for assessing more widely the effects of these multiple groups in persuasive situations like social campaigns, PSAs, and political spheres. This may also be particularly relevant in discussions of controversial issues—perhaps the discussion of this type of information on SNS would be different depending on the makeup of the group itself.

This finding also extends extant research on the **imagined audience** and **context collapse**. While nearly all work in this area is focused specifically on how people selectively

self-present in multiple identity environments, these findings show that individuals do indeed evaluate the interactants differently based upon their group identification and how that identity interacts with the topic of conversation. If credibility is in fact different based upon those multiple identities when the topic of conversation is relevant to those identities, this opens up a wide area of research into what *types* of group cues in this context are relevant in interpreting information? Furthermore, if message senders know that their intended audience is going to see them as more or less credible based upon their group identity, can those senders include potentially relevant group cues to enhance the perception that they are a credible source of information?

Study 2 Limitations

As discussed above, there are several limitations that should be noted with this study. First, the *artificial nature of the stimulus* may not effectively represent the real way individuals perceive multiple identities on SNS. These two identities (Communication Student and High School Student) were chosen because these are common identities across the sample we engaged for the study. However, people's actual identities and the strength of those identities are idiosyncratic and likely vary widely across their social network. These two identities, then, may have been fairly weak (or, in SCT terms, non-central) and thus we may see different effects with stronger identities.

Second, while the two fabricated *interactants* (Taylor and Jordan) were *designed and counter-balanced to be as neutral as possible*, this is not how SNS connections are actually perceived. This experiment took out any interpersonal factors that would most certainly impact the evaluation of the interactants and the intention to accommodate. Given that these interactions take place in a complex identity environment with a variety of cues, future

researchers could begin incorporating relevant interpersonal cues as well into their study design to determine how multiple identities interact with interpersonal cues.

Finally, Facebook was used as the stimulus for this study, which may have influenced the results to favor interpersonal interaction. This could potentially explain some of the null findings of accommodation intention, as well as certainly alter the evaluation of the interactants. In future studies, researchers should test how multiple identities affect accommodation intention and perception of interactants across various SNSs with features emphasizing more interpersonal or more intergroup encounters. Perhaps a more pseudonymous SNS such as Reddit would, as SIDE predicts, have different effects when individuals are presented with multiple group identities.

GENERAL DISCUSSION AND FUTURE RESEARCH

The two studies in this dissertation are among the first to address a pervasive yet under-studied phenomenon in communication research: how do multiple co-present identities function and affect the way that we choose to accommodate (or not) and perceive messages on SNSs? While there is certainly more to research in this rich area, the results from these two studies provide an interesting lens with which to expand research around intergroup communication and context collapse.

Multiple Identity Salience

First, the results from Study 1 show that social identity activation and grouping in SNS is, indeed, quite a complex process that is difficult to untangle. While participants did group their "friends" into distinct clusters, they did not typically do so from the perspective of multiple group memberships. The groupings participants did list matches nicely with existing research by Kelley et al. (2011) and others: spatial and temporal groupings are commonplace in SNS. In some ways this is not surprising. As Facebook was the chosen SNS for this dissertation, and the Facebook platform is built upon making and maintaining interpersonal connections with (primarily) existing offline ties, one could expect that these groupings would be centered around physical locations and times in life. These groupings often co-occurred with more distinct labels like family, club/hobby/sport, academic activities, and religion. While groupings did occur, there were few significant effects of those groupings across both studies. This may certainly be a result of the sample for study 1, as discussed above. These null findings, however, do raise many interesting questions for research into both online intergroup communication and context collapse.

First, the results from Study 1 indicate that relational closeness may be an important factor in how users view their connections in SNS. As discussed previously, this may have been an artifact of the study protocol itself—by using participants' existing friends list and expanding from a single person, that may have inadvertently primed the participants to think of their "friend" in more interpersonal terms. Perhaps if instead participants thought of their existing social groups first and then allocate their Facebook "friends" into those listed groups, they may be more likely to see that "friend" as more related to their group identification. Therefore, an important consideration for future research on (multiple) identity salience is the way in which researchers have participants explicate those identities. While this will most certainly change depending on the focus of the study itself, the question of *how* the researcher attempts to access those identities is an interesting one for future research to explore.

This methodological consideration is also germane to discussions of context (and content) collapse. While individuals are typically aware of those different roles/identities in previous studies focusing on selective self-presentation (e.g., Litt & Hargittai, 2016; Zillich & Müeller, 2019), does the way in which the researchers ask participants to describe those identities influence the outcome? When participants are asked to consider the multiple overlapping groups that may see their post, they do change disclosive behavior (see, e.g., Zillich & Müeller, 2019). But would having participants explicate the various characteristics of those groups affect that behavior in a different way? Perhaps as individuals more explicitly weigh the normative values and expectations of each group, the mental "calculus" of the groups and interactants to whom participants decide to tailor their message (or, in CAT terms, accommodate) may change their behavior.

Second, if multiple group identification isn't particularly commonplace in this environment this would indicate that other factors are more influential. This may be an artifact of Facebook as the chosen SNS (as discussed above), but it also may simply be that multiple group identification isn't as common as other forms of contextualizing interactants and messages. The results from Study 1, Part 2 showed that while there are a myriad of different rationales for engaging with a particular post, there was no discernable pattern that emerged from analyzing those responses. What other factors might be driving the perception of posts? Recent work from Pearson (2021) shows that a combination of informational and social content together predicts "source blindness" through less effortful processing. In other words, the combination of different types of information in SNS cause individuals to fail to recall the source of news information. So, one cue appears to be the information type present in this complex environment. Perhaps there are other features of the post itself that are the primary drivers of contextualizing interactants and messages. Or perhaps it has to do with the person posting itself and how much the type of content is expected in this environment. In that case, additional theoretical lenses such as expectancy violations theory could provide valuable insight into the ways people process this endless stream of content.

Finally, the lack of main effects in Study 2 for the multiple group experimental condition indicate that it isn't simply the *presence* of multiple identities that affects message or interactant perceptions. With certain variables, such as comment perception and credibility, it is the combination of that multiple group co-presence and a relevant topic of conversation that produce results. Interestingly, however, when asked about browsing the News Feed in Study 1, Part 2 participants did not provide many mentions of group identity as a rationale for engagement and memory. Since in these two samples of college students

group identity does not appear to serve as a cue naturally for message processing, and the presence of a group identity experimentally does not have any main effects, this raises the question: what does the role of the group identity serve in SNS use?

Perhaps group identity in SNS functions as a contextualizing cue that increases the likelihood that particular conversations will stand out—though under the level of discursive consciousness. In other words, while the group identity itself doesn't rise to the level where individuals are particularly aware of the group to which the interactant belongs, it may allow conversations that are germane to that identity to stand out more. This wasn't something addressed in the current dissertation, as Study 2 was a carefully controlled experimental protocol. Study 1 does provide some tentative support for this point—particularly with explicit groups being so prominent in the dataset. While the group itself was not mentioned many times as a rationale for engagement or memory, do we see a higher rate of remembered posts from explicit groups on Facebook than occurs in the overall dataset? This would require considerable additional analysis beyond the scope of this current work, as each post for each participant in the 5-minute browsing session would have to be individually coded to determine if the overall ratio of remembered posts is significantly different than the participants' news feeds in general. Nonetheless, it is an interesting potential implication for this line of work.

Explicit Groups and the Changing Nature of Facebook

Another additional area of consideration across both studies is the particular SNS that was used across both studies. While Facebook has been used in studies of both Context Collapse and CAT, it is certainly the case that individuals often use these SNS in different ways and for different purposes. One area that was somewhat addressed in study 1, but

deserves considerable additional attention, is the membership in formalized explicit groups on the site. Given the college sample, the explicit groups that the participants in study 1 noted were related to university life (e.g., “Free and For Sale UCSB”, “Overheard at UCSB”). These casual/avocational groups based upon a university affiliation may not necessarily be the type of groups that elicit strong group response. However, as Howard (2014) points out there are multiple types of group membership including those for social support and stigmatized identity. While the findings from these studies didn’t reveal any of those types of groups, it is plausible that with a larger and more diverse sample the type of explicit groups individuals mention may include those that relate more centrally to (multiple) salient identities. This may also be the case for groups that echo highly salient offline identities, such as political affiliation and groups focused on collective action. Thus, future research in this line would be wise to look not only at college samples, but the types of groups and identities that individuals outside of college students may find meaningful.

This raises an additional interesting question: if those groups are full of individuals who may not necessarily know each other, how do the perceptions of those group members vary based upon established intergroup principles like (for example) prototypicality, deviance, and normative values? Presumably as groups begin to include indivisual who do not have as strong of interpersonal ties, those group indicators may become more important.

Context Collapse and CAT

These two studies also were among the first to integrate two similar theoretical frameworks: Context Collapse and CAT. One of CAT’s many strengths is the focus on the underlying psychological processes that accompany the act of accommodation. This is in contrast to Context Collapse’s focus on the interactions between members of different

roles/groups and the privacy concerns that arise from those collisions/collusions. Context collapse does not focus on the underlying processes that address why these interactions may be taking place. These two frameworks, then, appear to work together to explain two intertwined phenomena—how the interactions between individuals on SNS may arise due to the different audiences co-present on the same platform (Context Collapse) and what may be the underlying psychological processes that accompany the decision to tailor/accommodate one's message to those audiences (CAT). Thus, I would argue that CAT and Context Collapse are still separately distinct and useful at answering questions in those two areas.

This is not to say that they do not inform each other, however. While CAT is certainly the more established of the two frameworks, context collapse provides an interesting additional lens with which to view the socio-psychological mechanism of accommodation in SNS. Context collapse's focus on privacy and self-presentational concerns informs several important parts of CAT's process: the initial orientation of the interactants, the affective and cognitive concerns of that interaction, and the psychological accommodative stance of the individual. CAT then takes that interaction further and predicts based upon those factors whether or not an individual will choose to accommodate.

Prototypicality Effects as Future Research

One additional area of inquiry that was not addressed explicitly in this dissertation has to do with the perceived *prototypicality* of the "friends" within a particular group to the respective group identity. Group members can be perceived as more or less prototypical in the context of their shared social identities—how closely the members exemplify the norms and attributes that make that group unique (Hogg & Reid, 2006). Certain group members seen as more prototypical are often more socially attractive (Hogg, Abrams, Otten, & Hinkle,

2004) and are able to avoid negative group critique for minor normative infractions more easily (Hogg & Reid, 2006; Hornsey & Imami, 2004; Nicholls & Rice, 2017). Given the average size of a user's entire network in SNS, it is likely there are multiple "friends" who share a common group identity, with some of those individuals being perceived as more or less prototypical in that group than others for that given group identity. While Study 2 did assess a related concept, group entitativity is focused on the group itself as opposed to the individuals within that group. This addition of a measure of the prototypicality of each interactant would further expand research into (multiple) group identity salience online.

For instance, one online interactant from a previous work identity may be perceived as more representative of that workplace than other participants who are from the same workplace, because that person embodies more of the culture/identity of that workplace. When the conversation is about something that activates that work group identity, are the posts of more prototypical individuals evaluated differently and, perhaps, converged towards (i.e., accommodated) than are the posts of other, less prototypical members of that group? Similarly, how do differences in member prototypicality affect perceptions when multiple groups (with individuals of differing prototypicality from each of those groups) are present? If a topic is salient to multiple groups, it may be that one highly prototypical member from one group, and a less prototypical member from another group, are disseminating the same article. If both group identities are salient simultaneously, does the perception of that article vary due to the prototypicality of the individuals? Finally, how do group members who are more prototypical of a certain group affect perceptions and interpretations of the group-in-question? If it is going against the normative behavior of the group to post the article, does that alter the perception of that article for the user who identifies with that group (i.e., would

the user evaluate that deviant behavior more or less negatively than for a more or less prototypical group member?)

Accommodation Intention and Computational Linguistic Analysis

One of the contributions of this dissertation was the initial creation of an online accommodation intention scale. While this initial scale certainly needs to be refined to increase model fit, this presents an important opportunity for future researchers to directly measure accommodation intention as a mediating variable in the online accommodation process. With extant online accommodation studies, much of the work that measures accommodation linguistically on SNS such as Twitter (e.g., Danescu-Niculescu-Mizil et al., 2011; Tamburrini et al., 2015) take a computational linguistic analysis approach to directly measure convergence/divergence in large-scale communities. This is certainly a novel and timely methodological tool—the ability to parse large datasets and see linguistic markers of accommodation at scale gives researchers an insight into naturalistic behavior that previously would not have been possible. However, it does not directly test the theoretical mechanism behind CAT—that affective and cognitive concerns predict accommodation *intention* which predicts actual accommodation. This underlying process, then, becomes an assumption in online accommodation research that may potentially operate differently than in similar offline studies.

As computational methods become more accessible in social science research, care should be taken to not simply use a theoretical lens such as CAT as an afterthought when assessing large-scale data. To accurately determine how CAT can effectively predict and explain behavior, researchers using theories such as this should develop additional methods to supplement this large-scale linguistic analysis by directly testing the theoretical

assumptions of their chosen framework at scale. This is, most certainly, a lofty goal—but it is one that is of paramount importance in advancing not just the methodological sophistication of this research but the theoretical lens as well.

CONCLUSION

The ability of SNS to bring together individuals from different groups, times, and spaces presents both great opportunities and great challenges for researchers interested in studying online communication. This dissertation work is, to the best of my knowledge, among the first to empirically test how overlapping/multiple identity salience in SNS functions not only as an antecedent to selective self-presentation (as is the case in work on context collapse), but also as a factor in how we perceive messages and interactants themselves.

The general findings of these two initial studies confirm that (multiple) identity salience in SNS is, most certainly, a deeply nuanced and subtle process. In particular, the results from Study 1 show that group identity may not be particularly salient and affecting behavior frequently on SNS—even in cases where that group may be an explicit group on the SNS itself. However, as groups have been shown to have effects in prior SNS studies perhaps it is the nature of *multiple* group identification that requires additional attention. While it is foundational in the intergroup literature that people inhabit multiple social identities, the Internet (and SNS in particular) provides the opportunity to make those multiple identities more salient naturally. The next step in this line of work, then, is to further disentangle how those multiple identities function in this environment—and what affordances of SNS allow for and constrain those group identities.

The two studies presented here followed a framework that was explicitly focused on group-level phenomena. It is evident from this work, however, that, at least for relationally based SNS such as Facebook, group and interpersonal relationships mutually inform each other (as seen in Study 1). Given the myriad of small cues that make up mundane, everyday

interactions on SNS, parsing out the specific effects of these cues and how they affect communicative behavior such as accommodation requires researchers to broaden their lenses away from simple intergroup and interpersonal paradigms and embrace the complexities of both orientations being simultaneously present—if not necessarily discursively conscious.

Finally, As Rains and Brunner (2015) argue—the medium within which these studies on SNS take place may have a pronounced effect on the ways in which its members see themselves and their relation to others. In order for researchers to truly begin to distinguish how these communicative processes function—and how group identity may play a role in those processes—we need to broaden scope away from a single SNS and begin to determine how theoretical frameworks function across platforms.

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APPENDICES

Appendix A: Study 1 Lab Protocol

Before lab session begins:

- Make sure computers are turned on in cubbies D, F, E, G, H
- Log in to your UCSB Box account **on Google Chrome** and minimize browser
- Open a Firefox window and place on right side of screen (drag all the way to right)
- Open **private browsing window** in Firefox, go to www.facebook.com and place on **left** side of screen (drag all the way to the left)
    - Log out of profile if logged in and/or delete and identifying information
- Open OBS Program (on desktop or Windows toolbar) with this logo:
    - Ensure settings are "Nicholls Diss" at top
    - Minimize OBS

As participants arrive

- Ask if they have an active Facebook account. If they do not, inform them that is a requirement specified on SONA and they will have to find an alternative study.
- Record attendance for participant on clipboard
- Ask Ps to follow and instruct them to enter cubbies starting with furthest cubby (H) and then continuing down line (G, E, F, D)

When Ps enter cubbies

- Click Qualtrics survey link in toolbar on **right** window
- Ask them to read the informed consent on screen to the right and follow the instructions.
- Can leave door open for now.

~2 mins later Ps will come get you

- **Start OBS program** by clicking "Control + \"
- Minimize OBS program (if necessary)
- Ask name, then **Enter Corresponding Participant ID (PID) number** from clipboard in Qualtrics box marked "PID" (e.g., 001, 123)
- Click "continue"
- Instruct Ps to continue following the instructions on screen to the right

~15 mins later Ps will come get you again

- **Stop recording** on OBS program ("Control + \")
- Have participant log out of Facebook and delete profile picture
- On desktop click "Spencer Recordings" folder
- Double-click on video marked "Video" to open in VLC Media Player
  - Ensure the video is of the News Feed Browsing
- VLC will open on left side of screen
- Scroll to the part of the video where they go on the News Feed
- Tell participants:
  - "Now we're going to have you review your browsing session and answer a few questions. Please follow along with the prompts and questions on the right side of the screen.
  - When the instructions say to pause or play the video click this button *show them button*.
  - When the instructions say to record the timestamp on the video please write down this number *show them timestamp number on VLC right above "play" button*.
  - For the first task we will have you do it by memory, afterwards refer to the video
  - Do you have any questions?"
- Close door

~15 minutes later Ps will say they have finished the study

- Thank them for their participation
- Ask if they have any questions about the study
- Thank them again and tell them SONA credit will be up by the end of the day

After participation is complete

- Go to their cubby and ensure they have signed out of Facebook and that the "end survey" instructions are up on Qualtrics.
- Close out of VLC and Qualtrics windows
- Go to "Spencer's study" folder
- Rename videos (Right click → rename)
  - Video → PID (e.g., 123)
- Refresh Google Chrome Box page (otherwise it won't work right)
- Upload videos to shared Box folder
- Move videos from "Spencer Recordings" folder to recycle bin

Appendix B: Facebook News Feed Browsing Instructions in Study 1 Part 2

These instructions were presented to the participants in the Qualtrics questionnaire on the right side of the screen during browsing.

> You are free to interact with the feed as you would if you were on Facebook at home or on your phone. Feel free to comment, like, click on links, and watch videos. However, we ask that you do not actually leave the feed to do other tasks for any longer than 15 seconds. In other words, please do not spend this time reading articles in-depth, looking up Friends' profiles for extended periods of time, or doing other actions that will take you away from the News Feed for extended periods of time.
>
> Remember that your screen is being recorded for the purposes of this study, so please try and stay on the news feed until the instructions tell you to stop.

Once the five minute timer had elapsed, participants saw these instructions:

> You may stop browsing now.
>
> 
>
>
> *Please DO NOT close any windows.*
>
> Please **inform the researcher** you have finished this part of the study. The researcher will move you on to the next section.

Appendix C: Group Identification Scale

Adapted from Hogg, Hains, and Mason (1998)

Please indicate your agreement with the following statements

Strongly disagree						Strongly agree
1	2	3	4	5	6	7

1. I am glad to be a member of this group I called <participant group name>.
2. I am committed to the group I called <participant group name>..
3. This group I called <participant group name> is important to me
4. I see myself as similar to other people from this group I called <participant group name> in terms of general attitudes and opinions
5. I like the other people from this group I called <participant group name>as a whole.
6. I feel like I fit into (this group).
7. I identify with other people from this group I called <participant group name>.
8. I see myself as belonging to this group I called <participant group name>.

Appendix D: Group Entitativity Scale

Adapted from Spencer-Rodgers, Hamilton, and Sherman (2007).

Thinking about the group you called <participant group name>, please answer the following questions:

Not at all						Extremely
1	2	3	4	5	6	7

1. Some groups have the characteristics of a 'group' more than others do. To what extent does this group you called <participant group name> qualify as a 'group'?
2. To what extent do you think the members of this group you called <participant group name> feel that they are part of their group?
3. How cohesive is this group you called <participant group name>?
4. How organized is this group you called <participant group name>?
5. How much unity do you think the members of this group you called <participant group name> feel?
6. How much do members from this group you called <participant group name> interact with one another?
7. To what extent are members of this group you called <participant group name> interdependent (i.e., dependent on each other) for achieving the group's goals?
8. How important is this group you called <participant group name> to its members?

Appendix E: Study 1 Codebook

Facebook and Group Identity Working Codebook

Codes:

Coding for Association

- Relational Closeness
- Temporal Grouping
- Spatial Grouping
- Other

Coding for Reasons Participants Engaged with Post

- Explicit Mention of Group
- Constitutive Norms
- Social Purposes/Goals
- Relational Comparisons
- Collective Language

Codes for Post Itself

- Explicit Facebook Group
- Friend of Participant
- Named Group
- Picture
- Video
- Paralinguistic Digital Affordances (PDA)
- Comment

Coding procedures

Coding for Association with "Friends" or discussion of how participants know the Poster (F1_1assoc, F2_1assoc)

Read each explanation for how participants state that they know the "friend(s)" in full. For each comment, code 1 if the code is present in the way the participant discusses their "friends", and code 0 if the code is not present (this will be the default). Note that coding is not mutually exclusive—content can be coded for one or more categories based on response given by the participant.

Relational Closeness (RC)

Relational closeness is the extent to which the relationship **with that "friend"** is intimate or important.

RC_P: The participant mentions relational closeness as a cue in a **positive** way.
e.g., "We're very good friends" or "We're very close"

RC_N: The participant mentions relational closeness as a cue in a **negative or neutral** way

e.g., “We don’t know each other that well” “we’re not close” “we’re acquaintances”

Temporal Grouping (TG)

Temporal grouping is the discussion or relation of time and/or “periods of life” in which the participant associated with the “friend”.

A. There is discussion of time in description of how they know these individuals
    a. E.g., “My old childhood friends” or “Someone I used to know from middle school”
B. There is discussion of time in how they discuss the group through which they know the individuals
    a. E.g., “We met through a group I was in at high school” or “We used to be in a club back in middle school”

Spatial Grouping (SG)

Spatial grouping is associated with a physical or spatial location as to how the participant is associated with the specific “friend”. This must be a reference to a **physical** place, such as a town, institution (e.g., specific university), other geographical location.

A. There is discussion of location or physical/spatial grouping in how they know the individual
    a. E.g., “I know them from my hometown” or “I know them from a camp I used to go to”
B. There is discussion of location or physical/spatial grouping in how they discuss the group
    a. E.g., “We know each other from high school in my hometown” or “I met them through a club at UCSB”

Other

If there is another association they list, please write down the association you best think exemplifies this description. This may be, for example, an online group, cultural identity, racial identity, etc.

Coding for Reason Participants Engaged with the Post

Read each explanation for why the participant engaged with a particular post in full. For each comment, code if the participant discusses each of the following. Note that coding is not mutually exclusive—content can be coded for one or more categories based on response given by the participant.

Explicit Mention of a Group (Group):

The participant explicitly mentions a group, organization, or collective of people that influenced their decision to remember/engage with the post.

e.g., "My sorority", "Gauchos", "Club on campus"

Constitutive norms (CN):

The practices and rules that define a group identity and lead others to recognize it. Constitutive norms serve to inform members of appropriate standards, collective expectations, and individual obligations. They also serve as rules that, when broken, cause other group members to sanction the inappropriate behavior and correct the group member (Marques & Yzerbyt, 1988).

CN_NonNorm: *Complaint about non-normative behavior*
The comment references the violation or breaking of group norms—note that the group must be explicitly mentioned (e.g., "I can't believe that they said this because I know them from X group and that's not what we stand for")

CN_Norm: *Mention of normative or prototypical group behavior*
This comment references a standard of conduct that a person is upholding related to group goals (e.g., "I went to UCSB with this person and they posted an awesome video about when we beat another team in soccer")

CN_Sanc: *Sanctioning of other individuals*
The comment directly calls out other users' bad behavior (e.g., "you can't say X here", "we don't allow that kind of talk", etc.).

Social purposes/Goals (SPG):

The social purposes of common identity are the specific goals that groups attach to their collective identity. For instance, social movements often have specific goals to achieve (e.g., recognition of gay marriage by the supreme court) that are only achievable by the collective group itself, and not individuals.

SPG_G: *Mention of goals for group in general*
The comment mentions the point of a group in general (e.g., "this person I know from my old philanthropy club and we worked with disadvantaged children")

SPG_S: *Mention of specific goals for group*
The comment discusses more specific instances of group behavior (e.g., "we went to a specific event with my old club and both did X thing")

Relational comparisons (RC)

Relational comparisons of common identity are the comparison by group members of their in-group to relevant out-groups and "others" who are not members of the in-group. Explicit in the social identity approach, the creation of an in-group identity will produce comparative (and potentially competitive) behavior with out-groups. Group members try and maintain in-

group positivity, often by referencing out-groups in a negative manner. Given the nature of the current study, and the multiple in-groups to which one belongs, there will likely not be much negative/derisive comparison with other in-groups, though participants may reference other groups to differentiate identities.

RC_P*: positive mention of other groups/identities*
The comment mentions other groups positively (e.g., "I stopped because this is something that I like given this person is a member of X group", etc.)
RC_N: *negative mention of other groups/identities*
The comment mentions other groups/identities negatively (e.g., "well of course they would say that because they belong to X group and we don't like them")

Collective language (CL)

Collective language is the use of "depersonalizing" language when group identity is salient. Individuals who have a common identity that is salient may depersonalize from their individual identities, meaning that they do not think of themselves as individuals but rather as group members. Since they are not thinking of themselves as individuals, they are more likely to use collective language (e.g., "we") than personal language (e.g., "I, you"). Given the explicit instruction to think of other group members, it is expected that individuals will use more collective language when discussing group membership—especially if that group is one for which they are highly identified (e.g., higher on scales of identification and entitativity).

CL_We: *Use of "we" or "us" (in relation to group/identity)*
There is a use of "we" or "us" referencing other members of the group/identity. If "we" or "us" refer to a group that is (in your best judgment) not the group to which the poster belongs, code 0.

Codes for The Post Itself

For each look at the post in its entirety. If there are multiple "screenshots" of the post it will be labeled with an additional third number (e.g., 001_1_1, 001_1_2). Please look at all screenshots if the post has a third number, and code those (multiple) screenshots as one unit of analysis.

Code 1 if any of the following are present, otherwise code 0:

FB_Group *The post is from an explicit group on Facebook.*
Explicit group is any Facebook "Group" that exists as a named entity (e.g., "Overheard at UCSB", "Free and For Sale UCSB", etc.)

FB_Friend *The post is from a person the individual is "Friends" with on Facebook.*
This post is not from a group, public figure, or corporation, AND is not posted in an explicit group.

The name will be blacked out at the top of the post if this is to be coded 1.

Group_Named *The post mentions a group by name.*
In the post itself the poster mentions the name of a group that is NOT an explicit group on Facebook (see FB_Explicit for that code).

E.g., “Sorority”, “Japanese Student Association”, “Arizona Diamondbacks”, etc.

Picture *The post contains a picture.*
If the post contains a picture (or multiple pictures), code 1.

Video *The post contains a video.*
If the post is a video, code 1.

PDA *The post is “liked”, “laughed at”, “angry” or the “like” button is pressed by the participant.*
If the “like” button is pressed **in any way** code 1.

Comment *The post is commented upon by the participant.*
If the participant leaves a comment, code 1.

Appendix F: Emergent Themes/Keywords from Post Engagement/Memory Rationale

Advertisement
Animal
Attention
Basketball
Celebrity
Clothing
Club
Coachella
College
Color
Comment
Concert
Cute
Distance
Dog
Election
Event
Familiar
Family
Fan
FB Group
First
FOMO
Food
Frequency
Friend
Funny
Group
Hair
Happy
High School
Home
Housing
Instagram
Interest
Kpop
Last
Location
Meme
Movement
Movie
Music
Negative Affect
Organization
Other Social Media
Page
PDA
Photo
Politics
Politics
Race
Rel. Closeness
Rel. Maintenance
Relatable
Relational Partner
Sale
Salience
Seen Before
Share
Shopping
Sorority
Space
Sport
Structural Equivalence
Support
Tag
Travel
UCSB
Unexpected/Unusual
Video
Vivid
Work

Appendix G: Scenario Screenshots and Text from Study 2

Scenario 1: Midterm

Post Text:

"I'm a little nervous about midterms… I heard the tests were really hard and trying to trick people. Anyone have advice for me?"

Comment 1 Text:

"Well yeah you need to not just memorize definitions, but it's probably also good to make sure you think about if there are answer choices that don't make sense. I heard the classes like that use a lot of all/none of the above things."

Comment 2 Text

"All you have to do is make sure you don't just memorize definitions. You need to also be sure to know how to apply the stuff to examples…"

Scenario 2: Homecoming

Post Text

"So excited for homecoming this year! Can't wait to be back and see all my old friends from high school!"

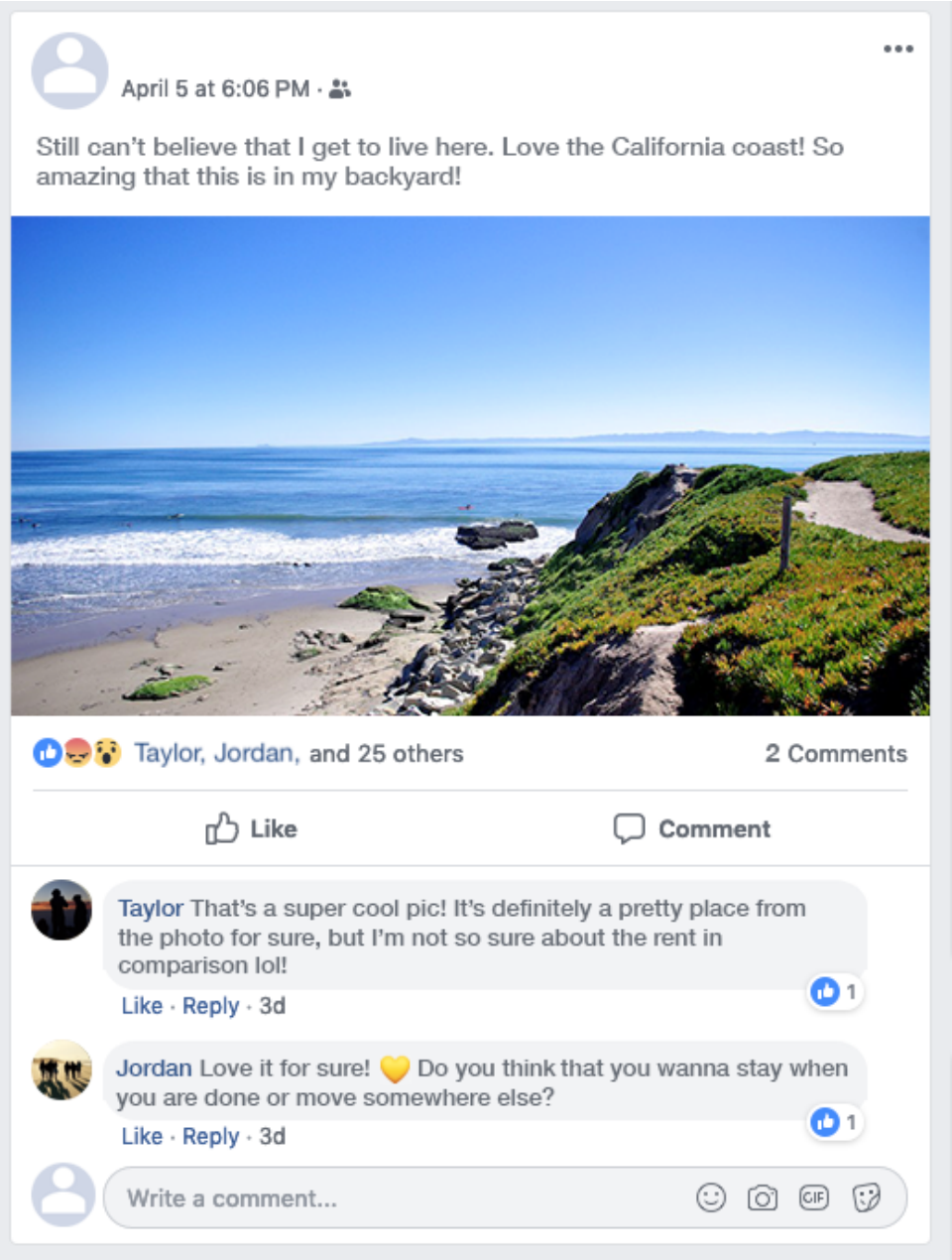
Comment 1 Text

"Woah that's crazy that you're going back! I never went to any of that stuff in high school, so I don't see it as super important. Why do you wanna go back and do it all again?"

Comment 2 Text

"Exciting! What do you think you're gonna do when you get back?".

Scenario 3: Beach



Post Text

"Still can't believe that I get to live here. Love the California coast! So amazing that this is my backyard!"

Comment 1 Text

"That's a super cool pic! It's definitely a pretty place from the photo for sure, but I'm not so sure about the rent in comparison lol!"

Comment 2 Text

"Love it for sure! <heart emoji> Do you think that you wanna stay when you are done or move somewhere else?"

Appendix H: Online Accommodation Intention Scale

The scale is directed toward a specific Target/Interactant of Accommodation. <Jordan> is replaced with either Jordan or Taylor, depending on the target.

The following statements ask you to think about communicating with <Jordan> if you were going to comment on the status. Please read each of the following statements and respond with the degree to which you are willing to do the corresponding behavior.

If interacting with <Jordan> on Facebook I would be willing to...

Extremely Unwilling	Unwilling	Somewhat Unwilling	Neither Willing nor Unwilling	Somewhat Willing	Willing	Extremely Willing
1	2	3	4	5	6	7

1. ...carefully focus on the topic that <Jordan> brought up in our conversation
2. ...put forth more work in writing my comment to make sure <Jordan> understands me.
3. ...use more emoji/emoticons or reaction GIFs that match with <Jordan>'s use of emoji/emoticons/Reaction GIFs.
4. ...tag <Jordan> in order to expect a response from them.
5. ...write more in the comment to make sure <Jordan> knows I'm talking to them.
6. ...respond quickly to a comment that <Jordan> made on the status if I were already on Facebook.
7. ...include cues in the comment only <Jordan> would understand to show <Jordan> that we are "on the same team".