Whistling in the Wind: Examining the Effects of Sexual Orientation Relational Demography on Individual Perceptions of Workgroup Process and Withdrawal

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Submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy under the Executive Committee of the Graduate School of Arts and Sciences

COLUMBIA UNIVERSITY

2013
ABSTRACT

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This study examined the relationship between perceived workgroup sexual orientation dissimilarity and participant perceptions of group process and withdrawal. Based on the theory of relational demography within groups (Riordan, 2000) and recent research on moderators of the dissimilarity-outcome relationship (e.g., Stewart & Garcia-Prieto, 2008), the study argued that: (1) perceived sexual orientation dissimilarity would be associated with negative group process effects and increased withdrawal for all study participants, (2) that the relationship between perceived sexual orientation dissimilarity and outcomes would be stronger for heterosexual individuals than for those who identified as lesbian, gay or bisexual (LGB), and (3) that participants’ level of sexual orientation identity development would moderate their responses to increased sexual orientation dissimilarity in their workgroups. Three hundred and ninety-eight graduate students at Columbia University were asked to respond to an online questionnaire designed to assess their perceptions of workgroup dissimilarity, communication, conflict and peer relations as well as their individual levels of withdrawal. Hypotheses were tested using hierarchical multiple regression analysis. Results indicated that perceived dissimilarity was positively related to increased relationship conflict, task conflict and withdrawal and negatively related to peer relations among all study participants. Additionally, the effects of perceived dissimilarity on task conflict and withdrawal were moderated by participant sexual orientation and participant sexual orientation identity development, consistent with study hypotheses. Slightly different patterns of findings emerged when the results were examined for LGB and heterosexual individuals separately. Though not hypothesized, values dissimilarity was found to
mediate the relationship between perceived sexual orientation dissimilarity and several of the group process outcomes, particularly for heterosexual individuals. The contributions and implications of these findings for relational demography and sexual orientation workplace research are also discussed.
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ACKNOWLEDGEMENTS

A close friend of mine once said that it takes a village to raise Frank Golom, and after seven years in the doctoral program in Social-Organizational Psychology, there should be no doubt that he was and is right. I would like to express my profound gratitude and affection to many individuals, all of whom have not only been responsible for my development as a professional, but for my personal development, health and well being as well.

First and foremost, I have to thank the indomitable Elissa Perry, my dissertation sponsor, advisor, mentor, role model and friend. I owe all of my academic training and success to her dedicated and selfless guidance, her tireless hours spent reviewing and improving my work, and her ardent and unyielding insistence that the only standards that matter are the impeccably high standards she taught me to set for myself. I would not and could not have had a tenth of the experience I had during these last seven years if she had not been assigned as my advisor back in 2005, and no matter what has happened, I have been and will be thankful for that assignment and everything that has come from it every single day.

I also have and will always be thankful for the guidance, influence, training, advice, counsel, trust and friendship of so many members of the Social-Organizational Psychology Program faculty. In particular, I owe everything I am as a practitioner to the undying, dedicated influence of Debra Noumair, whose insights, wisdom and unmatched professional instincts have taught me not only about the realities and complexities of organizational life, but also about the realities and complexities I hold within myself. My life and my practice are richer and fuller because of the many opportunities she has given me as well as her unmistakable presence in and clear influence on them. I am, without question, the psychologist I consider myself to be because of her.
I am also the teacher and educator I consider myself to be because of the ever-present and ubiquitous influence of the pre-eminent scholar and thinker, Lee Knefelkamp. When she told me during my admission interview that I would be adopted by the end of the day, she foretold a professional and personal relationship that I have come to respect and cherish, and one I cannot imagine being without. Whether it be deconstructing my latest classroom experiences or the ins and outs of American politics, Lee has always affirmed and validated, with unmatched knowledge and insight, the powerful educator and leader I have always wanted to be. Her life and career have truly been her greatest scholarship, and if I can attain even a tenth of her impact and insight, mine will have been an academic life well spent.

I have learned quite a bit over the last seven years, and am thankful for not only the faculty who have designed and guided that process but also for the friends and colleagues who have modeled for me an endless array of profiles in courage. To my best friend and colleague, Jennifer Bustamante: You taught me how to be a better thinker, researcher and doctoral student, and despite my own resistance at times, an even better friend. This journey would have meant little to me personally were it not for you; the last several years have just not been the same without you and I miss you every day. To the incredible Naira Musallam: I may have found a kindred spirit in your frank and passionate energy, but I found a friend in your warmth and compassion, and an inspiration in your courage. Thank you. And to my many friends and colleagues in the doctoral program, old and new, including Orla Nicdomnhail, Paul Hanvongse, Joaquin Roca, Adam Mitchinson, Marina Field, Mateo Cruz and the effervescently insightful Naomi Woods, my utmost respect, profound thanks and sincere love. I made it here on the days I couldn’t because you carried me, and there is no greater sacrifice you could have made on my behalf than that.
To my cohort, Mekayla Castro, Nishita Rai and Rae Tan, I will never in my life forget all that you have done for me, all that you have given me, and everything you have meant to me from the minute we stepped foot in Teachers College seven years ago. We have done more and learned more together than anyone I will likely do or learn anything with for the rest of my life, and there are very few ways I can ever repay you for the countless hours you have listened to me, advised me and consoled me, other than to say I love each and all of you with all my heart. You will always be my friends and colleagues, and we will always be our cohort. Thank you.

The number of individuals outside of Teachers College who have carried me to this place are many to count and even more to name, but their support has been undeniable, their impact will be lasting and their patience with the incredible number of hours I have either ignored or avoided them because of school is a model of selflessness for us all. That I have any friends or family left after this endeavor is certainly remarkable, but that I have managed to have friends and family as supportive, understanding and forgiving as Travis Grossi, Tori Imperato, Kelly Lawten, Casey Cartwright, Mara Lewin-Tankel, Jeffrey Tucker, Matthew Dempsey and Denise and Lawrence Sherlock is an inspiring honor that humbles me more than you know. Thank you for the conversations, distractions and moments of sheer joy throughout what has been an incredibly long and arduous process. These are some of the moments that have sustained me, and reminded me, what life will one day be like (or return to) most of all.

I was brought to this place by the care, love, attention, affection, dedication and hard work of several people who leave me breathless, restless, occasionally guilty, but most importantly, whole. To my friend and former partner, Brad Bates, I love, respect, admire and have relied on you more than I ever allowed myself to love and rely on anybody, and likely more than you will ever know. I am who I am today because of your unconditional love and influence,
and I promise to remember and to cherish that no matter what should happen to me or wherever I should go. To my love and my partner in life and in fun, not a day has gone by, Sean Elias, where I am not grateful to have found you and renewed at the thought of us sharing our lives together. The truth may be that I fell in love with you the day you sang to me, but the reality is that I continue to love you for all the many ways you teach me how to sing. This dissertation is owed in no small part to the loving and incredibly insightful way you challenged me to honor myself, my passion and my experiences. I did that and hope you are proud of me for it, but more importantly, I hope you continue to challenge and push me, for days unseen to come.

To my mother, friend and one of the most selfless women I have ever known, Louise Mazzola, and to my fiery and protective sister, Danielle Golom, please know that no matter what I do or who I become, I will first and foremost always be your son and brother. For me, the price of this Ph.D. is not just measured in the dollars it cost or the hours I have spent working on it, but rather, it is best measured in the countless sacrifices and years of turmoil you endured precisely so that I could have a better life. Mom, I do not tell you how grateful I am often enough, and I do not tell you how much I love you as nearly as I should, but I owe more than you realize to your efforts and your steadfastness, and to the fact that you made sure that we would always be ok no matter what. We’re ok, now. I am sure of that.

I dedicate this dissertation to the two individuals who, more than anyone else, are responsible for everything I have done in my life and for the man I have now become. You opened your home, your hearts and your lives to me on more occasions than I care to remember, and the only thing you ever asked me to do was to make something of myself in return. I have, and have done it in your honor, but because of your sacrifice, I truly believe this Ph.D. is yours, too. To my guardian angels, my kind and selfless grandparents, Carmela and Frank Mazzola, for
your willingness to raise another village child long after you thought your own work was done, I will love, thank, honor, remember and adore you, everyday for the rest of my life.
CHAPTER 1: INTRODUCTION

No matter how you examine it, the people we work with matter, both in terms of the competencies they bring to the table as well as the personal factors that inform their identities and how they live and experience the world. This is particularly true regarding sociodemographic diversity (e.g., age, race, gender) in organizations, which has received considerable attention over the last two decades (Anand & Winters, 2008; Ragins & Gonzalez, 2003) as a result of the continued diversification and globalization of the American workforce (Friedman, 2006). The growing number of women and employees of color in the U.S. labor market (Bureau of Labor Statistics, 2012) as well as changing social mores related to generational values, religious tolerance and sexual identity (Davis, 2011) now mean that more and more individuals find themselves working with others whose demographic backgrounds, perspectives and worldviews are likely to be fundamentally different from their own. As a result, there is a clear need, both in science and in practice, to examine the consequences of this dissimilarity and to consider its implications for individuals in organizational contexts.

A considerable amount of research has investigated the impact of demographic heterogeneity on attitudinal, behavioral and perceptual outcomes in work teams (for a review, see Williams & O’Reilly, 1998). This research has been illuminating in multiple respects, particularly regarding the group process and withdrawal implications of demographic dissimilarity. For example, research exploring the effects of heterogeneity in work units suggests that sociodemographic variations in one’s workgroup are often associated with both perceived and actual group process disadvantages and individual intentions to turnover (Milliken & Martins, 1996; Tsui, Egan & Xin, 1995; Williams & O’Reilly, 1998). Members of diverse groups have been shown to be less socially integrated and communicative with each other and
more likely to experience conflict and increased withdrawal behavior than members of homogenous groups (Williams & O’Reilly, 1998). This finding has been replicated in both field (e.g., Tsui, Egan & O’Reilly, 1992) and laboratory (e.g., Watson, Kumar & Michaelsen, 1995) settings, across several different demographic categories (e.g., race, gender age; Riordan, 2000; Riordan, Schaffer & Stewart, 2005; Williams & O’Reilly, 1998) and both inside and outside the United States (e.g., Farh, Tsui, Xin & Cheng, 1998).

Although the establishment of workplace demography as a legitimate area of inquiry has been welcome news for those interested in the advancement of inclusion in organizations, a close examination reveals that when it comes to studying sociodemographic diversity in the management literature, not all category memberships are created equal (Creed, 2006). As several scholars have noted (Ashkanasy, Hartel & Daus, 2002; Bell, Ozbilgin, Beauregard & Surgevil, 2011), researchers have historically focused on the study of race, gender, and to a much lesser extent, age in organizations. In fact, upwards of 70% of the team demography studies conducted in the last two decades continue to focus solely on such visible aspects of diversity as gender and race (Joshi, Liao & Roh, 2010). Concealable or less visible category memberships, including disability, religious affiliation and sexual orientation, have received decidedly less attention (Bell et al., 2011; Creed, 2006; Ragins & Gonzalez, 2003; Ragins, 2004), despite evidence suggesting that less visible forms of diversity have equally important workplace implications (e.g., Stone & Collela, 1999). The purpose of the current investigation is to examine the group process and withdrawal implications of heterogeneity based on one such important yet understudied sociodemographic variable – an individual’s sexual orientation.

The lack of demography research and theory on sexual orientation in organizations belies the significance of sexual orientation identity in American society. Data on the number of
lesbian, gay and bisexual (LGB) individuals in the United States and their workplace experiences suggest that the individual and sociocultural importance of sexual orientation is in little doubt. There are 8.8 million sexual minorities in the U.S., roughly equivalent to the size of the state of New Jersey and approximately 4% of the total U.S. population (Gates, 2011). The percentage of LGB individuals in the workplace may be even higher. By some estimates (Gonsiorek & Weinrich, 1991), gays, lesbians and bisexuals constitute between 4 and 17% of the U.S. workforce. For comparative purposes, 46% of the U.S. workforce in 2005 was female, and racial and ethnic minorities comprised approximately 18.1% of the workforce. An examination of recent data from the U.S. Census Bureau (2007) suggests that gays and lesbians may indeed represent a larger percentage of the labor force than African Americans (11%), Asians (5%), or Hispanics (13%), individually. Simply from a numbers perspective, there is a real need to understand the workplace experiences of such a relatively large minority of the U.S. workforce, including the ways in which heterosexual individuals react to and work with their LGB colleagues.

Additionally, LGB individuals are subject to discrimination both inside and outside the workplace that is often greater than that suffered by legally protected classes (Fone, 2001). Societal attitudes and actions toward homosexuality and sexual minority individuals continue to be both negative and exclusionary. While an overwhelming majority of Americans (89%) support equal employment opportunities for LGB people, a much smaller number (57%) agree that homosexuality is an acceptable “alternative lifestyle” and slightly fewer (56%) consider sexual relations between two same-gender individuals as “morally acceptable” (Gallup, 2011).

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1 In the current paper, the term sexual minority is used to refer broadly to those individuals who identify as lesbian, gay, bisexual, transgender or queer. The term LGB is used when making specific references to lesbian, gays and bisexuals.
Given these numbers, it is not surprising that discrimination against gays and lesbians exists at both the individual and institutional levels. Approximately 50% of respondents in a recent probability sample of LGB adults (Herek, 2009) reported that they experienced some form of verbal harassment, and 1 in 5 reported being victims of a person or property crime based on their sexual orientation. Same-sex marriage remains explicitly prohibited either by constitutional amendment or by law in 41 of 50 states (Human Rights Campaign, 2010).

Inside the workplace, the little work that has been done on sexual minority issues confirms that societal views of homosexuality have a clear negative impact on the work environments of LGB people (Mohr & Fassinger, 2011). Converging evidence from national probability samples, self-report studies and experimental investigations all support the presence of workplace discrimination against LGB employees (King & Cortina, 2010). Twenty-seven percent of a nationally representative sample of LGB respondents experienced at least one form of sexual orientation-based discrimination or harassment on the job over the last five years, a number that jumps to 37.7% when only out-LGB employees are considered (Sears & Mallory, 2011). Formal discrimination in selection, promotion and termination was reported by about 16% of respondents (Sears & Mallory, 2011). Experimental research confirms the presence of discrimination as well. Fictitious gay and lesbian job applicants have been rated less favorably and treated more hostilely than heterosexual applicants with the same qualifications in both lab (Horvath & Ryan, 2003) and field (Hebl, Foster, Mannix & Dividio, 2002) experiments.

Although the small body of research on LGB workplace issues has helped document the prevalence of discrimination against gay and lesbian employees and the importance of considering sexual orientation in demography research, it has not directly addressed the group process and withdrawal implications of workplace sexual orientation dissimilarity. Two factors
likely contribute to this particular gap in the LGB workplace literature. First, several researchers have noted (for reviews, see Creed, 2006; Croteau, 1996; Mohr & Fassinger, 2011; Ragins, 2004) that those interested in LGB organizational issues have focused almost exclusively on the discrimination, disclosure and vocational experiences of sexual minority employees, often to the neglect of other important areas of research (Shore et al., 2009). Second, existing LGB workplace research has been frequently criticized for being piecemeal and occasionally atheoretical (Creed, 2006; Ragins, 2004; Ragins & Cornwell, 2001). There is a noted lack of attention (Creed, 2006; Ragins, 2004) in the workplace literature to contextual factors that might impact LGB employees’ workplace experiences, including the demographic composition of one’s immediate team or work unit (Ragins, Cornwell & Miller, 2003) and the role of heterosexuals in co-creating LGB supportive or unfriendly work environments (King, Reilly & Hebl, 2008; Ragins, 2004). Yet empirical work to date has left these topics relatively unexplored (Mohr & Fassinger, 2011).

As more individuals continue to disclose their sexual orientation (Ragins, 2004) and do so at younger and younger ages (Savin-Williams, 2005), the group process and withdrawal implications of working with others of diverse sexual orientations will become an increasingly important area of inquiry that both sexual orientation and organizational demography researchers will need to begin to address (Ragins et al., 2003). The current study proposes using a theoretically and empirically supported framework from the demography literature to understand the process and withdrawal implications of sexual orientation diversity in organizational settings. In particular, the study uses the theory of relational demography within groups (Riordan, 2000; Tsui & O’Reilly, 1989) to examine whether increased sexual orientation dissimilarity between an individual and other members of his or her workgroup is associated with negative process
perceptions among group members (i.e., process loss) and potential withdrawal behavior. The current study is based on previous research suggesting that relative differences in sociodemographic diversity (e.g., age, race and gender) have negative implications for individual members’ perceptions of their group’s cohesion, communication and conflict processes as well as their own withdrawal (Riordan et. al., 2005).

By applying relational demography to the study of LGB workplace issues, the current investigation makes several contributions to two different streams of research. First, this study extends existing work on sexual orientation in organizations by directly addressing scholars’ concerns about the atheoretical nature of LGB workplace research (e.g., Creed, 2006). The current study uses an empirically supported theoretical framework to understand the impact of sexual orientation dissimilarity on group process perceptions and member withdrawal. Second, unlike previous LGB research that has focused almost exclusively on sexual minority individuals, relational demography is concerned with the effects of different demographic configurations on all employees within a group or organization, not simply those who are in the minority (Tsui et al., 1995). This dual focus on both heterosexual and LGB individuals broadens the scope of existing work that has studied sexual orientation issues in organizations. Third, the outcomes on which relational demography research and theory typically focus (e.g., social integration, communication, job attitudes and performance judgments) extend those historically studied by much of the LGB workplace research (e.g., disclosure, discrimination) to date (Mohr & Fassinger, 2011).

The relational demography literature may also benefit from examining sexual orientation as a sociodemographic variable of interest. First, as previously mentioned, much of the work on diversity and demography in organizations has been conducted with demographic variables that
are to a large extent visible and non-concealable (e.g., race, gender). The exploration of such invisible and concealable stigma as sexual orientation may contribute to a fuller understanding of relational demography effects. Second, LGB researchers have established the importance of studying sexual orientation identity development (Ragins, 2004; Worthington & Mohr, 2002), or the processes by which LGB and heterosexual individuals come to understand themselves and identify as members of their sexual orientation group (Cass, 1979; Mohr, 2002). Sexual orientation identity may play an important role in determining how demographic dissimilarity affects group process and withdrawal. Relational demography researchers studying other sociodemographic characteristics may find it useful to adopt the concept of identity development in their own work, as recent research on the moderating effects of racial/ethnic identification on relational demography outcomes (Stewart & Garcia-Prieto, 2008; Linnehan, Chrobot-Mason & Konrad, 2006) is beginning to suggest.

In sum, the current study examines whether sexual orientation dissimilarity between an individual and other members of his or her work unit is associated with that individual’s perceptions of group process and his or her own withdrawal behavior. Further, this research considers the psychological mechanisms (e.g., similarity/attraction; social categorization/identification) by which sexual orientation dissimilarity impacts process and withdrawal outcomes. It also considers whether individual factors related to one’s own sexual orientation identity moderate the effects of dissimilarity on group process and withdrawal perceptions at the individual level. Based on findings from previous relational demography research, I argue that (1) sexual orientation demographic dissimilarity is likely to have a negative impact on a group member’s perceptions of his or her group’s process as well as his or her own individual withdrawal behavior, (2) that such perceptions should be more negative for heterosexual
individuals than for those who are LGB, and (3) that heterosexual and LGB individuals’ understanding of their own respective sexual identity (i.e., sexual orientation identity development) should moderate how they respond to the presence of sexual orientation dissimilarity in their work units.

This dissertation is organized as follows. The following chapter (chapter two) reviews the theoretical and empirical literature on relational demography within groups and considers the ways in which the theory is likely to predict reactions to sexual orientation demographic dissimilarity in a workgroup. This chapter also considers a key moderator (i.e., sexual orientation identity development) that is likely to impact how and when sexual orientation diversity results in negative group processes and withdrawal behavior. Hypotheses are developed and presented throughout this chapter. Chapter three outlines the methodology and design of the current field study, including the sample, procedure and operational definitions of all measures used. This chapter includes a discussion of potential methodological limitations related to the use of self-report questionnaires in field research, including how those limitations were addressed in the current investigation. It also presents a description of how study data were analyzed. Chapter four reports the results of hierarchical regression analyses for each study hypothesis, including all associated data tables and graphs of interactions. Chapter 5 includes a summary of the study findings and their implications for demography research, theory and practice. The limitations of the study and its broader contribution to the demography and LGB workplace literatures are also discussed.
CHAPTER 2: LITERATURE REVIEW

Traditionally, there have been two approaches to the study of demography in organizations: compositional and relational demography. Whereas compositional demography refers to a group or organization’s aggregate demographic composition (e.g., race, age, gender, tenure; Pfeffer, 1983), relational demography refers to the impact of the relative or “comparative demographic characteristics of members of dyads or groups who are in a position to engage in regular interaction” with each other (Tsui & O’Reilly, 1989, p. 403). The current study utilizes a relational demography within group framework to examine the group process and withdrawal implications of work unit sexual orientation dissimilarity.

Research in the relational demography tradition focuses on the degree of demographic similarity between two individuals (e.g., person-person) or between an individual and each of the members of his or her workgroup (e.g., person-group), and examines the impact of that similarity on individual-level attitudinal, behavioral and perceptual outcomes (Riordan, 2000). The current study examines person-group differences at the individual-level and defines relational demography as an “individual’s similarity to or difference from others in a group on specific demographic attributes” (Tsui & Gutek, 1999, p. 33).

Adapted from Riordan (2000), Figure 1 depicts the basic relational demography framework that has been used to examine demographic dissimilarity in numerous studies and across several sociodemographic categories. This figure is based on a review of the theoretical and empirical relational demography literature and is included here to provide an overview of relational demography theory and how relational demography impacts outcomes. Next, I review relational demography theory and research at the person-group level of analysis (i.e., relational demography within groups).
Demographics That Have Been Studied

Research from a relational demography perspective generally begins with an examination of sociodemographic differences between an individual and other members of his or her work unit. To that end, relational demography researchers have investigated several different demographic variables, including the visible categories of race (e.g., Stewart & Garcia-Prieto, 2008), gender (e.g., Chatman & O’Reilly, 2004) and age (e.g., Avery, McKay & Wilson, 2007), as well as the less visible categories of education (e.g., Kirchmeyer, 1995), tenure (e.g., Riordan & Shore, 1997) and functional background (e.g., Westpahl & Zajac, 1995). In their exhaustive reviews of the relational demography within group literature, both Riordan (2000) and Joshi et al. (2010) noted that the majority of research in this area has focused on examining the consequences of gender and racial dissimilarity in groups and teams. By some estimates (Joshi, 2011), gender dissimilarity accounts for 19% of the significant relational demography effects in the empirical literature, followed by race (14%), age (13%) and tenure (9%) dissimilarity. To date, only one study has examined sexual orientation relational demography effects (Ragins et al., 2003).

How Dissimilarity Has Been Operationalized

Demographic dissimilarity has been operationalized in three ways, each of which has different implications for the kinds of conclusions that can be drawn about the effects of dissimilarity at the person-group level (see Riordan & Wayne, 2008, for an in-depth discussion of different approaches to measuring relational demography). Euclidean distance formulas, or d-scores, “operationalize an individual’s actual demographic similarity to a group” by comparing that person’s demographic attributes to those of every other group member and then averaging those comparisons across the total number of people within the unit (Riordan & Wayne, 2008, p.
The interaction term approach, on the other hand, “measures actual similarity between an individual’s demographic characteristics and the demographic composition of the entire group” by multiplying his or her demographic variable (e.g., gender) by the demographic composition (e.g., percent of women in the group) of the group in question (Riordan & Wayne, 2008, p. 568). The interaction term is then entered into a regression model and should account for significant variance over and above individual and group demography main effects. Finally, the perceptual approach to operationalizing relational demography involves directly asking individuals to assess the degree to which they perceive themselves to be similar to others in their workgroups on various demographic dimensions. This approach is “based on the theoretical assumption that individuals assign their own psychological meaning to the differences in demographic characteristics between themselves and others” (Riordan & Wayne, 2008, p. 571).

Although most relational demography research has measured the degree of actual demographic dissimilarity in a work team using Euclidean distance indices (e.g., Chattopadhyay, 1999, 2003; Chatman & O’Reilly, 2004; Elfenbein & O’Reilly, 2007; Iverson & Buttigieg, 1997; Jackson, Brett, Sessa, Julin & Peyronnin, 1991; Jehn, Chadwick & Thatcher, 1997; Liao, Joshi & Chang, 2004; Lichtenstein & Alexander, 2000; O’Reilly, Caldwell & Barnett, 1989; Tsui et al., 1992; Wagner, Pfeffer & O’Reilly, 1984; Wiersema & Bird, 1993; Zenger & Lawrence, 1989), findings from several studies suggest that perceived and actual dissimilarity are only moderately correlated (e.g., Cunningham, 2007) and that dissimilarity perceptions may be predictive of outcomes even after actual demographic differences are controlled (e.g., Liao, Chuang & Joshi, 2008). Because actual differences may only be meaningful to the extent to which they are perceived as differences, a number of more recent investigations have adopted a perceptual
approach to measuring relational demography at the person-group level (e.g., Avery et al., 2007; Cunningham, 2007; Goldberg, Riordan & Schaffer, 2010; Williams, Parker & Turner, 2007).

Outcome Measures That Have Been Examined

Both perceived and actual measures of demographic dissimilarity at the person-group level have been shown to be related to important workplace outcomes (Riordan, 2000), including: (1) turnover and withdrawal (e.g., Cunningham, 2007; Jackson et al., 1991; Liao et al., 2004; Wagner et al., 1984; Wiersema & Bird, 1993), (2) job performance (e.g., Ferris, Judge, Chachere & Liden, 1991; Kirchmeyer, 1995; Lichtenstein & Alexander, 2000), (3) group processes (e.g., Chattopadhyay, 1999; Jehn et al., 1997; O’Reilly et al., 1989; Williams et al., 2007; Zenger & Lawrence, 1989) and (4) various job-relevant attitudes (e.g., Avery et al., 2007; Cunningham, 2007; Iverson & Buttigieg, 1997; Tsui et al., 1992). For example, several studies have linked demographic dissimilarity to lower levels of job satisfaction (Cunningham, 2007), psychological commitment (Tsui et al., 1992) and employee engagement (Avery et al., 2007).

Additionally, one investigation examined the impact of sexual orientation demographic dissimilarity on LGB employees’ perceptions of workplace discrimination and their level of outness (Ragins et al., 2003). LGB respondents who worked with mostly gay coworkers reported less discrimination and were more out at work than those who worked in balanced or majority heterosexual environments. Although this study did not specifically examine any of the outcomes of interest relevant to the current investigation, it does provide initial empirical support for sexual orientation relational demography effects in the workplace. In order to consider the potential impact of sexual orientation dissimilarity more fully, relational demography research specifically related to group process and withdrawal behavior is reviewed next.
**Group process effects.** Numerous studies have examined the effects of relational demography on individual perceptions of workgroup process, including communication (Stewart & Garcia-Prieto, 2008; Zenger & Lawrence, 1989), group cohesion and cooperativeness (Chatman & O’Reilly, 2004; Goldberg et al., 2010; Riordan & Shore, 1997), quality of peer relations (Chattopadhyay, 1999, 2003), conflict and cooperation (Hobman, Bordia, & Gallois, 2003; Jehn et al., 1997) and perspective-taking (Williams et al., 2007). Although mixed or non-significant effects have been reported in some investigations (e.g., Jehn et al., 1997; Liao et al., 2004), several scholars have noted that “relational demography predictions have been supported most often when the outcomes of interest were related to group processes” (Riordan et al., 2005, p. 53). The less similar individuals are to their workgroups in terms of age, race and gender, for example, the less likely they are to trust (Chattopadhyay, 1999) and engage in communication (Zenger and Lawrence, 1989) with their coworkers, or to have positive relationships with them (Chattopadhyay, 2003). To that end, white individuals reported lower levels of workgroup cohesiveness and commitment when they were in mostly minority groups than when they were in groups composed predominantly of other white colleagues (Riordan & Shore, 1997). Additionally, Chatman and O’Reilly (2004) found that women reported less positive affect toward other members of their work unit as the percentage of women in the group decreased.

**Work withdrawal effects.** Studies have also examined the relationship between relational demography and work withdrawal, including actual turnover (Jackson et al., 1991; Kirchmeyer, 1995; O’Reilly et al., 1989; Wagner et al., 1984; Wiersema & Bird, 1993) and turnover intentions (Cunningham, 2007; Tsui et al., 1992). Although some investigations did not support hypothesized links between certain types of relational dissimilarity and turnover (Jackson et al., 1991; Wiersema & Bird, 1984), researchers have discovered support for the
impact of relational demography on withdrawal in several other investigations. For example, Wagner et al. (1984) and O’Reilly et al. (1989) both found support for a negative relationship between relational age differences and turnover. That is, the larger an individual’s distance from the rest of his or her group in terms of age, the more likely that individual was to leave the organization. Additionally, Tsui and her colleagues (Tsui et al., 1992) reported a similar effect for the related variable of intent to stay; those most different from others in their workgroup with respect to age were least likely to maintain organizational membership and most likely to express a desire to retire. Consistent with these findings, Cunningham (2007) discovered that perceptions of age and race dissimilarity were related to deep-level dissimilarity, which in turn positively predicted turnover intentions. Thus, despite some mixed findings, the effects of relational demography on withdrawal have been generally supported in the research literature.

**Relational Demography Theory and Research**

Two mechanisms have primarily been used to explain relational demography effects at the person-group level: the similarity/attraction paradigm (Byrne, 1971) and social categorization/identification theory (Hogg & Terry, 2000; Tajfel & Turner, 1986). Based on decades of social psychological research, each offers slightly different and in some cases competing explanations (Kulik & Bainbridge, 2006) for why demographic dissimilarity in general and sexual orientation dissimilarity in particular may impact outcomes.

**Similarity-attraction and symmetric effects.** A significant body of psychological work has demonstrated the positive effects of similarity on interpersonal attraction, communication, social integration and a desire to maintain group affiliation (see McPherson, Smith-Lovin & Cook, 2001, for a review). Those who possess similar personal characteristics and attitudes are expected to perceive each other as similar, to be attracted to one another as a result and to
increase the frequency of their interactions (Riordan, 2000). Referred to as the law of attraction, or the similarity-attraction paradigm (Byrne, 1971), this basic homophily principal has been used to explain positive similarity effects in various interpersonal settings, including supervisor-subordinate dyads (e.g., Shore, Cleveland & Goldberg, 2003), work teams (e.g., Ferris, Youngblood & Yates, 1985) and whole organizations (e.g., Schneider, Goldstein & Smith, 1995). In fact, the similarity-attraction paradigm is supported by decades of research confirming the notion that birds of a feather do indeed flock together in a variety of contexts (Umphress, Smith-Crowe, Brief, Dietz & Watkins, 2007).

Not surprisingly, a large number of relational demography investigations have used the similarity-attraction paradigm (Byrne, 1971) as a primary way of explaining person-group relational demography effects (e.g., Chattopadhyay, 2003; Ferris et al., 1991; Hobman et al., 2003; Jackson et al., 1991; Jehn et al., 1997; Kirchmeyer, 1995; Lichtenstein & Alexander, 2000; O’Reilly et al., 1989; Riordan & Shore, 1997; Wagner et al., 1984; Wiersema & Bird, 1993; Williams et al., 2007; Tsui et al., 1992; Umphress et al., 2007; Zenger & Lawrence, 1989). These investigations generally assume that “individuals compare their own demographic characteristics with the demographic composition of the social unit [to which they belong] in order to determine if they are similar or dissimilar” (Riordan, 2000, p. 132). Based on a similarity-attraction perspective, relational demography predicts that the more demographically similar an individual is to his or her referent workgroup, the more attracted to that group an individual will be and therefore the more likely to report positive individual-level attitudinal, affective and behavioral outcomes (Tsui & O’Reilly, 1989; Riordan, 2000; Riordan et al., 2005).

Results from several relational demography studies support this basic similarity-attraction proposition. For example, Kirchmeyer (1995) discovered that participants who were most
dissimilar to their workgroups in age, education and lifestyle were also most likely to report poor workgroup fit and lower levels of job challenge. Research has also found that the more similar an individual’s age was to the rest of his or her group, the less likely that individual was to leave the organization (Wagner et al., 1984) and the more likely he or she was to engage in technical communication with coworkers (Zenger & Lawrence, 1989). Similar findings have been reported in a number of investigations and across different demographic variables (e.g., Jackson et al., 1991; Hobman et al., 2003; Lichtenstein & Alexander, 2000; O’Reilly et al., 1989; Williams et al., 2007), thereby supporting the premise that work units will be interpersonally attractive to individuals to the extent that they are comprised of similar others and interpersonally unattractive to individuals to the extent that they are not (Riordan, 2000).

A key premise of these studies is the idea that individuals in heterogeneous groups will respond to demographic dissimilarity and similarity in the same way. That is, dissimilarity is assumed to lead to negative outcomes and similarity to positive outcomes for all participants, regardless of their sociodemographic group membership or their majority/minority status. Yet some research suggests that the symmetrical outcomes predicted by the similarity-attraction paradigm are not always empirically supported. First, dissimilarity has been shown to affect members of different demographic subcategories differently (e.g., men and women; black and white individuals; sexual minorities and heterosexuals) and does not always lead to negative outcomes for individuals in mixed workgroups. For example, a woman in a group of predominantly male members will not necessarily experience negative outcomes to the same extent as a man in a predominantly female group (Chatman & O’Reilly, 2004). Chattopadhyay (1999) also found that being in a racially dissimilar workgroup was negatively related to instances of organization-based altruism for white individuals in minority-dominated groups.
Comparable negative effects, however, were not found for minority individuals in majority-white groups.

Second, similarity has sometimes been shown to lead to negative outcomes for certain demographic subcategories. Chatman and O’Reilly (2004) found that women experienced greater workgroup commitment, more positive affect and increased perceptions of group cooperativeness when they worked in all female rather than mixed groups (as predicted by similarity-attraction). Men in all male groups, however, were less committed, expressed less positive affect and perceived their group as less cooperative than those in mixed units. Contrary to similarity-attraction predictions, gender similarity was positively related to affective and attitudinal outcomes for women but negatively related to those same outcomes for men. Additional asymmetric findings have been reported in other studies and across different demographic variables, including age (Ferris et al., 1991; Tsui et al., 1992) and race (Chattopadhyay, 1999; Riordan & Shore, 1997; Tsui et al., 1992). These results have led some relational demography researchers (e.g., Avery et al., 2007; Chattopadhyay, 1999, 2003; Chattopadhyay, George & Lawrence, 2004; Cunningham, 2007; Goldberg et al., 2010; Joshi, Liao & Jackson, 2006; Liao et al., 2004; Riordan & Shore, 1997; Stewart & Garcia-Prieto, 2008; Tsui et al., 1992; Williams et al., 2007) to introduce alternative theories to explain such asymmetric effects, including self-categorization and social identity theories (Hogg & Terry, 2000; Tajfel & Turner, 1986).

Social identity theory and asymmetric effects. According to self-categorization theory (Turner, 1987), individuals often classify themselves and others on the basis of shared social attributes, especially those based on the salient, visible and socio-historically important demographic categories to which they belong (Kulik & Bainbridge, 2006). As a result, it is
common for people, particularly in American society, to perceive themselves as members of various sociodemographic groups (e.g., LGB) and to use those same demographic characteristics to categorize others as non-members (e.g., straight). Once categorized, social identity theory (Hogg & Terry, 2000) predicts that individuals will then seek to enhance their own self-esteem and maintain a positive sense of their own identity by valuing those who share their own categorization and devaluing others who do not. Such in-group/out-group bias has been frequently documented in the psychological literature and is related to a number of important outcomes, including the perceived trustworthiness, honesty and cooperativeness of outgroup members (Ashforth & Mael, 1989; Brewer & Brown, 1998; Hogg & Terry, 2000; Tajfel & Turner, 1986). From this perspective, a workgroup or team is attractive to an individual “to the extent that it comprises others whose demographic profile is consistent with the categories that the individual has chosen to classify him or herself” (Tsui et al., 1992, p. 554).

Several scholars (e.g., Chattopadhyay, 1999; 2003; Chattopadhyay, Tluchowska & George, 2004b) have noted that the self-categorization and identification mechanisms that underlie social identity theory are particularly susceptible to the status afforded to members of different demographic subcategories, thereby making this theory potentially useful for explaining asymmetric relational demography effects. As Chattopadhyay (2003) noted:

“Although [basic social identity arguments] suggest that people are more inclined to associate with similar others, Tajfel and Turner (1986) point out that this is not uniformly true for all social groups. They base their argument on the following logic. Social groups differ with regard to the status accorded to them by society. . . Members of lower-status social groups may hold negative social identities and lack self-esteem because of their
social position. . . and may associate with dissimilar others who belong to the higher
status group to positively enhance their self-esteem” (p. 297-298).

As a result, the reaction of lower status social group members to dissimilarity is contingent on
the extent to which they are able to construct positive social identities around their demographic
characteristics (Chattopadhyay et al., 2004a, p. 898), and can therefore be either positive or
negative. In contrast, members of high status groups, who generally hold positive social
identities simply based on the status afforded their demographic subcategories, are likely to react
negatively to the presence of lower status dissimilar others in their work units because their own
social status and self-esteem are more clearly threatened.

Consistent with social identity theory, a number of research investigations (e.g., Chatman
& O’Reilly, 2004; Ferris et al., 1991) find differential effects of relational demography on
majority and minority group members. For example, Chatman and O’Reilly (2004) found that
male participants in their study had the greatest negative reactions to being a member of a mixed
or female-dominated workgroup. The number of men expressing a desire to transfer out of the
workgroup increased as the percentage of women in the group increased, but women’s reactions
to the gender composition of their workgroups was more varied and did not depend entirely on
the percentage of women or men in the group. Chatman and O’Reilly (2004) maintain that “one
explanation for men and women’s different reactions” to dissimilarity “lies in their status in
society and how these differences play out at work” (p. 194). Whereas men may perceive being
in the minority as a loss of power, women may in fact perceive being a member of a male-
dominated group as contributing to their status, under certain conditions.

Similarly, Chattopadhyay (1999) found that being in a racially dissimilar workgroup was
negatively related to instances of organization-based altruism for white individuals in minority-
dominated groups, but not for minority individuals in majority-white groups. Like the Chatman and O’Reilly (2004) investigation, the differential reactions of white and minority participants to racially dissimilar workgroups in this investigation might best be explained by examining individuals’ perceptions of the status conflicts they experience in a demographically similar or dissimilar group. A consideration of status would suggest that white individuals in minority-dominated groups should perceive their societal status as being threatened and therefore react more negatively (i.e., exhibit fewer instances of organization based altruism) than minority-individuals in white-dominated groups. This is exactly what Chattopadhyay (2003) found. Research by Riordan and Shore (1997) also supports a social identity and status interpretation. Whereas white participants in their investigation reported lower workgroup commitment and productivity as the percentage of minority individuals in their workgroups increased (e.g., status threats increased), African American participants displayed relatively stable perceptions of commitment and productivity across various racial compositions.

As noted above, relational demographers have found support for both symmetric (e.g., O’Reilly et al., 1989; Wagner et al., 1984) and asymmetric relational demography effects (e.g., Chatman & O’Reilly, 2004; Tsui et al., 1992). Because these contradictory patterns of findings have been found for a variety of demographic categories (Joshi, 2011; Joshi et al., 2010), exploring and explaining the presence of asymmetric effects has become an important focus of relational demography research and a frequently cited area for future work (Joshi, 2011; Riordan, 2000; Tonidandel, Avery, Bucholtz & McKay, 2008).

**Implications of Relational Demography Theory for Sexual Orientation Dissimilarity**

Ragins (2004) noted several ways in which sexual orientation is different from other sociodemographic variables that have been more frequently studied in the workplace
demography literature. For example, because the concealable nature of sexual orientation does not have obvious analogues in such nonconcealable demographics as race, gender and age, one key differentiator is the degree to which individuals choose to disclose their sexual orientation identity to their coworkers and the various antecedents and consequences of this disclosure (for a review, see Mohr & Fassinger, 2011; Ragins, 2004). Sexual orientation also differs from many other demographics in terms of the responses it engenders among heterosexual individuals. LGB employees are often subjected to negative reactions from their heterosexual counterparts (Ragins, 2004) that are based in part on individual assumptions about the nature of sexual orientation (e.g., is it a choice?) as well as the negative emotional reactions that result from either its perceived symbolic threat (e.g., homosexuality is an affront to my values) or from the real threat of courtesy stigma (e.g., gay by association; Goffman, 1963).

These differences beg the question of whether the theoretical processes hypothesized to explain relational demography effects are applicable to sexual orientation as a category of demographic difference. On the one hand, the nature of sexual orientation as a concealable demographic variable and the degree to which individuals are forced to come to terms with that orientation in American society suggest possible differences in how sexual orientation dynamics play out in work units when compared to the more frequently studied visible categories of race, age and gender. On the other hand, there is little evidence to suggest that similarity-attraction and social identification processes do not apply to sexual orientation, particularly given the ways in which minority sexual orientations are stigmatized both inside and outside the workplace and the fact that relational demography effects have been discovered for other concealable demographic categories (e.g., disability, tenure and functional background; Joshi, 2011; Riordan, 2000). The lack of research on sexual orientation as a demographic variable and the contradictory findings in
the existing relational demography literature suggest that sexual orientation dissimilarity may have either symmetric or asymmetric effects on individual perceptions of group processes and withdrawal behavior.

Given the ability of the similarity-attraction paradigm to predict the impact of dissimilarity across a range of demographics (e.g., tenure, age, education, race and functional background), it seems reasonable to anticipate similar effects when the demographic variable under consideration is sexual orientation. First, sociodemographic variables have been shown to be important factors on which critical work-related judgments are often rendered (Kulik & Bainbridge, 2006; Milliken & Martins, 1996), and sexual orientation is no exception (King & Cortina, 2010; Ragins, 2004). Second, individuals have been shown to react to sexual orientation dynamics in the workplace in ways that are similar to racial and gender dynamics (Ragins, 2004; Ragins et al., 2003). Given that attitudes toward LGB individuals remain predominantly negative or at least neutral in American society and the workplace (King & Cortina, 2010), there is good reason to suspect that individuals will respond to sexual orientation dissimilarity in ways that are similar to other demographic differences (e.g., race, gender, age). Based on the similarity-attraction paradigm and the aforementioned research supporting symmetric relational demography effects, the current study hypothesizes that:

Hypothesis 1: There will be a relationship between perceived sexual orientation dissimilarity and perceptions of group process and withdrawal behavior. The more individuals perceive their workgroup as being dissimilar to them in terms of sexual orientation, the less likely they will be to report high levels of cohesion, communication and peer relations among workgroup members and the more likely they will be to report high levels of conflict and withdrawal behavior.
Additionally, the status differentials that exist between majority and minority group members of other demographic categories not only exist for LGB and heterosexual individuals, they are in many ways more pronounced. In fact, with federal and state legislation blocking gay marriage and allowing employment discrimination on the basis of sexual orientation, these differentials are likely to be particularly salient both in and out of a workgroup context. Given research and theory suggesting that dissimilarity tends to affect higher status individuals more negatively than lower status individuals (e.g., Chattopadhyay et al., 2004a), sexual minorities in a largely heterosexual or mixed workgroup may be less likely to have their status threatened in the same way that heterosexual individuals would in a workgroup that included several LGB colleagues. As a result, LGB individuals will experience fewer negative reactions to dissimilarity than their heterosexual counterparts and less negative perceptions of group process.

_Hypothesis 2:_ The relationships between perceived sexual orientation dissimilarity and perceptions of group process and withdrawal behavior will differ based on an individual’s sexual orientation. Whereas both heterosexual and LGB individuals will react to demographically similar workgroups positively, heterosexual individuals in groups that are demographically dissimilar to them will report lower levels of cohesion, communication and peer relations among workgroup members relative to LGB individuals who are in demographically dissimilar workgroups. Heterosexuals will also be more likely to report higher levels of conflict and withdrawal behavior relative to their LGB counterparts.

A significant but overlooked implication of social identity theory for understanding relational demography is its emphasis on the self-categorization processes that impact identification with a particular social category. Although Tsui et al. (1992) noted that a
workgroup or team is attractive to an individual “to the extent that it comprises others whose
demographic profile is consistent with the categories that the individual has chosen to classify
him or herself” (p. 554, emphasis added), much of the demography literature has assumed that
these classifications are fairly automatic and uniform for members of the same demographic
subcategory. As a result, it may be important to consider the extent to which individuals
understand and identify with their own sociodemographic group membership when examining
relational demography effects. In the next section, I review recent empirical work on individual
difference moderators of the dissimilarity-outcome relationship in order to investigate the group
process and withdrawal implications of perceived sexual orientation dissimilarity more fully.

Individual Difference Moderators of the Dissimilarity-Outcome Relationship

Traditional relational demography theory has assumed that being a member of a certain
demographic category would “more or less inevitably lead to social categorization and elicit
intergroup biases” (Stewart & Garcia-Prieto, 2008, p. 660). Yet recent research is beginning to
indicate that the subjective meaning an individual imparts to his or her social identity may be
more important in understanding the effects of relational demography than an individual’s
objective demographic group membership (Ragins & Gonzalez, 2003, p. 137). For example,
Linnehan et al. (2006) examined the role of ethnic identity in qualifying the relationship between
supervisor-subordinate relational demography and diversity-related attitudes. Results indicated
that individuals’ sense of their own ethnic identity influenced how they both understood and
responded to demographic dissimilarity in the workplace. Specifically, people of color with a
supervisor of color had more positive attitudes toward diversity if they were high in ethnic
identity than if they were low in ethnic identity. For white employees, ethnic identity had no
effect. As the authors point out, the differential impact of dissimilarity was not simply
asymmetric with respect to majority or minority group status. It was also asymmetric for employees of color based on their individual level of ethnic identity. Simply put, “racial categorizations do not tell the whole story… individuals cannot be assumed to identify with demographic categorizations equally (p. 438),” and therefore cannot be assumed to respond equally when confronted with demographic dissimilarity.

Two additional investigations lend support to the idea of within-category differences when responding to demographic dissimilarity. Chattopadhyay (2003) examined the extent to which an individual’s level of dogmatism (i.e., “the tendency to have strong conservative and authoritarian opinions about society and to accept the legitimacy of traditional practices”) moderated the relationship between dissimilarity and peer relations, arguing that highly dogmatic individuals are more likely to subscribe to sex and race-based organizational hierarchies and endorse the existing status hierarchy as legitimate, even “when it serves to oppress them” (p. 298). Consistent with this hypothesis, female and minority employees were more likely to respond positively to increasing dissimilarity when they were high in dogmatism. Those low in dogmatism, on the other hand, reported more negative levels of trust and attraction to peers in their workgroup as demographic dissimilarity increased. In short, workgroup heterogeneity was positively linked to self-esteem and quality peer relations for those who were more likely to accept the “higher status accorded to white male employees” and negatively linked for individuals who were less likely to accept this status (p. 309).

Similar findings were also discovered in a study by Umphress and her colleagues (Umphress et al., 2007). Those high in social dominance orientation (i.e., “the tendency to hold nonegalitarian values and to support hierarchically structured relationships among social groups” Sidanius & Pratto, 1999; Umphress et al., 2007, p. 396) were attracted to demographic similarity
when they themselves were members of a majority group (e.g., white, male), but were repelled by it when they were members of a minority. These results not only suggest that individuals vary significantly regarding the extent to which they identify with or consider themselves to be members of their supposed in-group (Stewart & Garcia-Prieto, 2008), they also indicate that individuals are likely to vary in their responses to working with demographically similar and dissimilar others (Linnehan et al., 2006; Stewart & Garcia-Prieto, 2008).

**The Moderating Role of Sexual Orientation Identity Development**

The unique features of sexual orientation as a demographic category and the stigma associated with homosexuality indicate that the way in which individuals come to terms with their sexual orientation is a critical factor in determining how they will perceive and interact with other LGB and straight members in their workgroup. This assertion is backed by decades of empirical and theoretical work (e.g., Cass, 1979, 1984; Cox & Gallois, 1996; Horowitz & Newcomb, 2001; Mohr, 2002; McCarn & Fassinger, 1996; Troiden, 1979, 1989; Worthington, Savoy, Dillon, & Vernaglia, 2002) on sexual orientation identity. Sexual orientation identity is formally defined as the “perceptions individuals have of themselves as people whose romantic/sexual attractions, fantasies and behaviors are directed toward people of the same or opposite sex” (Mohr, 2002, p. 536). In the current study, sexual orientation identity is best viewed as a form of collective identity that a) represents identification with a particular social category (in this case LGB or heterosexual), b) includes cognitive beliefs associated with that category (e.g., stereotypes), and c) has affective, evaluative and behavioral components related to the category in question (e.g., closeness one feels toward other LGB and heterosexual individuals) (Ashmore, Deaux & McLaughlin-Volpe, 2004; Cass, 1984). Sexual orientation identity development is the process by which individuals evolve from mere acknowledgement of
their sexual orientation to a state of acceptance, self-identification and advanced psychosocial understanding (Cass, 1979).

There are numerous models of sexual orientation identity development in the psychological literature (Worthington, Navarro, Savoy & Hampton, 2008). Although these models differ in terms of the specific population they address (e.g., gay men, lesbians), the ways in which they conceptualize identity formation (e.g., linear stages, dimensions) and the degree of empirical support they have received (Mohr & Fassinger, 2000), they all reinforce the idea that LGB and heterosexual individuals (e.g., Mohr, 2002) are likely to go through some form of identity formation as they seek to understand their own sexual orientation identity and the sexual orientations of similar and dissimilar others (Mohr & Fassinger, 2000). Additionally, many of these models suggest that there are numerous psychological, behavioral and attitudinal consequences that result from one’s own beliefs about his or her sexual orientation, including but not limited to psychological adjustment (Brady & Busse, 1994), disclosure and level of outness (Mohr & Fassinger, 2000) and contact with other LGB and heterosexual individuals (Cass, 1984; Mohr, 2002).

Taken together, these sexual orientation identity development models (e.g., Cass, 1979; Troiden, 1989; McCarn & Fassinger, 1996) suggest that an individual’s degree of sexual orientation identity has clear implications for the ways in which he or she will perceive and relate to similar and dissimilar others. Those who are more advanced in their identity are generally more likely to view their sexual orientation as salient, to be aware of its interpersonal, societal and historical implications and to consider this orientation to be a central feature of their self-concept (Cass, 1979; Linnehan et al., 2006; McCarn & Fassinger, 1996). In contrast, those earlier

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2 Rather than base predictions on specific identity development models, the current study treats the concept of sexual orientation identity and identity development more broadly. Two examples of more popular models of sexual orientation identity development are depicted in Table 1, one for LGB and another for heterosexual individuals.
in the identity development process are not only less likely to see their demographic group membership as critical to their self-concept (Linnehan et al., 2006, p. 429), they may also be “less cognizant of the status and power dynamics associated with” sexual orientation and more likely to be drawn to individuals who enjoy higher status distinctions as a way of enhancing their own self-esteem (cf. Chattopadhyay, 2003; Umphress et al., 2007).

Consequently, sexual orientation identity may serve as a potential moderator of the relationship between sexual orientation demographic dissimilarity and group process and withdrawal. An individual’s interpretation of the sexual orientation composition of her workgroup and how she reacts to it should be at least partially contingent on how she understands her own sexual orientation and its personal relevance for her (Ragins & Gonzalez, 2003). As reviewed below, those earlier in their identity development should react differently to the sexual orientation composition of their workgroups than those whose identity development is more advanced (cf. Phinney, 1992). Because the ways in which LGB and heterosexual individuals come to terms with their own sexual orientation identity are somewhat distinct from each other (Mohr, 2002; Worthington et al., 2002), these reactions will likely differ between those who are gay or straight. Thus, the current study hypothesizes that:

Hypothesis 3: There will be a three-way interaction between perceived sexual orientation dissimilarity, participant sexual orientation and participant sexual orientation identity on perceptions of group process and withdrawal behavior.

The specific nature of this interaction for LGB and heterosexual individuals is reviewed next.

LGB identity development. The current study argues that LGB identity development is likely to qualify the effects of dissimilarity on group process and withdrawal behavior in several ways. LGB individuals at more advanced levels of identity are more likely to see their sexual
orientation as a critical component of their self-concept (cf. Phinney, 1992), and are frequently more committed to, and seek validation and self-esteem from, regular, sustained interactions with members of the LGB community (Cass, 1979; McCarn & Fassinger, 1996; Mohr & Fassinger, 2000). Thus, they should respond more negatively to work teams that do not include fellow LGB individuals and opportunities for such interactions. The presence of dissimilar others is therefore likely to decrease feelings of attraction to the workgroup and also increase the tendency for in-group/out-group effects to occur (Hogg & Terry, 2000). As a result, the relationship between perceived dissimilarity and group process perceptions will likely be particularly negative for LGB individuals who are further along in their identity development process, relative to those whose identity is less developed or understood. Additionally, the relationship between perceived dissimilarity and withdrawal will likely be more positive for LGB individuals with a more developed sense of their sexual orientation identity.

On the other hand, LGB individuals who are earlier in their identity development are not only less likely to consider sexual orientation as a critical component of their identity, they may also disavow their LGB identities and any behaviors that can be perceived as gay-related (Cass, 1979; Mohr & Fassinger, 2000). Additionally, those at the earliest stages of identity development may interpret the presence of heterosexuals differently than they would at later stages. In fact, for these individuals, interactions with heterosexuals might be sought out to the same degree that encounters with LGB persons might be avoided (Cass, 1979; McCarn & Fassinger, 1996), both as a way of increasing their own status (cf. Chattopadhyay et al., 2004a) and as a way of covering or passing as straight (Cass, 1979). As a result, not only is the presence of dissimilar others (i.e., heterosexuals) unlikely to decrease feelings of attraction to the workgroup, the lack of identification with a supposed in-group (e.g., LGB) suggests that the in-group/out-group
effects that hinder workgroup communication would be less likely to occur (Hogg & Terry, 2000). Thus, the relationship between perceived dissimilarity and group process will likely be positive for LGB individuals who are less far along in their LGB identity development, relative to those who are further along. The relationship between perceived dissimilarity and withdrawal will likely be more negative for those with a less developed sense of sexual orientation identity as well. More specifically:

Hypothesis 3a: Sexual orientation identity will moderate the relationship between perceived sexual orientation dissimilarity and perceptions of group process and withdrawal behavior. For LGB individuals who are further along in their identity development, the relationship between demographic dissimilarity and levels of cohesion, communication and peer relations among workgroup members will be negative, while the relationship between demographic dissimilarity and conflict or withdrawal behavior will be positive. For those whose sense of identity is less evolved, however, there will be a positive relationship between demographic dissimilarity and perceptions of group process (cohesion, communication and peer relations) and a negative relationship between demographic dissimilarity and conflict or withdrawal behavior.

Heterosexual identity development. Unlike LGB identity, much less has been written about the ways in which heterosexuals understand and come to terms with their sexual orientation. The work that has been conducted (Mohr, 2002; Worthington et al., 2002) draws heavily on models of white racial identity development (e.g., Helms, 1990). These models suggest that majority group members also go through a process of understanding and accepting their dominant sociodemographic identity and the privileges associated with it. This understanding in turn influences their beliefs about those in the minority (Helms, 1995) and their
interpretations of events and situations where demographic differences may be evident (e.g., being in a mixed race or gender workgroup). For example, individuals with a more evolved sense of white racial identity development have been shown to have more positive reactions to interracial situations at work than those who are less further along (Block, Roberson & Neuger, 1995), thereby lending support to the notion that identity development may influence majority members’ work related perceptions and outcomes.

The current study argues that the impact of heterosexual identity development is likely to qualify the effects of dissimilarity on perceived group process and withdrawal behavior in several ways. Heterosexual individuals earlier in their developmental process are likely to view “heterosexuality as the only moral and/or socially acceptable orientation” and to consider all things associated with heterosexuality as normal, proper and well-adjusted (Mohr, 2002, p. 542). In some cases, they may even consider heterosexuality as so normative that they are oblivious to having a sexual orientation or being the member of a sexual orientation group (Simoni & Walters, 2001). As a result, these heterosexuals may be particularly susceptible to perceiving differences between themselves and LGB individuals (Simoni & Walters, 2001) and may also harbor heterosexist or anti-LGB stereotypes and attitudes (Mohr, 2002). In fact, it is common for heterosexuals with a less evolved sense of identity to “not understand what lesbians and gay men want from straight people” (Simoni & Walters, 2001, p. 161) or to view LGB individuals and their interactions with them as disturbing (Mohr, 2002). The presence of dissimilar others in one’s workgroup is therefore likely to decrease feelings of attraction to and identification with the workgroup and may in fact be perceived as status-threatening (cf. Chatman & O’Reilly, 2004), subsequently allowing the in-group/out-group effects that hinder workgroup communication to occur (Hogg & Terry, 2000). As a result, the relationship between perceived
dissimilarity and group process perceptions will be more negative for heterosexual individuals who are less evolved in their heterosexual identity development process than those who are further along. The relationship between perceived dissimilarity and withdrawal will likely be more positive for those with a less developed sense of heterosexual identity as well.

In contrast, heterosexuals with a more developed sense of heterosexual identity will likely understand not only the struggles of LGB individuals but also the entitlements and advantages associated with their own heterosexuality (Mohr, 2002). This understanding may in turn decrease heterosexual individuals’ biased or negative reactions toward sexual minorities (Simoni & Walters, 2001), partly because they are better able to understand their own contributions “to the environmental and societal stressors in the lives of LGB individuals” (p. 159). Heterosexuals who are further along in the heterosexual identity development process are unlikely to render judgments about LGB individuals based solely on stereotypes about having a gay sexual orientation (Mohr, 2002). They are also less likely to perceive themselves as fundamentally different from those who are LGB (Mohr, 2002) or to react negatively to interacting with LGB individuals (Simoni & Walters, 2001). The presence of LGB individuals in one’s workgroup may therefore be less likely to decrease feelings of attraction to and identification with the group for those whose heterosexual identity is more evolved. As a result, the relationship between perceived dissimilarity and group process perceptions will likely be less negative for heterosexual individuals with a more advanced heterosexual identity, relative to those who are less far along in their identity development. The relationship between perceived dissimilarity and withdrawal will likely be less positive for those with a more developed sense of heterosexual identity as well. More specifically:
Hypothesis 3b: Sexual orientation identity will moderate the relationship between perceived sexual orientation dissimilarity and perceptions of group process and withdrawal behavior. For heterosexual individuals earlier in their identity development, the relationship between demographic dissimilarity and levels of cohesion, communication and peer relations among workgroup members will be negative, while the relationship between demographic dissimilarity and conflict or withdrawal behavior will be positive. For those who are further in their development, there will be a less negative relationship between demographic dissimilarity and perceptions of group process (cohesion, communication and peer relations) and a less positive relationship between perceived dissimilarity and conflict or withdrawal behavior.

Figure 2 depicts specific predictions by sexual orientation group for hypotheses 3a and 3b. In the study analyses, these predictions will be tested first on the full sample using a general measure of sexual orientation identity (i.e., collective identity) that applies to all respondents (hypothesis 3). They will then be tested on subsamples of LGB (hypothesis 3a) and heterosexual participants (hypothesis 3b), using group-specific sexual orientation identity development measures for LGB and heterosexual identity, respectively. A general measure of identity is used in addition to the specific identity measures because it allows the three-way interaction in hypothesis 3 to be tested on LGB and heterosexual participants simultaneously.
CHAPTER 3: METHOD

Participants

Given the focus of the current investigation on the impact of sexual orientation dissimilarity in groups, the population of interest consisted of individuals whose formal roles required them to perform a portion of their job responsibilities as part of a workgroup. Consistent with previous relational demography research (e.g., Chattopadhyay 1999, 2003; Chattopadhyay et al., 2004a), workgroups (Hackman, 1983) were defined as “intact, bounded social systems, with interdependent members and differentiated member roles, for pursuing shared, measurable goals” (Chattopadhyay et al., 2004a, p. 892). In the current study, the sample included graduate students who, in the course of the 2011 – 2012 academic year, had either worked or were working in small groups of 3 – 8 students on a semester-long collaborative project for which a tangible deliverable had been or would be produced. A student sample was chosen for several reasons. First, graduate students are often required to work on group projects as part of their course requirements (Kahn, 2008). Second, relational demography research has used student samples in the past (e.g., Chattopadhyay et al., 2004a). Third, many colleges and universities have established student affinity groups, which made it possible to identify and target LGB students for the study who were comparable to heterosexual students on a variety of demographic variables (e.g., school attended, education level, region of the country, etc.).

Participant characteristics. Participants in this study included 398 graduate students who were recruited from Teachers College, Columbia University and other graduate institutions throughout the Columbia University system (e.g., Graduate School of Arts and Sciences, School of Social Work, School of International Public Affairs, Mailman School of Public Health, Business School, Law School). Of these 398 students, 80.4% \((n = 320)\) listed Teachers College
as their primary institutional affiliation and 19.6% listed Columbia University or one of its
associated schools as their primary institutional affiliation (n = 78). Although the gender and
sexual orientation composition of the two samples differed, this did not result in any significant
differences between the samples on the outcome variables of interest in the study. As a result,
these samples were combined into one overall sample on which the study analyses were
conducted.3

Of these 398 students, 71.6% were women (n = 285) and 27.6% (n = 110) were men.
Three participants indicated their gender as “other.” A majority or 60.1% of the sample identified
as white (n = 239), 36.1% of the sample identified as a person of color (n = 144) and 3.8% as
“other” (n = 15). Two hundred and ninety-five heterosexual students participated in the study
(74.1%), compared to 101 lesbian, gay, bisexual or queer-identified students (25.4%). The mean
age across all participants was 29.10 years (SD = 7.11) and 71.5% of the sample reported being
between the ages of 21 and 30. Table 3 lists demographic information for all participants by
gender, race, sexual orientation, age group and affiliation. In sum, the majority of the sample was
comprised of white female heterosexuals between the ages of 21 and 30.

Workgroup characteristics. In addition to their individual demographic characteristics,
participants’ also were asked to report information related to the size, tenure, familiarity and task
status of their referent workgroup. The average group consisted of 5.49 members (SD = 3.47)
and lasted a total of 11.14 weeks (SD = 12.39). Participants chose to work with their referent
group members in 30.9% of cases (n = 123) and were assigned to work together in another
61.1% (n = 243). Also, 91% of participants reported that their groups had completed their work

3 The Columbia sample had a higher percentage of sexual minorities (60%) and men (51%) than the Teachers
College sample (17% and 22%, respectively). Although the recruiting procedures were the same for each institution,
these differences were likely due to the larger number of LGB-related listservs and online forums at Columbia
University than Teachers College.
together and were no longer engaged in group-related task interactions at the time of study participation. Table 4 lists group characteristic information for all participants. In sum, the majority of the sample was comprised of students working in small groups of 3-5 individuals for a period of one semester (1-15 weeks).

**Research Design and Procedure**

Study hypotheses were tested using a single, cross-sectional survey methodology. Data were collected from individuals using a web-based questionnaire that included measures of the predictor (i.e., perceived sexual orientation dissimilarity), moderators (i.e., sexual orientation, sexual orientation identity development) and outcome variables (i.e., quality of peer relations, communication, conflict, cohesion, withdrawal behavior) in addition to seven control and demographic items (discussed below). The study questionnaire was administrated to participants electronically.

Two different strategies were used to solicit students to participate. First, potential participants were recruited from classes at Teachers College, Columbia University. Multiple sections of select introductory and advanced courses were targeted simultaneously. Course sections were targeted selectively to help minimize the likelihood that students would be solicited for and participate in the study multiple times. Instructors teaching these courses received a brief electronic message (email) cover letter (Appendix A) describing the purpose of the study and asking if they would be willing to recruit participants for the study.

Interested instructors were then asked to introduce the study to their classes and offer students an opportunity to sign up to participate. Those who signed up were asked to provide their names and email addresses so that a targeted request for participation could be electronically distributed to them within 48 hours of signing up (Appendix C). The request for
participation ensured the confidentiality of all student data and provided students with a link to a web-based version of the study questionnaire hosted by the online survey platform Qualtrics (www.qualtrics.com). Qualtrics is frequently employed for the purpose of conducting social science field research and has been used by other departments within Teachers College and throughout the Columbia University system (e.g., Columbia Business School).

A unique survey link was generated for each individual who signed up to complete the study. These unique links were used to prevent participants from taking the survey multiple times. They also allowed the researcher to track whether the survey had been completed and to send follow-up reminders as necessary. A reminder was sent approximately one week after the original solicitation to those who had not yet responded to the initial request. Up to three additional reminders were used in some cases, consistent with recommended practice (Dillman, Smyth & Christian, 2009).

Second, a generic request for participation (Appendix B) was posted on publically available message boards accessible to matriculated graduate students at each institution (e.g., myTC portal; Facebook group pages). Additionally, to ensure that a sufficient number of LGB-identified students were included in the study, the same request was sent to a broad set of each institution’s online listservs and forums for LGB-identified graduate students. LGB individuals known to the principal investigator were asked to forward the generic participation request to other LGB graduate students as well. Such targeted snowball sampling techniques are common in sexual minority research, particularly given the difficulties of identifying and randomly sampling LGB individuals in sufficient numbers (Meyer & Wilson, 2009). Snowball or referral sampling may also allow a more representative group of LGB respondents to participate in the
study, in part “because it encourages participation from otherwise unreachable subjects” (i.e., those who may not be affiliated with a campus LGB organization; Mustanski, 2001, p. 295).

Students who responded to the generic message board and listserv requests for participation (Appendix B) were able to access the web-based version of the study questionnaire by clicking on a link embedded in the solicitation announcement. Because the same survey link was used for participants coming to the study from various message boards and listservs, it was impossible to identify or track whether any given person had completed the survey or to send out individual participation reminders as needed. As a result, general survey completion reminders were posted to each of the message boards and listservs one week after the original solicitation request was sent, with up to three additional reminders being sent in most cases. Qualtrics prevented individuals from repeatedly accessing the general survey link by blocking multiple completion attempts from the same Internet Protocol (IP) address.

At the start of the questionnaire (Appendix F), all respondents were required to read a short informed consent form and indicate whether they agreed to participate in the current study. This modified consent is common in web-based research (Dillman et al., 2009), as the choice to respond to an email solicitation and click on the survey link can be considered a consent to participate. Respondents who consented were required to generate a unique anonymous code before they began the online study. This code was used as an additional safeguard to ensure that there were no duplicate respondents in the final dataset, which there were not.

Once they had generated a code, participants were asked to confirm that they had worked or were working in at least one small group of 3 – 8 students on a semester-long collaborative project at some point during the 2011-2012 academic year. Those who did were asked a brief open-ended question requiring them to describe both the group and the project as a way of
triggering their memory about their workgroup experiences. They were then asked to respond to various items about these experiences, including the outcome measures of interest in the current study (e.g., cohesion, communication, conflict, quality of peer relations, withdrawal behavior). Items related to each outcome measure (e.g., conflict, withdrawal, etc.) were presented on separate, successive web pages. The items on each page were randomly presented to participants as a way of controlling for question order effects, consistent with recommended practice (Dillman et al., 2009).

Questions related to perceived dissimilarity (e.g., sexual orientation, values, race, etc.) were presented next, followed by those related to the study’s control and demographic variables, including sexual orientation. These demographic questions were collected after perceived dissimilarity in order to prevent any demographic items from ‘priming’ participant responses to the perceptual relational demography measure (Cunningham, 2007) or revealing the purpose of the study. Sexual orientation identity was assessed next to last due to its potentially sensitive nature (Dillman et al., 2009). Two different measures of sexual orientation identity were used. All participants first completed a measure of collective sexual orientation identity; next, they completed an identity development measure specific to their particular sexual orientation group. A Qualtrics feature known as branching allowed those who identified as heterosexual to receive a measure of heterosexual identity development and those who identified as LGB to receive a measure of LGB identity development. Questions related to the marker variable used to assess common method variance (reviewed later) were presented last. Table 2 details the order of all study measures.

At the conclusion of the survey, individuals were thanked for their participation and given basic information about the actual purpose of the research. Those who wished to sign up
for a gift card lottery (described below) or who needed to claim extra credit for a particular course were directed to a separate website where they could enter in their names and email addresses. This website was hosted by Google and was not linked to the Qualtrics platform or the study data in any way.

Qualtrics automatically compiled all survey responses into an online electronic database that was downloaded into Excel and SPSS format for additional analyses once data collection had ended. Online data was stored at Qualtrics.com and was only accessible to the principal investigator via a secure password. Downloaded data was stored on a password-protected computer that only the principal investigator could access. These steps were taken to ensure the confidentiality of all study participants’ data. Additionally, because Qualtrics and other web-based survey platforms record each participant’s IP address in the study database, complete anonymity in online research is difficult to ensure (Dillman et al., 2009). Nevertheless, no personal identifying information (i.e., names/emails) was linked to participant responses in this study. IP addresses recorded by Qualtrics were de-coupled from the database of participant responses prior to analyses.

Additional Considerations Regarding Survey Research

Several strategies were used to improve survey response rates (Dillman et al., 2009) and minimize common method variance (Podsakoff, MacKenzie, Lee and Podsakoff, 2003) problems common in online field research.

Web survey response rates and implementation. Studies suggest that response rates for online surveys can range anywhere between 10 to 35% percent (Cook et al., 2000; Porter & Whitcomb, 2003). Consistent with the tailored design method and other best practices related to survey design and administration (Dillman et al., 2009), several strategies were used to increase
the likelihood that individuals would respond to the solicitation to participate in the current study. These strategies are described below and included: 1) personalized contacts, 2) meaningful incentives, and 3) multiple contacts.

First, research (e.g., Heerwegh, 2005) suggests that personalized email contacts are likely to increase response rates, in some cases by as much as 8% (Dillman et al., 2009). Pre-notices or some other advanced indicators that a request for solicitation is forthcoming, particularly from a respected authority figure, are also likely to increase response rates (Dillman et al., 2009). Thus, where possible, instructors were asked to introduce the study to students in their classes before those students received a personalized email message from the principal investigator directly soliciting their participation. Although it is impossible to determine empirically from the study data, this process should have resulted in better response rates than having instructors email a generic and non-personalized study announcement directly to their students.

Second, research suggests that cash incentives, particularly when they are given as a token of appreciation with the solicitation request, are one of the largest contributors to improved response rates and are more effective at increasing responses than other types (e.g., gift cards, electronic gift cards) of incentives (for a review, see Dillman et al., 2009). The logistics of conducting a web-based survey make it difficult to distribute cash incentives to respondents prior to their participation, prompting many researchers to consider the use of post-survey lotteries or prize drawings. Research on the efficacy of such lottery approaches and on post-paid incentives in general is mixed, with some studies suggesting that they have little to no effect on response rates (Cook et al., 2000) and others indicating that lotteries with smaller prizes but higher chances of winning do in fact increase both response rates and response quality (Deutskens, Ruyter, Wetzels & Oosterveld, 2004). Because the use of course or extra credit may be a
particularly enticing incentive for graduate students, instructors who solicited students in their respective classes to participate were encouraged to offer them course or extra credit wherever possible. Additionally, twenty prizes of $25 each were offered in a post-completion lottery to all participants to avoid having only one subset of participants (e.g., students affiliated with a particular class) and not another (e.g., those who respond to the general solicitation through an online message board or listserv) receive an incentive for their participation.

Third, Dillman et al. (2009) suggest that one of the best ways to improve response rates to online surveys is to send potential participants multiple contacts and reminders to participate. Although there is no correct amount of follow-up contact per se, some have suggested that up to three reminders may in fact be necessary to ensure adequate responses to an online or web-based questionnaire (Cook et al., 2000). Additionally, the content of each reminder should vary, as should its timing (Dillman et al., 2009). As was the case in the current investigation, researchers who distribute Internet surveys via email are able to send multiple reminders at a quicker pace than those who distribute paper-based surveys via the mail or using other in-person methods.

**Common method variance.** The collection of data from a single, self-report, web-based survey could result in common method bias that would undermine the validity of the study’s findings if not properly controlled (Podsakoff et al., 2003). Common method bias refers to “variance that is attributable to the measurement method rather than through the constructs the measures represent” (Podsakoff et al., 2003, p. 879). It is a particular problem in relational demography research where both the dissimilarity and outcome measures are perceptual in nature and collected from the same data source at the same time (e.g., Cunningham, 2007; Goldberg et al., 2010). Several steps were taken to address these challenges and limit the
possibility that statistical findings were the result of methodological artifacts (Podsakoff et al., 2003).

First, perceived dissimilarity items were located in the questionnaire after the dependent variables (cohesion, communication, conflict, peer relations and work withdrawal) had been collected. This was done to prevent responses to perceived dissimilarity from potentially revealing the purpose of the study and biasing responses to the outcome variables. Second, the cover story for the study (see Appendices B and C) focused on the group process variables and not on perceived dissimilarity or relational demography, thereby “making it appear that the measure of the predictor variable is not connected with or related to the measurement of the criterion variables” (psychological separation; Podsakoff et al., 2003, p. 887). And, third, different response formats, scale endpoints and verbal labels were used for each dependent and independent variable where appropriate, which should “diminish the respondent’s ability to use his or her prior responses to answer subsequent questions” or to acquiesce (methodological separation; Podsakoff et al., 2003, p. 888). Participants were also assured in the survey instructions (see Appendix F) that their responses were confidential and that there were no right or wrong answers to any of the survey items.

Lastly, several statistical procedures were used to determine whether common method bias was a problem and to control for it if necessary. Consistent with previous relational demography research (Goldberg et al., 2010), Harman’s single-factor test (Podsakoff et al., 2003, p. 888) was used to examine the extent of common method bias in the current study. To that end, a principle components factor analysis was conducted on all predictor and outcome variables. Should the items all load on a single factor or should a general factor account for a large percentage of the variance across all items, this would suggest the presence of common method
bias in the study data. Additionally, Goldberg et al. (2010) recommended including a theoretically unrelated marker variable among the measures, examining whether there are any significant relationships between the marker variable and the independent variables, and partialing out those effects, if necessary. A marker variable was included in the study questionnaire, and the results of both the marker variable analysis and Harman’s single-factor test are discussed in Chapter 4.

**Measures**

A complete list of all measures used in the study can be found in Appendices D and E.

**Predictor.** The main predictor variable in this study was perceived sexual orientation dissimilarity. It is described in detail below.

**Perceived sexual orientation dissimilarity.** Similar to recent relational demography research (Avery et al., 2007; Cunningham, 2007; Goldberg et al., 2010; Liao et al., 2008; Williams et al., 2007), workgroup sexual orientation dissimilarity was assessed using a perceptual measure (Riordan & Wayne, 2008). Individuals were asked how similar they were to other members of their workgroup on a range of sociodemographic characteristics (Cunningham, 2007), including gender, race, age, sexual orientation, religious affiliation and socioeconomic status (e.g., “How similar are you to other members of your workgroup with respect to race?”). Sexual orientation was embedded among a list of other demographic variables in order to make it less salient to participants and to disguise the purpose of the study. Participants responded to each characteristic on a 7-point scale ranging from 1 (*very dissimilar*) to 7 (*very similar*). Scores on the sexual orientation item were reverse-coded such that high scores indicated greater perceived sexual orientation dissimilarity.
**Moderator variables.** Moderator variables in this study included sexual orientation, a general measure of collective sexual orientation identity that all participants completed and a specific measure of sexual orientation identity development for LGB and heterosexual participants, respectively.

**Sexual orientation.** Individuals were asked to indicate their sexual orientation by selecting the category that best represented their self-identification. Consistent with recommended practice (www.gaydata.org), individuals were able to choose from the following commonly used sexual orientation categories: *gay, lesbian, bisexual, straight/heterosexual, other (please specify).*

**Collective identity.** The ‘importance to identity’ subscale of the Collective Self-Esteem Scale (Luhtanen & Crocker, 1992) was administered to all participants as a general measure of the strength of an individual’s sexual orientation group identification. This subscale has been used in other relational demography studies (e.g., Stewart & García-Prieto, 2008) to assess the “importance of one’s social group membership to one’s self-concept” (Luhtanen & Crocker, 1992, p. 304) and was moderately correlated with the specific measures of LGB and heterosexual identity used in this investigation, as previous research suggests (Mohr & Fassinger, 2000). Items from this measure were modified to specify sexual orientation group membership, and included: (a) “The sexual orientation group I belong to is an important reflection of who I am,” (b) “In general, belonging to my sexual orientation group is an important part of my self-image,” (c) “Overall, my sexual orientation group membership has very little to do with how I feel about myself,” and (d) “The sexual orientation group I belong to is unimportant to my sense of what kind of person I am.” Participants responded to each item on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). A measure of collective sexual orientation identity
was created by averaging responses across all items, with higher scores indicating greater levels of identification with one’s sexual orientation group. High internal consistency estimates for the subscale (α > .85) have been found in previous relational demography research (Stewart & Garcia-Prieto, 2008). In the current study, Cronbach’s alpha for scores on the importance to identity subscale was .81. Cronbach’s alphas for the LGB and heterosexual subsamples were .79 and .78, respectively.

**LGB identity.** Mohr and Fassinger’s (2000) LGB Identity Scale (LGBIS) was used to assess sexual minority participants’ level of LGB identity. The 27-item LGBIS measures identity across 6 dimensions, including internalized homonegativity (e.g., “I would rather be straight if I could”), need for privacy (e.g., “My sexual orientation is a very private and personal matter”), need for acceptance (e.g., “I often wonder whether others judge me for my sexual orientation”), identity confusion (e.g., “I’m not totally sure what my sexual orientation is”), difficult process (e.g., “Coming out to my friends and family has been a very lengthy process”) and superiority (e.g., “Straight people have boring lives compared with LGB people”). Participants responded to each item on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Research with the LGBIS (Mohr & Fassinger, 2000) suggests that the homonegativity, need for privacy, need for acceptance and difficult process subscales load onto a single negative identity factor that reflects the degree to which LGB individuals experience difficulty related to their sexual orientation identity development. Because it is most relevant for the current study, this negative identity factor was used in the analyses in lieu of the 6 separate subscales. Scores were calculated by averaging responses for items assessing homonegativity, need for privacy, need for acceptance and difficult process, with higher scores indicating fewer identity-related challenges. Data from a large sample of partnered LGB adults (Mohr & Fassinger, 2000)
provided support for the psychometric properties of the LGBIS. Internal consistency estimates in preview research (Mohr & Fassinger, 2000) ranged from a low of .65 on the superiority subscale to a high of .81 on the need for privacy subscale, with an alpha of .79 on the combined negative identity factor. Several of the negative identity subscales were also moderately correlated with measures of self-esteem, LGB identity stage and the number of years that have passed since achieving identity milestones (e.g., coming out), suggesting that scores on the subscales adjust as individuals move through the identity formation process (Mohr & Fassinger, 2000). In the current study, Cronbach’s alpha for scores on the negative identity factor was .88.

**Heterosexual identity.** Twenty-four items from a 50-item scale developed by Simoni and Walters (2001) were used to measure heterosexual identity. Adapted from Helms and Carter’s (1990) White Racial Identity Attitudes Scale (WRIAS), this measure was designed to assess an individual’s level of heterosexual identity across 5 dimensions (e.g., contact: being unaware of one’s heterosexual status; disintegration: beginning to see that status; reintegration: denying that status; pseudo-independence: minimizing status because of guilt; and autonomy: fully acknowledging one’s status). Items were adapted to include bisexuals in addition to gay men and lesbians. Sample items included: a) “I involve myself in causes regardless of the sexual orientation of the people involved in them” and b) “Gays/lesbians/bisexuals and straight people differ from each other in some ways, but no one sexual orientation is superior.” Participants responded to each item on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Research (Simoni & Walters, 2001) indicates that the underlying factor structure of the heterosexual identity development scale does not support the existence of 5 discreet dimensions of heterosexual identity. Simoni and Walters (2001) found high internal consistency (α >.8)
estimates for only 2 of the 5 subscales, with moderate reliability estimates for 2 others ($\alpha = .66$ and .75) and an unacceptably low estimate ($\alpha = .29$) for the fifth. A principal components factor analysis of their study data revealed that only one factor accounted for the majority of the variance across all items, with 24 of the 50 items loading cleanly (factor loadings > .5) on this factor. These findings are consistent with some research on the original WRIAS. Based on a meta-analysis of published studies and factor analyses of two independent data sets, Behrens (1997) concluded that the WRIAS may function best “as a unified index” of racial identity, or a single bipolar factor. Although the theoretical assumptions of Behren’s (1997) analyses have been called into question (Helms, 1997), the similarities between psychometric research on the WRIAS (e.g., Behrens, 1997) and the results from the Simoni and Walters (2001) investigation suggest that it was appropriate to use only the 24 items that loaded on a single factor in the current investigation.

A principal components factor analysis of the current study data confirmed the presence of this single heterosexual identity factor. The 24 items on this factor most closely reflected aspects of the disintegration, reintegration and pseudo-independence dimensions from the full measure, assessing both heterosexuals’ attitudes toward LGB individuals (e.g., “I feel hostile when I am around gay men, lesbians and bisexuals”) as well as their willingness to recognize their own heterosexual identity and privilege (e.g., “I limit myself to straight people’s activities”). Scores were generated by averaging responses across the 24 items, with higher scores indicating a greater acceptance of LGB individuals and more advanced levels of heterosexual identity. In the current study, Cronbach’s alpha for scores on the heterosexual identity development measure was .93.
**Outcome variables.** Outcome variables in this study included cohesion, communication, conflict, quality of peer relations and withdrawal behavior. All outcome variables are described in detail below.

**Cohesion.** A 7-item scale developed by Riordan and Shore (1997) was used to measure workgroup cohesion. Cohesion refers to “the extent to which group members are psychologically linked to one another” (Goldberg et al., 2010, p. 906) as well as the degree of attraction, coordination and morale among them (Shaw, 1981). Sample items included: “Most of the employees in my workgroup get along well with each other,” and “Most of the employees in my workgroup respect each other.” The phrase ‘members of this group’ was substituted for ‘employees in my workgroup’ on the final questionnaire. Participants responded to each item on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). A measure of workgroup cohesion was created by averaging responses across all items. Higher scores indicated greater levels of cohesion among workgroup members. High internal consistency estimates for the cohesion scale ($\alpha > .90$) have been found in previous research (Riordan & Shore, 1997). In the current study, Cronbach’s alpha for scores on the cohesion measure was .93.

**Communication.** Consistent with previous organizational demography research (Smith, Smith, Olian, Sim, O’Bannon & Scully, 1994), both the frequency of communication and the degree of informality of communication among workgroup members were assessed. Frequency and informality have been identified as two important dimensions of communication in workgroups, particularly given the importance of informal networks for effective group functioning (Cross, Ehrlich, Dawson, Helferich, 2008). Frequency of communication was assessed using a 5-item scale (ranging from never to daily) that asked participants to indicate the number of times they communicated on average with other members of their workgroup during
the semester (e.g., “Please indicate the frequency of formal face-to-face meetings between you
and other members of your workgroup”). Responses across these items were averaged to form a
frequency of communication subscale, with higher scores indicating more frequent
communication. This measure was found to have acceptable ($\alpha = .73$) reliability in previous
demography research (Smith et al., 1994). It was adapted slightly to match modes of
communication common to graduate students (e.g., adding ‘texting’). The initial internal
consistency estimate for scores on the frequency scale was .67, indicating low reliability.
Although two items were removed from the scale based on findings from the reliability analyses
(i.e., scale if item deleted; item-total correlations), Cronbach’s alpha did not substantially
improve after the removal of these items and was .68 for the revised, shortened measure. See
Appendix D for a list of which items were retained and removed in the final frequency scale. The
revised measure was used in the study analyses.

Degree of informality was assessed using a 4-item scale developed by Smith et al. (1994).
Participants were asked to indicate their level of agreement with several statements related to the
ease of communication among workgroup members (e.g., “Meetings between members of this
workgroup are very informal”) on a 7-point Likert scale ranging from 1 (strongly disagree) to 7
(strongly agree). Scores on the informal communication measure were calculated by averaging
responses across the four items, with higher scores indicating greater levels of informal
communication among workgroup members. Acceptable internal consistency estimates ($\alpha = .75$)
have been reported for this measure in prior research (Smith et al., 1994). In this study, the initial
internal consistency estimate for scores on the informality scale was .53, indicating unacceptably
low reliability. One item was removed from the scale based on findings from the reliability
analyses (i.e., scale if item deleted; negative item-total correlation). Cronbach’s alpha for the
revised shortened measure improved to .74. See Appendix D for a list of which items were retained and removed in the final informality scale.

Conflict. Workgroup conflict was measured with the Intragroup Conflict Scale (ICS), which was developed by Jehn (1995; Jehn, Northcraft & Neale, 1999) and used in previous relational demography research (e.g., Jehn et al., 1997). The ICS assesses two dimensions of conflict: relationship and task. Five items were used to examine relationship conflict, including: “How much emotional conflict is there among members of your workgroup?” and “How much are personality clashes between members of the workgroup evident?” An additional 4 items were used to assess task conflict (e.g., “How much disagreement is there among the members of your group over their opinions?”). Participants responded to each item on a 5-point scale ranging from 1 (none) to 5 (a great deal). Subscale scores were calculated by averaging responses across relevant items, with higher scores indicating greater levels of task or relationship conflict, respectively. High internal consistency estimates for this measure ($\alpha > .80$) have been reported in several studies (Jehn, 1995; Jehn et al., 1997). In the current study, Cronbach’s alphas for the relationship and task conflict scales were .92 and .87, respectively.

Quality of peer relations. A 6-item measure developed by Chattopadhyay (1999) and included in several relational demography investigations (e.g., Chattopadhyay, 1999; 2003) was used to assess quality of peer-relations among workgroup members. Items on the scale were designed to measure individuals’ trust in (e.g., “I can rely on my workgroup members not to make my job more difficult by careless work”) and attraction to their coworkers (e.g., “I would like to think of members of my workgroup as good friends”) separately. These items, however, have been shown to cluster together on a single latent factor in previous research (Chattopadhyay, 1999). Participants responded to each item on a 7-point Likert scale ranging
from 1 (strongly disagree) to 7 (strongly agree). A quality of peer relations measure was created by averaging responses across all 6 items, with higher scores indicating more positive peer relations among group members. High internal consistency estimates for the peer relations scale ($\alpha = .82$) have been found in previous research (Chattopadhyay, 1999). In the current study, Cronbach’s alpha for the quality of peer relations scale was .89.

**Withdrawal behavior.** Withdrawal was assessed using select items from a measure of work withdrawal developed by Hanisch and Hulin (1990) and used in previous relational demography research (Liao et al., 2008). This measure assessed several aspects of withdrawal, including unfavorable work behavior (e.g., “How often did you make excuses to get out of workgroup meetings?”), lateness (e.g., “How often were you late for workgroup meetings?”), absenteeism (e.g., “How often did you miss meetings of your workgroup?”) and turnover intentions (e.g., “How often did you think about leaving your workgroup for another group?”). Items related to desire to retire and intended retirement age were not included due to their irrelevance to the current sample. All items were scored on a 5-point scale ranging from 1 (never) to 5 (constantly). Liao, Chuang and Joshi (2008) reported an internal consistency estimate of .81 for their 12-item version of this measure. For the current study, a withdrawal behavior measure was originally calculated by averaging responses across 5 of the most relevant scale items from Hanisch and Hulin (1990) and 3 additional items created by the principal investigator to assess withdrawal behavior in a contemporary student team context (e.g., “How often do you text or email non-members during your workgroup meetings?”). Higher scores indicated more work withdrawal behaviors.

The internal consistency estimate for scores on the withdrawal behavior scale was .55, indicating unacceptably low reliability. Because removing several items based on findings from
the reliability analyses (i.e., scale if item deleted; negative item-total correlation) did not significantly improve response reliability, an exploratory principal components factor analysis (EFA) was conducted on the current study’s 8-item measure. Results of the EFA suggested a three-factor solution, each with eigenvalues greater than 1 (Stevens, 1996), rather than a single-factor withdrawal measure. Reliabilities for each of these three factors, however, were at unacceptable levels (< .5). As a result, a two-item measure of withdrawal was created based on the highest bivariate inter-item correlation among all withdrawal items (e.g., “How often do you look at the clock during workgroup meetings?” and “How often do you mentally check out of workgroup meetings?”). Cronbach’s alpha for the revised two-item measure improved to .62. See Appendix D for a list of items that were retained and removed in the final withdrawal behavior scale.

**Additional measures.** Additional measures in this investigation included items related to the study’s control and demographic variables as well as a marker variable. All additional measures are described in detail below.

**Control and demographic variables.** Data on several control variables were collected, based in part on previous relational demography investigations. These included: (a) group size (e.g., Chatman & O’Reilly, 2004; Chattopadhyay, 2003; Cunningham, 2007; Tsui et al., 1992), operationalized as the number of individuals in the workgroup, including the respondent; (b) peer familiarity (Chattopadhyay et al., 2004a), operationalized as whether workgroup members chose to work together or were assigned; (c) group tenure, operationalized as the number of weeks group members worked together; (d) affiliation, operationalized as Teachers College, Columbia University or Columbia University; and (e) simple demographic variables (e.g., Chattopadhyay,
2003; Tsui et al., 1992), including age, race and gender. See Appendix E for a complete list of all control and demographic variables as well as detailed coding information.

**Perceived values dissimilarity.** Because previous relational demography research suggests that surface-level demographic variables (e.g., race, age, gender) may serve as proxies for underlying deep-level (e.g., personality, values) dissimilarity (Harrison, Price & Bell, 1998), participants were asked to indicate on a 7-point Likert scale the degree to which their group members were similar to them in terms of values. Responses were reverse-coded such that high scores indicated greater perceived values dissimilarity. This values dissimilarity measure was used in supplemental exploratory analyses, described in detail in Chapter 4.

**Marker variable.** To determine the possible effects of common method bias, a 4-item measure of environmental norms (Garling, Fujiib, Garlinga & Jakobsson, 2003) was included along with measures of the predictor, outcome and control variables. This scale was chosen because it was thought to be theoretically unrelated to the constructs of interest in the current study, as Podsakoff et al. (2003) and Lindell and Whitney (2001) recommend. Sample items included: “I feel a moral obligation to protect the environment,” and “I feel that I should protect the environment.” Participants responded to each item on a 5-point Likert scale ranging from 1 (strong disagree) to 5 (strongly agree). High internal consistency estimates for the scale ($\alpha = .94$) have been previously reported (Garling et al., 2003). In the current study, Cronbach’s alpha for scores on the marker variable was .87.

**Data Analysis**

**Preliminary data analyses.** Several preliminary analyses were conducted prior to the main study analyses and hypothesis tests. First, Harman’s single factor test was conducted to determine the presence of common method bias in the study data. Second, several confirmatory
factor analyses (CFAs) were conducted to assess the underlying structure of all dependent measures (cohesion, communication, conflict, quality of peer relations and withdrawal). Third, means, standard deviations and intercorrelations for all untransformed study variables were calculated and analyzed. These preliminary analyses helped determine the pattern of relationships among the study variables prior to conducting the main analyses as well as which variables would be included for hypothesis testing.

**Hypothesis testing overview.** Consistent with standard practice in relational demography research (Joshi, 2011), hierarchical linear regression was used to test the degree to which each of the outcome variables was predicted by the main and interactive effects of perceived sexual orientation dissimilarity, participant sexual orientation and participant sexual orientation identity development. Prior to running the main analyses, the moderately positively skewed distribution of scores on relationship conflict (skewness = 1.00) was corrected by a square root transformation (Judd, McClelland & Ryan, 2008). The moderately negatively skewed distribution of scores on heterosexual identity (skewness = -1.75) was corrected by an inverse transformation (Judd, McClelland & Ryan, 2008). Additionally, all continuous predictor variables were centered prior to analyses to reduce multicollinearity issues related to the interaction terms and to increase the interpretability of all interaction effects (Aiken & West, 1991). Statistical assumptions for multiple regression (linearity, normality, homoscedasticity and independence) were examined for all analyses. Other than transforming relationship conflict and heterosexual identity to reduce the skewness of the regression residuals, all assumptions were met.

Two different sets of hierarchical regression analyses were used to test the hypotheses in the current study. One set of analyses was conducted on the full, combined sample of LGB and
heterosexual individuals. In these analyses, the importance to identity subscale of the collective identity scale was used as a measure of sexual orientation identity development, thereby allowing for the combined test of hypotheses 3a and 3b. Another set of analyses was conducted separately for the LGB and heterosexual subsamples. In these analyses, sexual orientation identity development was assessed using group-specific measures of identity development (i.e., LGB or heterosexual identity, respectively), thereby providing separate tests for hypotheses 3a and 3b. The general procedures for conducting hierarchical regression analyses were the same for each sample (i.e., full sample or subsamples) and are discussed in detail below.

**Hypothesis testing for the full sample.** Analyses on the full sample were conducted in a series of steps to provide information about the predictive power of increasingly higher order interaction terms. In the first step, all control and predictor variables were entered. In the second and third steps, all two and three-way interaction terms were entered, respectively. This method of creating hierarchical sets of predictors is consistent with other relational demography studies that have specifically investigated the interactions between race, racial dissimilarity and racial identification (e.g., Stewart & Garcia-Prieto, 2008). It was the preferred approach in the current study because the main effects of sexual orientation and the various identity measures were not hypothesized; only their higher order interactions with perceived sexual orientation dissimilarity were of interest. As a result, it is theoretically most appropriate to examine the effects of perceived dissimilarity while controlling for sexual orientation and collective identity, but not to test the combined effect of perceived sexual orientation dissimilarity, sexual orientation and collective identity by entering them as main effect variables in their own step.

Consistent with recommended practice (Cohen, Cohen, West & Aiken, 2003), individual predictors were not analyzed for significance unless the step in which they were entered
produced a significant increase in the amount of variance accounted for in the outcome variable. Thus, hypothesis 1 would be confirmed if the set of predictor and control variables in step 1 explained a significant amount of variance in the outcome of interest, and the perceived sexual orientation dissimilarity variable in that step was also significant. Hypothesis 2 would be confirmed if the set of two-way interactions produced a significant increase in the amount of variance accounted for in the outcome variable over and above the step 1 predictors, and the perceived dissimilarity by participant sexual orientation interaction was significant. Hypothesis 3 would be confirmed if the three-way interaction between perceived dissimilarity, participant sexual orientation and importance to identity (collective identity) produced a significant increase in the amount of variance accounted for in the outcome variable over and above the step 2 predictors. Because step 3 included only the one three-way interaction term, a significant change in variance accounted for between steps 2 and 3 would indicate that the individual three-way interaction term was statistically significant. All significant interactions were interpreted using simple slopes analyses, with high and low levels defined as those values that were 1 SD above and below the mean, respectively (Aiken & West, 1991). Lastly, to control the Type I error rate associated with the relatively large number of predictors in each full sample regression analysis, only the regression coefficients for the terms involving the perceived dissimilarity variable were formally tested.

**Hypothesis testing for the LGB and heterosexual subsamples.** Although a general measure of sexual orientation identity development was used in the current study (i.e., collective identity), research also suggests that LGB and heterosexual individuals come to terms with and develop their sexual orientation identities in different and sometimes contradictory ways (Cass, 1984; Mohr, 2002). As a result, additional hierarchical linear regression analyses examining the
effects of perceived dissimilarity and sexual orientation identity development were explored separately for LGB and heterosexual respondents using one of two group-specific measures of sexual orientation identity development (i.e., LGB or heterosexual identity, respectively). In order to remain consistent with the hierarchical regressions used to test hypotheses one, two and three in the full sample, all control and predictor variables were entered into the analyses in the first step. In the second step, the two-way interaction between perceived dissimilarity and heterosexual or LGB identity was entered. Consistent with recommended practice (Cohen, Cohen, West & Aiken, 2003), individual predictors were not analyzed for significance unless the step in which they were entered produced a significant increase in the amount of variance accounted for in the outcome variable. Thus, support for hypotheses 3a and 3b would be found if the two-way interaction between perceived dissimilarity and sexual orientation identity development (LGB or heterosexual) produced a significant increase in the amount of variance accounted for in the outcome variable over and above the step 1 control and predictor variables. As was the case with the full sample results, statistically significant interactions were interpreted using simple slopes analyses, with high and low levels defined as those values that were 1 SD above and below the mean, respectively (Aiken & West, 1991).
CHAPTER 4: RESULTS

Preliminary Data Analyses

Common method variance. In order to test and possibly control for common method variance, a marker variable assessing environmental attitudes was included among all study measures. Consistent with recommended practice (Goldberg et al., 2010), this measure was originally selected as a marker variable because it was thought to be theoretically unrelated to the variables of interest in the study. Bivariate correlations among all study variables, however, revealed that the marker variable was in fact significantly correlated with the measures of heterosexual and LGB identity development. Although the marker variable was chosen because it seemed theoretically unrelated to the other study measures, upon reflection it is possible that it may have also measured liberal attitudes that, perhaps not surprisingly, are correlated with heterosexual and LGB identity development. As a result, the marker variable technique could not be used to detect common method bias in the study data. Instead, Harman’s single factor test was used (Podsakoff et al., 2003). All items for the predictor, moderator and dependent measures were loaded into an exploratory principal components factor analysis. Sixteen factors with eigenvalues greater than 1 emerged from the EFA, with the largest factor accounting for only 17% of the variance. As a result, common method bias does not appear to be a threat in the current study (Podsakoff et al., 2003).

Confirmatory factor analysis. Given the strong correlations between some of the outcome measures and the low reliabilities of others, a series of CFAs were run to determine the appropriate factor structure of the dependent variables. Consistent with my earlier review of the research literature and outlined in Figure 3, the first model tested (i.e., the proposed model) included all retained items as indicators of their respective latent factors and several latent factors
as indicators of second-order latent constructs (e.g., task and relationship conflict as indicators of conflict; frequency and degree of informality as indicators of communication). A second model, the null model, included all items loading on a single latent factor. The results of each CFA are reported in Table 5. Although there is some debate over which indices should be included and what constitutes good model fit (Kline, 2011), general rules of thumb for determining the fit of a confirmatory factor model suggest that acceptable fit is indicated by comparative fit (CFI) and Tucker-Lewis indices (TLI) of .90 or greater (Hu & Bentler, 1999) and Root Mean Square Error of Approximation (RMSEA) between .06 and .08 (Schreiber, Stage, King, Nora & Barlow, 2006). Based on these guidelines, the proposed measurement model fit the data better than the null model, but neither model adequately captured participant responses.

A third model, the seven-factor model, included all items as loading on their respective latent factors, but did not include any second-order latent constructs (e.g., conflict, communication). Similar to the measurement and null models, this seven-factor model did not meet the criteria for acceptable model fit. An additional factor (e.g., frequency of communication) was removed from the model after several of the observed item indicators failed to load significantly onto this factor. As Table 5 indicates, model fit greatly improved when the frequency of communication factor was removed and a six-factor model was tested.

Given the high correlation between peer relations and cohesion in the six-factor model, additional improvements in model fit were achieved by removing either the peer relations or the cohesion measure. Because the peer relations measure has been used repeatedly in previous relational demography research (e.g., Chattopadhyay, 1999; 2003), it was retained in favor of the cohesion measure, resulting in an acceptably fitting five-factor model. All remaining items
significantly loaded on each of their respective factors (standardized loadings > .6), providing additional support for the five-factor model (Stevens, 1996).

A four-factor model removing informal communication was also tested. While the overall $\chi^2$ for the model improved, the various fit indices were unchanged over the five-factor model. Thus, the five-factor model was retained and all study hypotheses were tested on the following five dependent factors: informal communication, relationship conflict, task conflict, peer relations and withdrawal.

**Descriptive and correlational analyses.** Descriptive statistics and bivariate correlations for all variables used in the main analyses are included in Table 6. Several important findings and patterns of relationships among the study variables are worth noting. First, there were low amounts of withdrawal behavior ($M = 2.35, SD = .77$), task conflict ($M = 2.65, SD = .84$) and relationship conflict ($M = 2.15; SD = 1.00$) reported by participants in the study (on 5-point scales) and little variance on these measures. Additionally, heterosexual respondents reported very high mean levels of heterosexual identity development ($M = 6.10$ on a 7-point scale) and exhibited little variance on this measure ($SD = .77$).

As expected, many of the control variables were significantly correlated with the outcome measures in the study (at the .05 level). The only exceptions to this were participant age and group tenure, which were not related to any of the predictor, moderator or dependent variables. As a result, neither age nor group tenure was included as a control variable in the study analyses.

Among the predictors, perceived sexual orientation dissimilarity was strongly and positively related to participant sexual orientation ($r = .71$); LGB participants in the study perceived higher levels of sexual orientation dissimilarity in their workgroups than heterosexual
participants. Perceived sexual orientation dissimilarity was also negatively related to heterosexual identity development \((r = -.20)\), but not to LGB identity development \((r = -.04, \text{ ns})\); the more advanced participants were in their heterosexual identity, the less sexual orientation dissimilarity they perceived among their group members. Additionally, collective identity, or the degree to which participants considered sexual orientation to be an important aspect of their identity, was significantly related to measures of both LGB and heterosexual identity development. Interestingly, however, the direction of the relationship was different for straight and LGB individuals. Being further along in one’s LGB identity development was associated with a greater tendency to consider sexual orientation as a central aspect of identity \((r = .24)\). For heterosexual respondents, being further along in one’s identity development was associated with a decreased tendency to consider sexual orientation as a central aspect of identity \((r = -.26)\).

Lastly, perceived sexual orientation dissimilarity was significantly related to several outcome variables, including task conflict \((r = .11)\), withdrawal \((r = .15)\) and peer relations \((r = -.12)\); as perceived sexual orientation dissimilarity increased, participants’ reported levels of task conflict and withdrawal increased and the quality of their workgroup peer relations decreased. Although not specifically hypothesized, values dissimilarity was also significantly correlated with most study outcomes, including relationship conflict \((r = .28)\), task conflict \((r = .26)\), quality of peer relations \((r = -.38)\) and withdrawal \((r = .11)\).

**Full Sample Hierarchical Regression Analyses**

**Hypothesis 1 - main effect of perceived sexual orientation dissimilarity.** Hypothesis 1 predicted that perceived dissimilarity would be negatively related to informal communication and quality of peer relations and positively related to relationship conflict, task conflict and withdrawal behavior. This hypothesis was supported for relationship conflict, task conflict and
peer relations, marginally supported for withdrawal and not supported for informal communication. Controlling for participants’ sexual orientation, perceived dissimilarity was significantly and negatively related to peer relations ($\beta = -.26, p < .01, PRE^4 = .03$) and significantly and positively related to relationship conflict ($\beta = .17, p < .05, PRE = .01$) and task conflict ($\beta = .19, p < .05, PRE = .02$). Perceived dissimilarity was also positively related to withdrawal behavior, though the effect was marginally significant ($\beta = .15, p < .10, PRE = .00$). See Step 1 in Table 7 for complete results related to the main effect hypothesis.

**Hypothesis 2 - asymmetric/differential effect of perceived sexual orientation dissimilarity by participant sexual orientation.** Hypothesis 2 predicted that the effects of perceived dissimilarity on all study outcomes would depend on participants’ sexual orientation. In particular, the impact of perceived dissimilarity on group process and withdrawal would be stronger for heterosexuals than LGB individuals. This hypothesis was not supported for any of the outcome measures of interest. None of the two-way interactions between perceived dissimilarity and sexual orientation was significant, nor did the set of two-way interactions significantly add to the amount of variance accounted for over and above the control and predictor variables. See Step 2 in Table 7 for complete results related to the asymmetric/differential effects hypothesis.

**Hypothesis 3 - moderating effect of sexual orientation identity development on the perceived dissimilarity by participant sexual orientation-outcome relationship.** Hypothesis 3 predicted that the effects of perceived dissimilarity on all study outcomes would depend on participants’ sexual orientation as well as their sexual orientation identity development (measured in the full sample by the importance to identity subscale of the Collective Self-Esteem

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4 PRE refers to the proportional reduction in error (Judd et al., 2008), or the percent of variance in the outcome variable that is accounted for by perceived sexual orientation dissimilarity, over and above the control variables.
LGB individuals whose sexual orientation was less important to their identity were expected to react positively to the presence of heterosexual individuals in their workgroups; those whose sexual orientation was more important to their identity were expected to react negatively. For heterosexual individuals, the opposite reaction was expected. Heterosexuals whose sexual orientation was less important to their identity were expected to react negatively to the presence of LGB individuals in their workgroups, but those whose sexual orientation was more important to their identity were expected to react less negatively.

Consistent with hypothesis 3, a three-way interaction was found for task conflict ($\beta = .42$, $p < .05$, $PRE = .01$) and a marginally significant three-way interaction was found for withdrawal ($\beta = .32$, $p < .10$, $PRE = .01$). This three-way interaction was not found for informal communication ($\beta = -.18$, $ns$), relationship conflict ($\beta = .28$, $ns$) or quality of peer relations ($\beta = -.11$, $ns$). See Step 3 in Table 7 for complete results related to the moderated effects hypothesis. Consistent with recommended practice, simple slopes analyses were used to interpret the significant and marginally significant interactions and are reviewed in detail below.

**Task conflict.** Simple slopes analyses revealed that perceived dissimilarity was significantly and positively related to task conflict for heterosexual individuals whose sexual orientation was less important to their identity, $t(332) = 3.02$, $p < 0.01$. For those whose sexual orientation was more important to their identity, the perceived dissimilarity of their workgroups had no effect on task conflict, $t(332) = .45$, $ns$. For LGB individuals, perceived dissimilarity was marginally and negatively related to task conflict for those whose sexual orientation was less important to their identity, $t(332) = -1.47$, $p < 0.10$. For those whose sexual orientation was more important to their identity, perceived dissimilarity had no effect on task conflict, $t(332) = .94$, $ns$. See Figure 4 for a graph of this interaction.
**Withdrawal behavior.** Simple slopes analyses revealed that perceived dissimilarity was marginally and positively related to withdrawal for heterosexual individuals whose sexual orientation was less important to their identity, $t(332) = 1.76, p < 0.10$. For those whose sexual orientation was important to their identity, the perceived sexual orientation dissimilarity of their workgroups had no effect on withdrawal, $t(332) = .36, ns$. For LGB individuals, perceived dissimilarity had no effect on withdrawal for those whose sexual orientation was less important to their identity, $t(332) = -.89, ns$. For those whose sexual orientation was more important to their identity, however, perceived dissimilarity was marginally and positively related to withdrawal, $t(332) = 1.50, p < 0.10$. See Figure 5 for a graph of this interaction.

**Additional Full Sample Analyses**

**The mediating role of values dissimilarity.** Given the significant bivariate correlations between values dissimilarity, perceived sexual orientation dissimilarity and the outcomes of interest, several additional analyses were conducted on the full sample of LGB and heterosexual participants. Though not hypothesized a priori, these analyses are consistent with recent relational demography research (Harrison et al., 1998; Joshi, 2011) suggesting that surface-level dissimilarity (e.g., age, race, gender) may in fact serve as a proxy by which underlying values dissimilarity is inferred, particularly at earlier stages of a group’s development.

The first of these analyses examined whether values dissimilarity mediated the relationship between perceived sexual orientation dissimilarity and the group process and withdrawal measures. Tests for mediation were conducted using a series of simple linear regression models based on Baron and Kenny’s (1986) recommendations for examining mediated relationships in social psychological research. In order to demonstrate mediation, the following conditions must be met: (1) the independent variable must be significantly related to
the dependent variable; (2) the independent variable must be significantly related to the mediator variable; and (3) the relationship between the independent variable and the dependent variable must be reduced (i.e., become less significant or nonsignificant) when both the independent and mediator variables are included in the regression equation. Sobel’s (1982) test statistic was used to determine whether this reduction in the IV-DV relationship was statistically significant (i.e., significantly different from zero).

Results indicated that the relationships between perceived dissimilarity and relationship conflict, task conflict and peer relations were all significantly and partially mediated by values dissimilarity. For relationship conflict, perceived sexual orientation dissimilarity was positively related to perceived values dissimilarity ($\beta = .18, p < .05$), which in turn was positively related to relationship conflict ($\beta = .22, p < .01$), with the direct effect of perceived sexual orientation dissimilarity on relationship conflict ($\beta = .16, p < .05$) becoming less significant when the mediator, values dissimilarity, was included in the analysis ($\beta = .13, p < .10$, Sobel’s statistic = 1.95, $p < .05$). For task conflict, perceived sexual orientation dissimilarity was positively related to perceived values dissimilarity ($\beta = .18, p < .05$), which in turn was positively related to task conflict ($\beta = .23, p < .01$), with the direct effect of perceived sexual orientation dissimilarity on task conflict ($\beta = .18, p < .05$) becoming less significant when the mediator, values dissimilarity, was included in the analysis ($\beta = .14, p < .10$, Sobel’s statistic = 1.97, $p < .05$). For peer relations, perceived sexual orientation dissimilarity was positively related to perceived values dissimilarity ($\beta = .18, p < .05$), which in turn was negatively related to quality peer relations ($\beta = -.34, p < .01$). Again, the direct effect of perceived sexual orientation dissimilarity on peer relations ($\beta = -.26, p < .01$) was less significant when values dissimilarity was included in the
analysis ($\beta = -.20, p < .01$; Sobel’s statistic = 2.13, $p < .05$). See Table 8 for regression analyses testing mediation using Baron and Kenny’s (1986) procedures.

**Exploratory mediated moderation model.** Given the presence of mediation and the findings from hypothesis 3 suggesting significant moderated effects of perceived dissimilarity on task conflict, a mediated moderation model between perceived dissimilarity, sexual orientation and collective identity, with values dissimilarity as a mediator, was also tested for task conflict. Muller, Judd and Yzerbyt’s (2005) procedures (based on Baron & Kenny, 1986) for testing mediated moderation were adopted and are similar to those used in the simple mediation analyses described above. There was no evidence of mediated moderation. None of the two or three-way interactions between perceived dissimilarity, sexual orientation and collective identity successfully predicted values dissimilarity (the mediator) for the full sample, nor was the strength of the association between the interaction term and the outcome variable reduced when the mediator was included in the final regression model. Table 9 presents the results of the mediated moderation analysis for task conflict.

**Subsample Hierarchical Regression Analyses for LGB Participants**

**Hypothesis 3a - moderating effect of LGB identity development on the perceived sexual orientation dissimilarity-outcome relationship.** Hypothesis 3a predicted that the effects of perceived dissimilarity on outcomes would depend on LGB participants’ level of sexual orientation identity development (assessed with a specific measure of LGB identity). LGB individuals who were less far along in their identity development were expected to react positively to the presence of heterosexual individuals in their workgroups, but those who were farther along were expected to react negatively.
Hypothesis 3a was supported for withdrawal ($\beta = .23$, $p < .05$, $PRE = .04$). Simple slopes analyses revealed that perceived dissimilarity was significantly and positively related to withdrawal for those who were further along in their LGB identity development, $t(70) = 2.15$, $p < 0.05$. As perceived dissimilarity increased, withdrawal increased. For those who were less far along in their LGB identity development, the relationship between perceived dissimilarity and withdrawal was not significant, $t(70) = 1.14$, $ns$. See Figure 6 for a graph of this interaction. Additionally, there were no significant main effects of perceived dissimilarity on any of the outcomes of interest for LGB participants. See Table 10 for the results of the main LGB subsample analyses.

Subsample Hierarchical Regression Analyses for Heterosexual Participants

**Hypothesis 3b - moderating effect of heterosexual identity development on the perceived sexual orientation dissimilarity-outcome relationship.** Hypothesis 3b predicted that the effects of perceived dissimilarity on outcomes would depend on heterosexual participants’ level of sexual orientation identity development (assessed with a measure of heterosexual identity). Heterosexuals who were less far along in their identity development were expected to react negatively to the presence of LGB individuals in their work units; those who were farther along were expected to react less negatively. Two different regression analyses were conducted to test hypothesis 3b. The first used a transformed measure of heterosexual identity, which corrected the moderately negatively skewed heterosexual identity scores by taking their inverse. The second used the untransformed measure. Because there was no improvement to the normality of the regression residuals using the transformed measure, results for the untransformed measure will be interpreted here and are included in Table 11, consistent with
recommended practice (Judd et al., 2008). Findings for the transformed heterosexual identity measure are included in Table 12 but are not interpreted.

Hypothesis 3b was not supported for any of the outcome measures of interest. None of the two-way interactions between perceived dissimilarity and sexual orientation identity development was significant, nor did the two-way interaction significantly add to the amount of variance accounted for over and above the control and predictor variables.

Conversely, the main effect of perceived dissimilarity was positively related to task conflict ($\beta = .16, p < .01, PRE = .02$) and negatively related to peer relations ($\beta = -.18, p < .01, PRE = .03$) for heterosexual participants. See Table 11 for the results of the main heterosexual subsample analyses.

It is important to note that heterosexual identity moderated the relationship between perceived dissimilarity and relationship conflict when the transformed heterosexual identity development measure was used in the analyses. These findings, however, are contrary to what was hypothesized (see Table 12 and Figure 7), to research and theory on heterosexual identity development (Mohr, 2002; Simoni & Walters, 2001) and to the results found when the untransformed heterosexual identity measure was used. Simple slopes analyses revealed that perceived dissimilarity was significantly and positively related to relationship conflict for heterosexual individuals who were further along in their identity development. For those who were less far along, perceived dissimilarity had no impact on relationship conflict. Such contradictions are likely due in part to significant limitations of the heterosexual identity measure, which are discussed in detail in Chapter 5. As a result, this lone significant result involving the transformed heterosexual identity development measure is not interpreted.
Additional Subsample Analyses for LGB and Heterosexual Participants

Based on findings from the full sample analyses, three additional analyses were conducted on the LGB and heterosexual subsamples. The first cluster of additional analyses re-tested hypotheses 3a and 3b using the two-way interaction between perceived dissimilarity and collective identity (instead of the group-specific LGB and heterosexual identity measures). These analyses were conducted to explore whether a similar pattern of moderating results might be found for LGB and heterosexual participants when the collective identity measure was used, as was expected.

The second cluster of additional analyses examined whether values dissimilarity mediated the relationship between perceived sexual orientation dissimilarity and the study outcomes for LGB and heterosexual participants. These analyses were conducted to determine if the mediation results reported for the full sample might also be found for the LGB and heterosexual subsamples.

The third cluster of additional analyses examined whether perceived sexual orientation dissimilarity mediated the relationship between sexual orientation identity development (using both the group-specific and collective identity measures) and the study outcomes. These analyses were conducted to determine if sexual orientation identity development might influence the degree to which individuals perceive sexual orientation dissimilarity in their workgroups in the first place, as the significant bivariate correlations between perceived dissimilarity and heterosexual and collective identity suggest.

Results for all of the additional analyses are reviewed below, by LGB and heterosexual subsample.
**Additional findings for LGB participants.** There were no significant effects of the perceived dissimilarity by collective identity interaction for LGB participants (Table 13). Unlike the findings for the group-specific LGB identity development measure, responses to the general measure of collective identity did not moderate the relationship between perceived sexual orientation dissimilarity and withdrawal. Additionally, there were no significant mediation results for the LGB participants in the study. Values dissimilarity did not mediate the relationship between perceived sexual orientation dissimilarity and any of the study outcomes (Table 14). Lastly, perceived sexual orientation dissimilarity did not mediate the relationship between LGB identity or collective identity and any of the dependent measures (Table 15). LGB participants’ level of LGB identity development did not seem to influence their perceptions of sexual orientation dissimilarity among workgroup members ($\beta = .04$, *ns*).

**Additional findings for heterosexual participants.** There was a significant two-way interaction between perceived sexual orientation dissimilarity and collective identity for heterosexual individuals’ reported relationship conflict (Table 16). Perceived dissimilarity was significantly and positively related to relationship conflict for those whose sexual orientation was less important to their identity, $t(252) = 2.89$, *p* < .01. For those whose sexual orientation was more important, perceived dissimilarity had no effect on relationship conflict, $t(252) = -.08$, *ns*. See Figure 8 for a graph of this interaction. Additionally, values dissimilarity did mediate the relationship between perceived sexual orientation dissimilarity and task conflict and peer relations (Table 17). For task conflict, perceived sexual orientation dissimilarity was positively related to perceived values dissimilarity ($\beta = .16$, *p* < .01), which in turn was positively related to task conflict ($\beta = .17$, *p* < .01), with the direct effect of perceived sexual orientation dissimilarity on task conflict ($\beta = .17$, *p* < .01) becoming less significant when the mediator, values
dissimilarity, was included in the analysis ($\beta = .15$, $p < .05$, Sobel’s statistic = 1.84, $p < .10$). For peer relations, perceived sexual orientation dissimilarity was positively related to perceived values dissimilarity ($\beta = .16$, $p < .01$), which in turn was negatively related to quality peer relations ($\beta = -.28$, $p < .01$). Again, the direct effect of perceived sexual orientation dissimilarity on peer relations ($\beta = -.21$, $p < .01$) was less significant when values dissimilarity was included in the analysis ($\beta = -.17$, $p < .01$; Sobel’s statistic = 2.30, $p < .05$).

Given the presence of mediation and the findings suggesting moderated effects of perceived dissimilarity on relationship conflict for heterosexual participants, a mediated moderation model between perceived dissimilarity and collective identity, with values dissimilarity as a mediator, was also tested for relationship conflict for the heterosexual subsample. Similar to the mediated moderation model for the full sample, the two-way interaction between perceived dissimilarity and collective identity did not successfully predict values dissimilarity (the mediator) for heterosexual individuals, nor was the strength of the association between the interaction term and the outcome variable reduced when the mediator was included in the final regression model. Table 18 presents the results of the mediated moderation analyses for relationship conflict.

Lastly, perceived sexual orientation dissimilarity significantly mediated the relationship between heterosexual identity and peer relations, but did not do so for any of the other study variables (e.g., relationship conflict, task conflict and withdrawal). Additionally, this result was only found for the untransformed measure of heterosexual identity, and was not found for the transformed measure or for collective identity. In particular, heterosexual identity was negatively related to perceived sexual orientation dissimilarity ($\beta = -.21$, $p < .01$), which in turn was negatively related to peer relations ($\beta = -.18$, $p < .01$), with the direct effect of heterosexual
identity on relationship conflict ($\beta = .14, p < .05$) becoming less significant when the mediator, perceived sexual orientation dissimilarity, was included in the analysis ($\beta = .11, p < .10$, Sobel's statistic $= 2.19, p < .05$). Those we were less advanced in their heterosexual identity were more likely to perceive sexual orientation dissimilarity in their workgroups, and this increased dissimilarity was negatively related to attraction and liking (i.e., peer relations) for other group members. See Table 19 for the results for the untransformed variable. Similar to hypothesis 3b, because there was no improvement to the normality of the regression residuals using the transformed heterosexual identity measure, these results are included in Table 20 but are not interpreted here (Judd et al., 2008). Findings for all full and subsample analyses are summarized in Figure 9.
CHAPTER 5: DISCUSSION

The current study examined whether increased sexual orientation dissimilarity between an individual and members of his or her workgroup was associated with negative group process perceptions (i.e., process loss) and potential withdrawal behavior. Utilizing the theory of relational demography within groups, the study specifically examined whether perceptions of workgroup sexual orientation dissimilarity predicted participants’ reported levels of informal communication, relationship conflict, task conflict and peer relations among group members. In addition, the study examined whether sexual orientation dissimilarity predicted participants’ own withdrawal behavior. Consistent with relational demography theory and research suggesting that the effects of demographic dissimilarity in work units may differ based on various individual factors (Joshi, 2011; Riordan, 2000; Figure 1), the moderating roles of sexual orientation and sexual orientation identity development were also explored. Results indicated some support for study predictions depending on the outcome variable measured. These results and their implications for demography research, theory and practice are reviewed below.

Symmetric or Asymmetric Effects of Perceived Sexual Orientation Dissimilarity

In accordance with hypothesis 1, findings from the main study analyses suggested that perceived sexual orientation dissimilarity, like other forms of demographic dissimilarity, is associated with significant group process and withdrawal implications for LGB and heterosexual individuals in work units. Specifically, regardless of sexual orientation, there was a significant negative effect of dissimilarity on peer relations, significant positive effects of dissimilarity on task conflict and relationship conflict and a marginally significant and positive effect of dissimilarity on withdrawal behavior. Individuals in workgroups with members of perceptibly different sexual orientations were more likely to report discord in member interactions and were
less likely to trust and be attracted to their group members (i.e., quality peer relations). They were also marginally more likely to report withdrawing psychologically from their group meetings, including an increased tendency to “mentally check out.” These results are consistent with relational demography predictions that are based on the similarity-attraction paradigm (Byrne, 1971), including previous research suggesting that the less similar individuals are to their workgroup members in terms of age, race and gender, the less likely they are to have positive interactions with them (e.g., Kirchmeyer, 1995; Lichtenstein & Alexander, 2000; Zenger & Lawrence, 1989), regardless of their minority or majority status. Further, the presence of significant dissimilarity effects after controlling for participant sexual orientation and the lack of a significant perceived dissimilarity by sexual orientation interaction for hypothesis 2 provided some support in this investigation for the symmetric relational demography effects that have been found in other studies (e.g., O’Reilly et al., 1989; Wagner et al., 1984). That is, the effects of perceived sexual orientation dissimilarity on outcomes initially appeared to be similar for LGB and heterosexual participants and did not appear to differ based on an individual’s sexual orientation.

Other study findings, however, reveal a slightly different and more nuanced pattern of perceived dissimilarity effects for LGB and heterosexual participants. In the subsample analyses by sexual orientation, the main effect of perceived sexual orientation dissimilarity was not related to any of the outcomes of interest for LGB individuals, but heterosexual participants reported increased task conflict and decreased attraction and trust (i.e., quality peer relations) as the presence of LGB individuals in their workgroups increased. These results are consistent with recent relational demography investigations (e.g., Chatman & O’Reilly, 2004; Chattopadhyay et

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5 Significant effects for relationship conflict and withdrawal were also found when the collective identity measure was included in the analyses, but not when the untransformed and transformed heterosexual identity development measures were used (see Table 16).
al., 2004a) that are based on social identity theory, all of which support the presence of
differential or asymmetric reactions to demographic dissimilarity contingent on one’s majority or
minority status (e.g., men vs. women, white individuals vs. individuals of color). Not only did
the LGB and heterosexual participants in this study react differently to demographic dissimilarity
in their workgroups (Chatman & O’Reilly, 2004; Riordan & Shore, 1997), LGB individuals also
did not always react negatively, as predictions based on social identity theory suggest
(Chattopadhyay, 2003). In short, members of high status groups whose own social status and
self-esteem are more clearly threatened by the presence of dissimilar others should react more
negatively to the presence of lower status dissimilar others in their work units, which is what this
study found.

In the full sample, the impact of perceived sexual orientation dissimilarity on task conflict
and withdrawal was moderated both by participant sexual orientation and the degree to which
individuals considered their sexual orientation to be an important part of their self-concept,
thereby providing additional support for asymmetric or differential relational demography
effects. The significant three-way interaction between perceived dissimilarity, sexual orientation
and collective identity on task conflict was driven in part by the different responses of LGB and
heterosexual individuals who did not consider their sexual orientations to be an important aspect
of their identity (i.e., low collective identity). Consistent with study hypotheses, whereas
heterosexual respondents low in collective identity reported increased levels of task conflict as
the presence of LGB individuals in their workgroups increased, LGB respondents low in
collective identity reported less task-related conflict as the number of heterosexual individuals
increased. Taken together with the marginally significant three-way interaction for withdrawal
(Figure 5; described later), these findings provide further evidence that LGB and heterosexual
individuals do not necessarily respond to workgroup sexual orientation dissimilarity in the same way.

As a result, there are several reasons to suggest that the overall impact of perceived dissimilarity in this investigation depended in part on whether one identified as LGB or heterosexual. First, the pattern of results from the subsample analyses seems to indicate various differences in LGB and heterosexual participants’ responses to dissimilarity, including different outcome, moderating and mediating patterns of relationships across the two groups. For example, when the main and interactive effects of perceived dissimilarity on LGB and heterosexual respondents were examined separately, LGB individuals reported no significant group process effects, but increased dissimilarity significantly impacted their withdrawal behavior. Heterosexual individuals, on the other hand, reported no consistent effects of dissimilarity on withdrawal, but were consistently and significantly impacted by increased dissimilarity on at least two of the four group process outcomes (e.g., task conflict and quality peer relations).

Second, there are several methodological explanations for the lack of differential or asymmetric relational demography effects in some of the full sample analyses, particularly those used to test the two-way interaction between perceived sexual orientation dissimilarity and participant sexual orientation (hypothesis 2). Because the combined sample on which the main study analyses were conducted was overwhelmingly heterosexual, it is likely that the significant main effects for perceived dissimilarity in the full sample were largely driven by the effects of perceived dissimilarity for heterosexuals, even after sexual orientation was statistically controlled. Additionally, given the fact that several meta analyses have shown most sociodemographic (e.g., age, race, gender) relational demography effects to be small in magnitude (Joshi, 2011; Riordan 2000), it is not surprising that the two-way interactions between
perceived sexual orientation dissimilarity and sexual orientation were not statistically significant in the full sample analyses. Simply put, although the simple effects of perceived dissimilarity on outcomes may have been significant for heterosexual individuals, the difference in simple slopes between heterosexual and LGB respondents may not have been large enough to support or detect the presence of an overall, two-way interaction effect (Dawson & Richter, 2006). Thus, the lack of support for asymmetric relational demography effects in the full sample analyses testing the perceived dissimilarity by sexual orientation interaction (hypothesis 2) may be a function of methodological or statistical considerations, and not theoretical ones. Findings across the various subsample analyses and from the three-way interactions in the full sample suggest that LGB and heterosexual individuals differed in their reactions to demographic dissimilarity in their work units in ways that were largely predictable and theoretically-consistent with social identity approaches to relational demography (Chattopadhyay, 1999; 2003; Chattopadhyay et al., 2004b). That is, majority group members in this study (i.e., heterosexuals) tended to have more negative reactions to demographic dissimilarity in their workgroups than those in the minority (i.e., LGB individuals), as social identity theory would suggest (Chattopadhyay, 2003; Hogg & Terry, 2000).

**Moderating Role of Sexual Orientation Identity Development**

Additional evidence of asymmetric relational demography effects can be found in the full and subsample results supporting the role of sexual orientation identity development in qualifying LGB and heterosexual individuals’ reactions to demographic dissimilarity. For LGB individuals, sexual orientation identity development moderated the relationship between perceived dissimilarity and withdrawal when both the collective and LGB identity measures were used. In the full sample, LGB participants who were high in collective identity reported
marginally greater withdrawal behavior as the number of heterosexual individuals in their workgroups increased. Similarly in the subsample, the effect of increased sexual orientation dissimilarity on withdrawal was positive for LGB individuals who were more advanced in their identity development. Sexual orientation identity also moderated the relationship between perceived dissimilarity and task conflict, but only in the combined sample analyses when the collective identity measure was used. Specifically, the effect of increased sexual orientation dissimilarity on task conflict was marginally negative for LGB individuals in the full sample who were low in collective identity, but a similar result was not reflected in a significant or marginally significant two-way interaction between perceived dissimilarity and either LGB or collective identity in the subsample analyses.

For heterosexuals, the presence and direction of the moderating effects of heterosexual identity development on the dissimilarity-outcome relationship depended entirely on which measure of heterosexual identity was used. In the case of the untransformed heterosexual identity measure, there were no moderating effects found. In the case of the transformed heterosexual identity measure, heterosexual identity moderated the relationship between perceived sexual orientation dissimilarity and relationship conflict, but did so in ways that were contrary to the hypotheses (i.e., individuals who were more advanced in their identity and more accepting of LGB individuals reported more negative reactions to workgroup sexual orientation dissimilarity) and counter-intuitive to research and theory on collective (Ashmore et al., 2004; Linnehan et al., 2006) and heterosexual identity (Mohr, 2002; Simoni & Walters, 2001). An additional test of hypothesis 3b using the collective identity measure on the heterosexual subsample also supported a moderated relationship between perceived dissimilarity and relationship conflict, but did so in ways that were consistent with the study hypotheses and reflected the pattern of simple effects.
found for the three-way interaction on task conflict in the full sample. That is, heterosexual individuals who were low in collective identity reported increased relationship and task conflict as the number of LGB individuals in their workgroups increased. For those high in collective identity, the relationship between perceived dissimilarity and either relationship or task conflict was not significant.

As noted in Chapter 4, the measure of heterosexual identity development used in this study was problematic for several reasons. First, there is a lack of clarity in the research literature (Mohr, 2002) regarding what heterosexual identity is as a construct and how it manifests for individuals who are less and more advanced in their identity development. Although several researchers have suggested that heterosexual identity functions in ways that are similar to white racial identity, empirical evidence supporting this claim is lacking (Simoni & Walter, 2001). Thus, it is difficult to interpret the findings for the heterosexual identity development measure used in the current investigation, including the negative bivariate correlation between collective identity and heterosexual identity, particularly because research and theory (Ashmore et al., 2004; Linnehan et al., 2006, Phinney, 1992) suggest that the importance individuals attach to their sexual orientation and the degree to which they consider it to be a critical aspect of their self-concept should increase as they develop a more advanced sense of identity. Second, the measure of heterosexual identity development used in this study was based on a modified measure of heterosexual identity (Simoni & Walters, 2001) for which there is little evidence of construct validity in the existing psychological literature. As a result, it is unclear whether the scale used in the current investigation measured heterosexual identity, heterosexuals’ attitudes toward LGB individuals or some degree of both. Finally, the lack of variance on the untransformed and transformed heterosexual identity variables may make it difficult to interpret
the bivariate correlations and parameter estimates associated with the heterosexual identity development measure due to restriction of range issues (Zimmerman & Williams, 2000). These factors may contribute to the limited evidence for effects of this variable in the current research. Moreover, they may suggest why the lone significant two-way interaction that was found for this measure was not intuitive or consistent with theory related to heterosexual identity development.

Still, findings from both the full and subsample analyses broadly support the notion that identity-related variables are likely to moderate the dissimilarity-outcome relationship, as previous relational demography research on the moderating role of racial identification (e.g., Linnehan et al., 2006; Stewart & Garcia-Prieto, 2008) and the literature on sexual orientation identity development (e.g., Cass, 1979; Simoni & Walters, 2001) would suggest. Particularly with respect to task conflict, relationship conflict and withdrawal, heterosexual individuals in the current study who considered their sexual orientation to be an important aspect of their identity tended not to react to increased dissimilarity in their work units, whereas those whose sexual orientation was less important to them tended to react negatively. For LGB individuals, their reactions to increased dissimilarity were contingent on their sexual orientation identity development in ways that, though not always significant, were largely consistent with the study hypotheses. In both the full and subsample analyses, LGB participants who were more advanced in their identity development reported greater or marginally greater withdrawal behavior as the sexual orientation dissimilarity of their workgroups increased (see Figures 5 and 6). Thus, there is general support in this study for the idea that individuals’ reactions to sexual orientation dissimilarity may depend not only on whether the individuals themselves are gay or straight, but also on the degree to which they identify with their supposed sexual orientation in-group.
Mediating Role of Values Dissimilarity

An additional unanticipated finding in the current study concerned the role of values dissimilarity in mediating several of the sexual orientation dissimilarity-outcome relationships in the full sample. Although not specifically hypothesized, perceived sexual orientation dissimilarity significantly predicted values dissimilarity, which in turn was significantly related to task conflict, relationship conflict and quality of peer relations. Similar to the main effect of perceived dissimilarity on the full sample, the presence of significant mediation appears to have been driven largely by the heterosexual subsample, as there were no significant mediation effects for LGB participants on any of the outcome measures studied. Thus, it appears as if surface-level demographic dissimilarity may act as a proxy for deep-level values dissimilarity, consistent with recent relational demography research (Harrison et al., 2008; Joshi, 2011). Because LGB individuals generally experience sexual orientation dissimilarity to a greater degree than their heterosexual counterparts and have frequent contact with heterosexual individuals, they may have more individuating information about heterosexuals and are less likely to rely on stereotypes to infer values similarity. As a result, sexual orientation dissimilarity in their workgroups may not be a sufficient source of information about the degree to which their teammates share their underlying values. For heterosexual participants, who tend to have less frequent contact with LGB individuals and thus less individuating information about them, sexual orientation differences may in fact reveal some deeper clues (Ragins, 2004) about the nature of the LGB colleagues with whom they work (e.g. their values).

Contributions and Implications for Future Research

The current study makes several significant contributions to the relational demography and LGB workplace literatures. First, and perhaps most importantly, it extends research on
relational demography within groups to include the understudied, concealable, yet socially important variable of sexual orientation. If nothing else, findings from the current investigation provide some of the earliest empirical evidence of the deleterious process and withdrawal effects of sexual orientation dissimilarity in the workplace, particularly for heterosexual individuals. To date, these effects have gone undocumented in the research literature. Only one study has focused on sexual orientation from a relational demography perspective, examining the impact of workgroup dissimilarity on LGB individuals’ perceptions of workplace discrimination as well as their degree of outness (Ragins et al., 2003). Given the results of the current investigation, future research should continue to explore the implications of sexual orientation and other concealable forms of dissimilarity in the workplace, both by expanding the specific process and withdrawal outcomes studied (e.g., perspective-taking, cooperation, absenteeism) as well as including other outcomes traditionally explored in relational demography research (e.g., performance, job attitudes, etc.). Different operationalizations of sexual orientation dissimilarity (e.g., actual dissimilarity, interaction term approaches) should also be considered (Riordan, 2000; Riordan & Wayne, 2008).

Second, this study is among the earliest to explore individual difference moderators of relational demography effects, which have historically been ignored in favor of such contextual factors as organizational culture or the larger demographic composition of the workplace (Riordan, 2000). More specifically, this study explored sexual orientation identity development as a moderator of the dissimilarity-outcome relationship, and is one of the earliest to explicitly integrate the identity literature with the theory of relational demography within groups to understand the impact of demographic dissimilarity in the workplace (cf. Linnehan et al., 2006; Stewart & Garcia-Prieto, 2008). By continuing to explore additional individual difference
variables in future investigations, the field of relational demography will address a significant and persistent limitation of research in this area, namely the assumption that individuals belonging to the same demographic subcategories will respond to demographic differences in the workplace in the same way (Ragins & Gonzalez, 2003). Additionally, the significant moderating influences of collective and LGB identity in the current investigation suggest that more research is needed to explain how variability in identity development leads to differential reactions to workplace dissimilarity. For example, it is unclear, given the results of the current study, exactly how similarity-attraction or social identity mechanisms explain the moderating effect of sexual orientation identity development. Future research should test theoretically relevant mediators of the dissimilarity by identity-outcome relationship in order to better understand such moderated relational demography effects. Potentially relevant mediators might include attraction, liking and self-categorization.

Third, a number of features of the current investigation directly address several limitations that have been highlighted in previous LGB workplace research (Creed, 2006; Ragins, 2004). This includes the use of an empirically-validated and theoretically-supported framework for examining sexual orientation dissimilarity in the workplace (Creed, 2006), a focus on heterosexual individuals in addition to LGB participants and the broadening of the outcomes of interest so that they extend beyond the study of disclosure and discrimination (Mohr & Fassinger, 2011). Future research on sexual orientation issues in organizations should continue to move toward conducting theoretically-based investigations that explore the range of subtle ways sexual orientation diversity is likely to manifest in organizational contexts. Regardless of the findings, such attempts are likely to be mutually beneficial to the mainstream management and LGB workplace literatures, both in terms of how mainstream management scholars view LGB
research as well as the degree to which findings related to sexual orientation continue to influence and be integrated into the mainstream management field (Creed, 2006).

**Implications for Practice**

Although relational demography researchers have not historically been known to focus on the practical contributions of their research (Jackson, 2012), the current study offers several implications for organizations attempting to understand and manage the sexual orientation diversity of their workforces. First, the study provides clear evidence that sexual orientation dissimilarity in a workgroup context matters, particularly when it comes to its group process and withdrawal implications. Thus, organizations should, at the very least, be aware of the importance of sexual orientation differences between and among their employees in much the same way that they have become increasingly aware over the last several decades of the various workplace challenges posed by race, gender, age and other forms of sociodemographic diversity (Anand & Winters, 2008). Including sexual orientation demographic and climate questions on annual employee surveys is one way to foster such awareness.

Second, as findings from the current study indicate, the impact of sexual orientation workgroup dissimilarity appears to differ for LGB and heterosexual individuals. For example, LGB participants did not report any negative group process implications as the presence of heterosexual individuals in their work unit increased, but those who were more advanced in their identity development did experience an increased tendency to withdraw in response to increasing dissimilarity. Although the identity development implications of the current study may be difficult for organizations to address, the impact of dissimilarity on withdrawal for those who were more inclined to identify and associate with an LGB community (Cass, 1979; McCarn & Fassinger, 1996) suggests that organizations may be able to mitigate this withdrawal tendency by
setting up employee resource groups for sexual minority individuals, recruiting and retaining additional out LGB employees and implementing workplace policies and practices that promote LGB inclusion (e.g., domestic partner benefits).

Conversely, heterosexual participants did not report any consistent withdrawal effects as the presence of LGB individuals in their work unit increased, but they did experience several adverse process reactions in response to increasing dissimilarity (e.g., increased task conflict and decreased peer relations). Several of these adverse effects were also mediated by values dissimilarity, or the perception among heterosexual study participants that other LGB members of their team did not share their values. Thus, organizations concerned about mitigating the potential negative effects of sexual orientation dissimilarity on heterosexuals’ group process perceptions may do well to emphasize the underlying values that all employees share, be they related to the larger culture of the organization or to some greater team or organizational goal.

Limitations

Like all research, this investigation is not without its limitations. First and foremost, the cross-sectional design of the current field study limits its ability to make causal claims about the relationships between and among the study variables (McGrath, 1982) or to tease out the temporal ordering of the independent variable-dependent variable associations (Spector, 1994). Though unlikely, participants whose groups experienced increased levels of conflict could have been more sensitive to various sociodemographic differences that they otherwise would have ignored. Such a proposition has not been explicitly examined or supported in the relational demography literature (Joshi, 2011; Riordan, 2001), nor would it be possible in research investigations where dissimilarity has been operationalized using indices of actual rather than perceived demographic dissimilarity.
Similarly, another potential limitation in the current study is that all variables were operationalized using self-report questionnaires, including perceived dissimilarity. Much has been written in the management literature regarding the limitations of self-report measures, including their susceptibility to response sets, social desirability, retrospective memory effects and method bias (Spector, 1994). Although there was no evidence of common method variance in the current investigation, it is possible that different results would have been found if objective or implicit measures that are less susceptible to social desirability had been used, especially for heterosexual identity development (e.g., number of LGB friends, frequency contact with LGB individuals at work). The low reliabilities of some of the study outcomes, particularly the communication and withdrawal scales, may have also made it difficult to find effects for these variables (Carmines & Zeller, 1979). Different measures of these constructs should be used in future research.

Lastly, the use of a student sample poses a significant limitation to the generalizability of the study findings. Though some relational demography research has been conducted on student participants (e.g., Chattopadhyay et al., 2004a), a more accurate test of the relational demography model depicted in Figure 1 would be to examine intact work teams in a professional setting. Thus, it remains to be seen if the group process and withdrawal effects of sexual orientation dissimilarity found in the current study would be replicated in a non-student sample of working professionals, many of whom have interdependent work relationships that extend beyond 15 weeks or a single semester. Given the fact that the current study found effects for perceived sexual orientation dissimilarity in a sample of relatively liberal, well-educated Columbia University graduate students, there is reason to suspect that the findings would be
replicated, and stronger perceived dissimilarity effects would be found, in a more diverse and less liberal sample (e.g., wider age range, more variance on heterosexual identity development).

Despite these limitations, this investigation was the first to provide empirical support for the idea that sexual orientation differences among workgroup members can influence their group process perceptions and withdrawal behavior. It also was the first to document how an individual’s identification with his or her sexual orientation group could qualify his or her reaction to such differences. Given the lack of attention to sexual orientation in the mainstream organizational demography and management literatures (Bell et al., 2011), these findings are not only important in their own right, they will hopefully help spur future research in this critical yet understudied area.
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Figure 1. An organizing framework for research on relational demography within groups, adapted from Riordan (2000).
Figure 2. Predicted relationships between perceived sexual orientation dissimilarity and outcomes for participants at less advanced vs. more advanced levels of sexual orientation identity, by participant sexual orientation. A (+) indicates a positive relationship between perceived sexual orientation dissimilarity and the listed outcome. A (-) indicates a negative relationship. The (less - ) and (less +) distinctions for those more advanced in their heterosexual identity are relative to those who are less advanced.
Figure 3. Proposed confirmatory factor model. Error terms are not depicted. All latent exogenous factors were assumed to covary.
Figure 4. The relationship between perceived sexual orientation dissimilarity and task conflict for LGB and heterosexual individuals at high and low levels of collective identity (i.e., identity importance). A (+) or (-) indicates a significant or marginally significant simple effect.
Figure 5. The relationship between perceived sexual orientation dissimilarity and withdrawal for LGB and heterosexual individuals at high and low levels of collective identity (i.e., identity importance). A (+) or (-) indicates a significant or marginally significant simple effect.
Figure 6. The relationship between perceived sexual orientation dissimilarity and withdrawal for LGB individuals at more and less advanced levels of identity development. A (+) or (-) indicates a significant or marginally significant simple effect.
Figure 7. The relationship between perceived sexual orientation dissimilarity and relationship conflict for heterosexual individuals at more and less advanced levels of identity development. A (+) or (-) indicates a significant or marginally significant simple effect.
Figure 8. The relationship between perceived sexual orientation dissimilarity and relationship conflict for heterosexual individuals at high and low levels of collective identity (i.e., identity importance). A (+) or (-) indicates a significant or marginally significant simple effect.
<table>
<thead>
<tr>
<th>HYPOTHESIS</th>
<th>COMBINED SAMPLE</th>
<th>LGB RESPONDENTS</th>
<th>HETEROSEXUAL RESPONDENTS</th>
</tr>
</thead>
</table>
| H1: Main Effect of Perceived Sexual Orientation Dissimilarity (PD) | Relationship conflict (+)  
Task conflict (+)  
Peer relations (-)  
Withdrawal (+) (Table 7) | ns (Table 10) | Task conflict (+)  
Peer relations (-)  
Relationship conflict and withdrawal (+ only with collective ID and transformed) (Tables 11, 12 and 16) |
| H2: PD x Sexual Orientation (SO) | ns (Table 7) | | |
| H3: PD x SO x Collective Identity (CI)  
OR  
PD x LGB/HETERO ID | Task conflict (+)  
Low CI hetero (+): Low CI LGB (-)  
Withdrawal (+)  
Low CI hetero (+): High CI LGB (+) (Table 7; Figures 4 and 5) | Withdrawal (+)  
More advanced LGB identity (+) (Table 10; Figure 6) | Relationship conflict (+ only with transformed)  
More advanced hetero identity (+) (Tables 11, 12; Figure 7) |
| Supplemental | Values dissimilarity mediates PD – outcome relationship for relationship conflict, task conflict, peer relations (but no mediated moderation) (Tables 8 and 9) | No moderating effects of CI (Table 13) | Moderating effect of PD x CI on relationship conflict (-)  
Low CI (+) (Table 16; Figure 8)  
Values dissimilarity mediates PD – outcome relationship for task conflict, peer relations (but no mediated moderation) (Tables 17 and 18)  
Mediating effects of PD for untransformed hetero ID and peer relations (Tables 19 and 20) |

**Figure 9.** Summary of dissertation findings by hypothesis and sample. Bold type indicates significant main, interactive or simple effects. Listed effects that are not bold are marginally significant. Simple effects are italicized.
<table>
<thead>
<tr>
<th>Stage</th>
<th>LGB Identity Development (based on Cass, 1979)</th>
<th>Heterosexual Identity Development (based on Simoni &amp; Walters, 2001)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less advanced</td>
<td>Identity Confusion: Become consciously aware that homosexuality is personally relevant to one’s behavior and sense of self; disavow or denigrate LGB identity</td>
<td>Contact: Oblivious to issues related to sexual orientation; approach the world with a naiveté about how sexual orientation affects one’s life</td>
</tr>
<tr>
<td></td>
<td>Identity Comparison: Recognize and acknowledge that one may have an LGB identity; avoid behaviors that are at odds with others’ view of oneself as heterosexual</td>
<td>Disintegration: Experience confusion and disorientation about the effects of being heterosexual; develop ambivalent awareness of the implications of being LGB</td>
</tr>
<tr>
<td></td>
<td>Identity Tolerance: Develop a greater sense of commitment to having an LGB identity; seek out other LGB persons and detach from interactions with heterosexuals</td>
<td>Reintegration: Idealize all that is heterosexual and depreciate all that is non-heterosexual; actively and passively endorse heterosexism and sexual prejudice toward LGB individuals</td>
</tr>
<tr>
<td></td>
<td>Identity Acceptance: Normalize LGB identity through sustained interactions with the LGB community; self-identify as LGB</td>
<td>Pseudo-Independence: Intellectually acknowledge heterosexuality and partially recognize the sociopolitical implications of being LGB</td>
</tr>
<tr>
<td></td>
<td>Identity Pride: Rely exclusively on LGB community for support; dichotomize the world into LGB (credible/significant) vs. heterosexual (discredited/insignificant)</td>
<td>Autonomy: Develop a positive, integrated anti-heterosexist heterosexual identity</td>
</tr>
<tr>
<td>More advanced</td>
<td>Identity Synthesis: Re-engage with heterosexuals; integrate LGB identity with all other aspects of self</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Table 2

*Questionnaire Measures in Order of Presentation*

<table>
<thead>
<tr>
<th>Questionnaire Section</th>
<th>Measure</th>
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<tbody>
<tr>
<td>Informed consent</td>
<td>Informed consent</td>
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<tr>
<td></td>
<td>Unique code</td>
</tr>
<tr>
<td></td>
<td>Qualifying items</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Cohesion</td>
</tr>
<tr>
<td></td>
<td>Communication (frequency and degree of informality)</td>
</tr>
<tr>
<td></td>
<td>Conflict (task and relational)</td>
</tr>
<tr>
<td></td>
<td>Quality of peer relations (attraction and liking)</td>
</tr>
<tr>
<td></td>
<td>Withdrawal behavior</td>
</tr>
<tr>
<td>Predictors</td>
<td>Perceived dissimilarity</td>
</tr>
<tr>
<td>Control and demographic variables</td>
<td>All control and demographic variables, concluding with sexual orientation</td>
</tr>
<tr>
<td>Moderators</td>
<td>Collective identity</td>
</tr>
<tr>
<td></td>
<td>LGB or heterosexual identity (depending on response to the sexual orientation question)</td>
</tr>
<tr>
<td>Marker variable</td>
<td>Environmental attitudes</td>
</tr>
</tbody>
</table>

*Note.* Each measure was presented on a separate page. Items on each page were randomly ordered except the control and demographic questions.
Table 3

*Participant Demographics*

<table>
<thead>
<tr>
<th>Demographic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>110</td>
<td>27.6</td>
</tr>
<tr>
<td>Female</td>
<td>285</td>
<td>71.6</td>
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<tr>
<td>Other</td>
<td>3</td>
<td>0.8</td>
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<tr>
<td><strong>Race</strong></td>
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<td></td>
</tr>
<tr>
<td>White</td>
<td>239</td>
<td>60.1</td>
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<tr>
<td>Minority</td>
<td>144</td>
<td>36.1</td>
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<tr>
<td>Other</td>
<td>15</td>
<td>3.8</td>
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<tr>
<td><strong>Sexual orientation</strong></td>
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<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>295</td>
<td>74.1</td>
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<tr>
<td>LGBQ</td>
<td>101</td>
<td>25.4</td>
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<tr>
<td>Other</td>
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<tr>
<td><strong>Age group</strong></td>
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<td></td>
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<td>21-30</td>
<td>284</td>
<td>71.5</td>
</tr>
<tr>
<td>31-40</td>
<td>81</td>
<td>20.4</td>
</tr>
<tr>
<td>Over 40</td>
<td>32</td>
<td>8.1</td>
</tr>
<tr>
<td><strong>Affiliation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers College</td>
<td>320</td>
<td>80.4</td>
</tr>
<tr>
<td>Columbia</td>
<td>78</td>
<td>19.6</td>
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</tbody>
</table>

Note. N = 393-398, depending on missing data. Percentages are based on valid data only.
Table 4

*Participant Group Characteristics*

<table>
<thead>
<tr>
<th>Demographic</th>
<th>n</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td><strong>Group size</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-5 members</td>
<td>271</td>
<td>68.3</td>
</tr>
<tr>
<td>6-9 members</td>
<td>104</td>
<td>26.2</td>
</tr>
<tr>
<td>Over 10 members</td>
<td>22</td>
<td>5.5</td>
</tr>
<tr>
<td><strong>Group tenure</strong></td>
<td></td>
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<tr>
<td>1-5 weeks</td>
<td>129</td>
<td>32.4</td>
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<tr>
<td>6-10 weeks</td>
<td>133</td>
<td>33.4</td>
</tr>
<tr>
<td>11-15 weeks</td>
<td>84</td>
<td>21.1</td>
</tr>
<tr>
<td>Over 15 weeks</td>
<td>52</td>
<td>13.1</td>
</tr>
<tr>
<td><strong>Peer familiarity</strong></td>
<td></td>
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<tr>
<td>Chose group</td>
<td>123</td>
<td>30.9</td>
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<tr>
<td>Assigned to group</td>
<td>243</td>
<td>61.1</td>
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<tr>
<td>Other</td>
<td>32</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Task status</strong></td>
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</tr>
<tr>
<td>Work completed</td>
<td>358</td>
<td>91.1</td>
</tr>
<tr>
<td>Work in progress</td>
<td>35</td>
<td>8.9</td>
</tr>
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</table>

Note. N = 393-398, depending on missing data. Percentages are based on non-missing data.
### Table 5

**Goodness of Fit Indices for Confirmatory Factor Analysis of Dependent Measures**

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null Model$^a$</td>
<td>3517.87</td>
<td>434</td>
<td>.61</td>
<td>.55</td>
<td>.13</td>
</tr>
<tr>
<td>Proposed Model$^b$</td>
<td>1575.99</td>
<td>424</td>
<td>.85</td>
<td>.83</td>
<td>.08</td>
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<tr>
<td>Seven-Factor Model$^c$</td>
<td>1201.55</td>
<td>413</td>
<td>.90</td>
<td>.88</td>
<td>.07</td>
</tr>
<tr>
<td>Six-Factor Model$^d$</td>
<td>935.71</td>
<td>309</td>
<td>.92</td>
<td>.90</td>
<td>.07</td>
</tr>
<tr>
<td>Five-Factor Model$^e$</td>
<td>456.35</td>
<td>160</td>
<td>.94</td>
<td>.92</td>
<td>.07</td>
</tr>
<tr>
<td>Four-Factor Model$^f$</td>
<td>379.33</td>
<td>113</td>
<td>.94</td>
<td>.92</td>
<td>.08</td>
</tr>
</tbody>
</table>

*Note. CFI = Comparative Fit Index. CFI greater than .90 indicates adequate fit. TLI = Tucker-Lewis Index (Non-Normed Fit Index). TLI greater than .90 indicates adequate fit. RMSEA = Root Mean Square Error of Approximation. RMSEA less than .08 indicates adequate fit (Hu & Bentler, 1999; Schreiber et al., 2006).*

$^a$ All dependent items loading on a single latent factor.

$^b$ All dependent items loading on respective factors, with second-order latent factors for communication and conflict.

$^c$ All dependent items loading on respective factors, without second-order latent factors.

$^d$ All dependent items loading on respective factors, without second-order latent factors and frequency of communication.

$^e$ All dependent items loading on respective factors, without second-order latent factors, frequency of communication and cohesion.

$^f$ All dependent items loading on respective factors, without second-order latent factors, frequency of communication, cohesion and informal communication.

*p < .05.*
### Table 6

**Means, Standard Deviations and Bivariate Correlations for All Untransformed Study Variables**

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
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<td>1. Age</td>
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<td>2. Gender</td>
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<td>3. Race</td>
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<td>.08</td>
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<td>4. Group size</td>
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<td>5. Group tenure</td>
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<td>6. Peer familiarity</td>
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<td>-.18*</td>
<td>-.17*</td>
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<td>7. Values dissimilarity</td>
<td>3.37</td>
<td>1.36</td>
<td>.09</td>
<td>-.04</td>
<td>-.06</td>
<td>.03</td>
<td>.11*</td>
<td>-.25*</td>
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<td>8. PSO dissimilarity</td>
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<td>.11*</td>
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<td><strong>Moderators</strong></td>
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<td>10. Collective identity</td>
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<td>.27*</td>
<td>.36*</td>
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<td>.06</td>
<td>-.02</td>
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<td>-.22*</td>
<td>-.04</td>
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<td>.24*</td>
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<td>-.02</td>
<td>.01</td>
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<td>-.15*</td>
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<tr>
<td>16. Relationship conflict</td>
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<td>.03</td>
<td>.16</td>
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<td>19. Withdrawal</td>
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<td>.09</td>
<td>-.07</td>
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<td>.15*</td>
<td>.12*</td>
<td>.12*</td>
<td>-.33*</td>
<td>-.08</td>
</tr>
</tbody>
</table>

Note. N = 86-398, depending on missing data. * p < .05. Internal consistency reliabilities are listed in bold on the diagonal. Gender, race, peer familiarity and orientation are all dummy coded such that 1 = male (cp. female), white (cp. people of color), chose to work together (cp. were assigned to work together) and LGBTQ (cp. heterosexual).
Table 6

*Means, Standard Deviations and Bivariate Correlations for All Untransformed Study Variables (continued)*

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>13</th>
<th>14</th>
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<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
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<td>17. Task conflict</td>
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<td>.16*</td>
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<td>.74*</td>
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<td>18. Peer relations</td>
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<td>-.08</td>
<td>.31*</td>
<td>.28*</td>
<td>-.30*</td>
<td>.62</td>
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</table>

Note. N = 86-398, depending on missing data. * p < .05. Internal consistency reliabilities are listed in bold on the diagonal. Gender, race, peer familiarity and orientation are all dummy coded such that 1 = male (cp. female), white (cp. people of color), chose to work together (cp. were assigned to work together) and LGBTQ (cp. heterosexual).
Table 7

Hierarchical Regression Analysis Predicting Study Outcomes from Perceived Sexual Orientation Dissimilarity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Informal Communication (n=345)</th>
<th>Relationship Conflict (n=345)</th>
<th>Task Conflict (n=345)</th>
<th>Peer Relations (n=345)</th>
<th>Withdrawal (n=345)</th>
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<td>Step 2  β</td>
<td>Step 3  β</td>
<td>Step 1  β</td>
<td>Step 2  β</td>
</tr>
<tr>
<td>Controls and Predictors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.06 -.07 -.07</td>
<td>.02 .01 .02</td>
<td>.07 .07 .08</td>
<td>.08 .08 .07</td>
<td>.09 .09 .09†</td>
</tr>
<tr>
<td>Race</td>
<td>.09† .08 .09</td>
<td>.11* .10* .10†</td>
<td>.05 .04 .04</td>
<td>-.17** -.17** -.17**</td>
<td>.16** .16** .16**</td>
</tr>
<tr>
<td>Sexual orientation (SO)</td>
<td>.12 .13 .10</td>
<td>-.09 -.10 -.06</td>
<td>-.09 -.02 -.09</td>
<td>.13† .10 .08</td>
<td>-.03 -.02 .04</td>
</tr>
<tr>
<td>Group size</td>
<td>-.17** -.17** -.17**</td>
<td>.08 .09 .08</td>
<td>.10† .09† .09†</td>
<td>.06 .06 .06</td>
<td>.05 .05 .05</td>
</tr>
<tr>
<td>Peer familiarity</td>
<td>.11* .10† .10†</td>
<td>-.11* -.12* -.11*</td>
<td>-.02 -.02 -.01</td>
<td>.22** .22** .22**</td>
<td>-.05 -.05 -.05</td>
</tr>
<tr>
<td>Collective identity (CI)</td>
<td>-.11† -.10 -.07</td>
<td>-.02 -.01 -.05</td>
<td>-.07 -.02 -.09</td>
<td>.05 .10 .12</td>
<td>.10† .10 .05</td>
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<tr>
<td>Perceived dissimilarity (PD)</td>
<td>-.01 -.01 -.01</td>
<td>.17* .15† .14</td>
<td>.19* .25** .23*</td>
<td>-.26** -.28** -.27**</td>
<td>.15† .15† .14</td>
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<tr>
<td>Two-Way Interactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDxSO</td>
<td>.02 .05</td>
<td>.08 .02</td>
<td>-.15 -.22†</td>
<td>.08 .10</td>
<td>-.02 -.08</td>
</tr>
<tr>
<td>CIxSO</td>
<td>-.00 .10</td>
<td>-.00 -.16</td>
<td>-.06 -.30†</td>
<td>-.11 -.05</td>
<td>-.01 -.19</td>
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<tr>
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<td>-.11 -.05</td>
<td>-.14 -.24*</td>
<td>-.04 -.17</td>
<td>.02 .06</td>
<td>.01 -.09</td>
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<tr>
<td>Three-Way Interaction</td>
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<td></td>
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<tr>
<td>PDxSOxCI</td>
<td>-.18</td>
<td>.28</td>
<td>.42*</td>
<td>-.11</td>
<td>.32†</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.07 .08 .09</td>
<td>.05 .07 .08</td>
<td>.05 .06 .07</td>
<td>.12 .12 .12</td>
<td>.08 .08 .09</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.07 .01 .01</td>
<td>.05 .02 .01</td>
<td>.05 .01 .01</td>
<td>.12 .00 .00</td>
<td>.08 .00 .01</td>
</tr>
<tr>
<td>$\Delta F$</td>
<td>3.86** 1.21 .95</td>
<td>2.68** 2.01 2.38</td>
<td>2.26* 1.47 5.17*</td>
<td>6.26** .72 .35</td>
<td>4.19** .01 3.12†</td>
</tr>
</tbody>
</table>

Note. Continuous predictor variables were centered prior to analysis. Standardized coefficients are reported.

†$p < .10$. *$p < .05$. **$p < .01$. 

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Table 8

**Regression Analysis Testing the Simple Mediation Model between Perceived Sexual Orientation Dissimilarity (IV), Values Dissimilarity (Mediator) and Study Outcomes**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Informal Communication (n = 344-346)</th>
<th>Relationship Conflict (n = 344-346)</th>
<th>Task Conflict (n = 344-346)</th>
<th>Peer Relations (n = 344-346)</th>
<th>Withdrawal (n = 344-346)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta^a$   $\beta^b$   $\beta^c$</td>
<td>$\beta^a$   $\beta^b$   $\beta^c$</td>
<td>$\beta^a$   $\beta^b$   $\beta^c$</td>
<td>$\beta^a$   $\beta^b$   $\beta^c$</td>
<td>$\beta^a$   $\beta^b$   $\beta^c$</td>
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<tr>
<td>Controls and Predictors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.06      -.04      -.05</td>
<td>-.01*     -.04     .02</td>
<td>.07         -.04     .08</td>
<td>.07         -.04     .06</td>
<td>.07         -.04     .08</td>
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<tr>
<td>Race</td>
<td>.08       -.03      .09</td>
<td>.11       -.03     .13**</td>
<td>.05         -.03     .06</td>
<td>-.17**      -.03     -.19**</td>
<td>.17*       -.03     .18**</td>
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<tr>
<td>Sexual orientation (SO)</td>
<td>.08       -.16*     .09</td>
<td>-.09       -.16*    -.07</td>
<td>-.10        -.16*   -.07</td>
<td>.15*        -.16*   .10</td>
<td>.01        -.16*   .02</td>
</tr>
<tr>
<td>Group size</td>
<td>-.17**     -.04     -.17**</td>
<td>.08        -.04     .09†</td>
<td>.10†        -.04     .10†</td>
<td>.06         -.04     .05</td>
<td>.05         -.04     .05</td>
</tr>
<tr>
<td>Peer familiarity</td>
<td>.10       -.23**    .12*</td>
<td>-.12*      -.23**  -.07</td>
<td>-.03        -.23**  .02</td>
<td>.22**       -.23**  .15**</td>
<td>-.06        -.23**  -.04</td>
</tr>
<tr>
<td>Perceived dissimilarity (PD)</td>
<td>-.01†      .18*      -.03</td>
<td>.16*       .18*     .13†</td>
<td>.18*        .18*     .14†</td>
<td>-.26**      .18*     -.20**</td>
<td>.15†       .18*     .14†</td>
</tr>
<tr>
<td>Values dissimilarity</td>
<td>-----      -----     .07</td>
<td>-----      -----     .22**</td>
<td>-----      -----     .23**</td>
<td>-----      -----     -.34**</td>
<td>-----      -----     .08</td>
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<tr>
<td>$R^2$</td>
<td>.07        .07       .07</td>
<td>.05        .07       .10</td>
<td>.04         .07       .09</td>
<td>.11         .07       .22</td>
<td>.07         .07       .08</td>
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<tr>
<td>Model $F$</td>
<td>3.90**     4.52**    3.58**</td>
<td>3.21**     4.52**   5.56**</td>
<td>2.38**      4.52**   4.82**</td>
<td>7.13**      4.52**   13.82**</td>
<td>4.42**     4.52**   4.13**</td>
</tr>
</tbody>
</table>

**Note.** Standardized coefficients are reported.

$^a$Model 1 (IV $\rightarrow$ DV). $^b$Model 2 (IV $\rightarrow$ ME). $^c$Model 3 (IV+ ME $\rightarrow$ DV).

$^†p<.10$. $^*p<.05$. $^{**}p<.01$. 
Table 9

Hierarchical Regression Analysis Testing a Mediated Moderation Model between Perceived Sexual Orientation Dissimilarity (IV), Sexual Orientation (Moderator), Collective Identity (Moderator), Values Dissimilarity (Mediator) and Task Conflict

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1&lt;sup&gt;a&lt;/sup&gt; (n = 343-345)</th>
<th>Model 2&lt;sup&gt;b&lt;/sup&gt; (n = 343-345)</th>
<th>Model 3&lt;sup&gt;c&lt;/sup&gt; (n = 343-345)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Step 1</td>
<td>Step 2</td>
<td>Step 3</td>
</tr>
<tr>
<td></td>
<td>β</td>
<td>β</td>
<td>β</td>
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<tr>
<td>Controls and Predictors</td>
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<td>.07</td>
<td>.08</td>
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<tr>
<td>Race</td>
<td>.05</td>
<td>.04</td>
<td>.04</td>
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<tr>
<td>Sexual orientation (SO)</td>
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<td>.09</td>
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<td>Group size</td>
<td>.10&lt;sup&gt;†&lt;/sup&gt;</td>
<td>.09&lt;sup&gt;†&lt;/sup&gt;</td>
<td>.09&lt;sup&gt;†&lt;/sup&gt;</td>
</tr>
<tr>
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<td>-.02</td>
<td>-.01</td>
</tr>
<tr>
<td>Collective identity (CI)</td>
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<td>-.02</td>
<td>-.09</td>
</tr>
<tr>
<td>Perceived dissimilarity (PD)</td>
<td>.19&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.25**</td>
<td>.23*</td>
</tr>
<tr>
<td>Two-Way Interactions</td>
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<td></td>
<td></td>
</tr>
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<td>-.22</td>
<td>-.12</td>
</tr>
<tr>
<td>CIxSO</td>
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<td>-.30&lt;sup&gt;†&lt;/sup&gt;</td>
<td>.01</td>
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<tr>
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<td>-.17&lt;sup&gt;†&lt;/sup&gt;</td>
<td>-.05</td>
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<td>Three-Way Interaction</td>
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<td></td>
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</tr>
<tr>
<td>PDxSOxCI</td>
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<td>.12</td>
<td>.43&lt;sup&gt;*&lt;/sup&gt;</td>
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<td>.01</td>
</tr>
<tr>
<td>$\Delta F$</td>
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<td>1.47</td>
<td>5.12&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Note. Continuous predictor variables were centered prior to analysis. Standardized coefficients are reported.

<sup>a</sup>Model 1 (IV $\rightarrow$ DV). <sup>b</sup>Model 2 (IV $\rightarrow$ ME). <sup>c</sup>Model 3 (IV + ME $\rightarrow$ DV).

<sup>†</sup>p < .10. <sup>*</sup>p < .05. <sup>**</sup>p < .01.
Table 10

Hierarchical Regression Analysis Predicting LGB Respondents’ Study Outcomes from Perceived Sexual Orientation Dissimilarity and LGB Identity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Informal Communication (n=80)</th>
<th>Relationship Conflict (n=80)</th>
<th>Task Conflict (n=80)</th>
<th>Peer Relations (n=80)</th>
<th>Withdrawal (n=78)</th>
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<td>Step 1</td>
<td>Step 2</td>
<td>Step 1</td>
<td>Step 2</td>
<td>Step 1</td>
</tr>
<tr>
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<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
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<td>Gender</td>
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<td>-.12</td>
<td>.07</td>
<td>.09</td>
<td>-.01</td>
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<tr>
<td>Race</td>
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<td>.05</td>
<td>.10</td>
<td>.11</td>
<td>.01</td>
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<td>-.12</td>
<td>.04</td>
<td>.05</td>
<td>.08</td>
</tr>
<tr>
<td>Peer familiarity</td>
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<td>-.01</td>
<td>-.08</td>
<td>-.06</td>
<td>.04</td>
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<td>-.11</td>
<td>-.09</td>
<td>-.08</td>
<td>-.14</td>
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<td>.10</td>
<td>.10</td>
<td>-.03</td>
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<td>Two-Way Interaction</td>
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<td>.09</td>
<td>.04</td>
<td>-.05</td>
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<td>.07</td>
<td>.07</td>
<td>.04</td>
<td>.04</td>
<td>.03</td>
</tr>
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<td>$\Delta R^2$</td>
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<td>.00</td>
<td>.04</td>
<td>.00</td>
<td>.03</td>
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<td>$\Delta F$</td>
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<td>.16</td>
<td>.45</td>
<td>.51</td>
<td>.31</td>
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</table>

Note. Continuous predictor variables were centered prior to analysis. Standardized coefficients are reported.

†p < .10. *p < .05. **p < .01.
Table 11

Hierarchical Regression Analysis Predicting Heterosexual Respondents’ Study Outcomes from Perceived Sexual Orientation Dissimilarity and Heterosexual Identity (untransformed)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Informal Communication (n=260)</th>
<th>Relationship Conflict (n=260)</th>
<th>Task Conflict (n=260)</th>
<th>Peer Relations (n=260)</th>
<th>Withdrawal (n=260)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Step 1 β</td>
<td>Step 2 β</td>
<td>Step 1 β</td>
<td>Step 2 β</td>
<td>Step 1 β</td>
</tr>
<tr>
<td>Predictors and Controls</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
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<td>-.01</td>
<td>.10</td>
<td>.10</td>
<td>.12*</td>
</tr>
<tr>
<td>Race</td>
<td>.07</td>
<td>.07</td>
<td>.05</td>
<td>.04</td>
<td>-.18**</td>
</tr>
<tr>
<td>Group size</td>
<td>-.20**</td>
<td>-.20**</td>
<td>.10</td>
<td>.10</td>
<td>.07</td>
</tr>
<tr>
<td>Peer familiarity</td>
<td>.14*</td>
<td>.14*</td>
<td>-.02</td>
<td>-.02</td>
<td>.21**</td>
</tr>
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<td>Heterosexual identity (HI)</td>
<td>.07</td>
<td>.06</td>
<td>-.11†</td>
<td>-.11†</td>
<td>.11†</td>
</tr>
<tr>
<td>Perceived dissimilarity (PD)</td>
<td>.02</td>
<td>.02</td>
<td>.10</td>
<td>.11†</td>
<td>-.18**</td>
</tr>
<tr>
<td>Two-Way Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>PDxHI</td>
<td>-.02</td>
<td>.08</td>
<td>.06</td>
<td>.04</td>
<td>.06</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.08</td>
<td>.08</td>
<td>.07</td>
<td>.08</td>
<td>.13</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.08</td>
<td>.00</td>
<td>.07</td>
<td>.01</td>
<td>.13</td>
</tr>
<tr>
<td>$\Delta F$</td>
<td>3.73**</td>
<td>.08</td>
<td>3.26**</td>
<td>1.86</td>
<td>3.24**</td>
</tr>
</tbody>
</table>

Note. Continuous predictor variables were centered prior to analysis. Standardized coefficients are reported.

$p < .10. * p < .05. ** p < .01.$
Table 12

Hierarchical Regression Analysis Predicting Heterosexual Respondents’ Study Outcomes from Perceived Sexual Orientation Dissimilarity and Heterosexual Identity (transformed)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Informal Communication (n=260)</th>
<th>Relationship Conflict (n=260)</th>
<th>Task Conflict (n=260)</th>
<th>Peer Relations (n=260)</th>
<th>Withdrawal (n=260)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Step 1 β</td>
<td>Step 2 β</td>
<td>Step 1 β</td>
<td>Step 2 β</td>
<td>Step 1 β</td>
</tr>
<tr>
<td>Predictors and Controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.01</td>
<td>-.01</td>
<td>-.01</td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>Race</td>
<td>.07</td>
<td>.07</td>
<td>.12*</td>
<td>.04</td>
<td>-.18**</td>
</tr>
<tr>
<td>Group size</td>
<td>-.20**</td>
<td>-.20**</td>
<td>.10†</td>
<td>.04</td>
<td>.12*</td>
</tr>
<tr>
<td>Peer familiarity</td>
<td>.14*</td>
<td>.14*</td>
<td>-.10†</td>
<td>-.02</td>
<td>.21**</td>
</tr>
<tr>
<td>Heterosexual identity (HI)</td>
<td>.04</td>
<td>.03</td>
<td>.01</td>
<td>.04</td>
<td>.09</td>
</tr>
<tr>
<td>Perceived dissimilarity (PD)</td>
<td>.02</td>
<td>-.01</td>
<td>.12†</td>
<td>.19**</td>
<td>-.19**</td>
</tr>
<tr>
<td>Two-Way Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDxHI</td>
<td>-.03</td>
<td>.14*</td>
<td>.12†</td>
<td>-.02</td>
<td>.11†</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.08</td>
<td>.08</td>
<td>.06</td>
<td>.08</td>
<td>.13</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.08</td>
<td>.00</td>
<td>.06</td>
<td>.02</td>
<td>.13</td>
</tr>
<tr>
<td>$\Delta F$</td>
<td>3.61**</td>
<td>3.92**</td>
<td>3.17*</td>
<td>3.06**</td>
<td>6.01**</td>
</tr>
</tbody>
</table>

*Note. Continuous predictor variables were centered prior to analysis. Standardized coefficients are reported.

† $p < .10$. * $p < .05$. ** $p < .01$. 
### Hierarchical Regression Analysis Predicting LGB Respondents’ Study Outcomes from Perceived Sexual Orientation Dissimilarity and Collective Identity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Informal Communication (n=85)</th>
<th>Relationship Conflict (n=85)</th>
<th>Task Conflict (n=85)</th>
<th>Peer Relations (n=85)</th>
<th>Withdrawal (n=85)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>Step 2</td>
<td>Step 1</td>
<td>Step 2</td>
<td>Step 1</td>
</tr>
<tr>
<td>Predictors and Controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.15</td>
<td>-.18</td>
<td>.05</td>
<td>.06</td>
<td>-.04</td>
</tr>
<tr>
<td>Race</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>-.00</td>
</tr>
<tr>
<td>Group size</td>
<td>-.07</td>
<td>-.07</td>
<td>.03</td>
<td>.03</td>
<td>.07</td>
</tr>
<tr>
<td>Peer familiarity</td>
<td>.00</td>
<td>-.03</td>
<td>-.13</td>
<td>-.13</td>
<td>-.03</td>
</tr>
<tr>
<td>Collective identity (CI)</td>
<td>-.24*</td>
<td>-.21†</td>
<td>-.19†</td>
<td>-.20†</td>
<td>-.18</td>
</tr>
<tr>
<td>Perceived dissimilarity (PD)</td>
<td>-.03</td>
<td>-.06</td>
<td>.13</td>
<td>.15</td>
<td>.02</td>
</tr>
<tr>
<td>Two-Way Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDxCI</td>
<td>-.19</td>
<td>.06</td>
<td>.17</td>
<td>.17</td>
<td>-.05</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.11</td>
<td>.14</td>
<td>.07</td>
<td>.07</td>
<td>.04</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.11</td>
<td>.03</td>
<td>.07</td>
<td>.00</td>
<td>.04</td>
</tr>
<tr>
<td>$\Delta F$</td>
<td>1.64</td>
<td>2.87</td>
<td>.98</td>
<td>.30</td>
<td>.51</td>
</tr>
</tbody>
</table>

Note. Continuous predictor variables were centered prior to analysis. Standardized coefficients are reported.  
†$p < .10$. *$p < .05$. **$p < .01$.  

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Table 14

Regression Analysis Testing the Simple Mediation Model between Perceived Sexual Orientation Dissimilarity (IV), Values Dissimilarity (Mediator) and Study Outcomes for LGB Respondents Only

<table>
<thead>
<tr>
<th>Variable</th>
<th>Informal Communication (n = 85)</th>
<th>Relationship Conflict (n = 85)</th>
<th>Task Conflict (n = 85)</th>
<th>Peer Relations (n = 85)</th>
<th>Withdrawal (n = 85)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β^a</td>
<td>β^b</td>
<td>β^c</td>
<td>β^a</td>
<td>β^b</td>
</tr>
<tr>
<td>Controls and Predictors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.14</td>
<td>-.09</td>
<td>-.14</td>
<td>.06</td>
<td>-.09</td>
</tr>
<tr>
<td>Race</td>
<td>.07</td>
<td>-.06</td>
<td>0.07</td>
<td>.08</td>
<td>-.06</td>
</tr>
<tr>
<td>Group size</td>
<td>-.08</td>
<td>-.05</td>
<td>-.08</td>
<td>.01</td>
<td>-.05</td>
</tr>
<tr>
<td>Peer familiarity</td>
<td>-.01</td>
<td>-.08</td>
<td>-.01</td>
<td>.15</td>
<td>-.08</td>
</tr>
<tr>
<td>Perceived dissimilarity (PD)</td>
<td>-.08</td>
<td>.00</td>
<td>-.08</td>
<td>.09</td>
<td>.00</td>
</tr>
<tr>
<td>Values dissimilarity</td>
<td>-----</td>
<td>-----</td>
<td>.02</td>
<td>-----</td>
<td>-----</td>
</tr>
</tbody>
</table>

| R²                             | .06    | .02    | .06    | .04    | .02    | .10    | .01    | .02    | .09    | .14    | .02    | .22    |
| Model F                        | .94    | .25    | .78    | .61    | .25    | 2.54*  | .11    | .25    | 2.02*  | 2.54*  | .25    | 8.69** |

Note. Standardized coefficients are reported.

^aModel 1 (IV → DV). ^bModel 2 (IV → ME). ^cModel 3 (IV+ ME → DV).

^p < .10. ^* p < .05. ^** p < .01.
Table 15

Regression Analysis Testing the Simple Mediation Model between LGB Identity (IV), Perceived Sexual Orientation Dissimilarity (Mediator) and Study Outcomes for LGB Respondents\(^a\)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Controls and Predictors</th>
<th>Informal Communication (n=80)</th>
<th>Relationship Conflict (n=80)</th>
<th>Task Conflict (n=80)</th>
<th>Peer Relations (n=80)</th>
<th>Withdrawal (n=80)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β(^b)</td>
<td>β(^c)</td>
<td>β(^d)</td>
<td>β(^b)</td>
<td>β(^c)</td>
<td>β(^d)</td>
</tr>
<tr>
<td>Controls and Predictors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.13</td>
<td>.06</td>
<td>-.12</td>
<td>.08</td>
<td>.06</td>
<td>.07</td>
</tr>
<tr>
<td>Race</td>
<td>.06</td>
<td>-.04</td>
<td>.06</td>
<td>.09</td>
<td>-.04</td>
<td>.10</td>
</tr>
<tr>
<td>Group size</td>
<td>-.13</td>
<td>.08</td>
<td>-.12</td>
<td>.05</td>
<td>.08</td>
<td>.04</td>
</tr>
<tr>
<td>Peer familiarity</td>
<td>.01</td>
<td>-.08</td>
<td>-.00</td>
<td>-.09</td>
<td>-.08</td>
<td>-.08</td>
</tr>
<tr>
<td>LGB identity (GI)</td>
<td>-.11</td>
<td>.04</td>
<td>-.11</td>
<td>-.09</td>
<td>.04</td>
<td>-.09</td>
</tr>
<tr>
<td>Perceived dissimilarity (PD)</td>
<td>-----</td>
<td>-----</td>
<td>-.10</td>
<td>-----</td>
<td>-----</td>
<td>.10</td>
</tr>
<tr>
<td>(R^2)</td>
<td>.06</td>
<td>.03</td>
<td>.07</td>
<td>.03</td>
<td>.03</td>
<td>.04</td>
</tr>
<tr>
<td>Model (F)</td>
<td>.95</td>
<td>.40</td>
<td>.92</td>
<td>.41</td>
<td>.40</td>
<td>.45</td>
</tr>
</tbody>
</table>

Note. Standardized coefficients are reported.

\(^a\) Because a similar, non-significant pattern of results was found for collective identity, only data related to LGB identity are presented.

\(^b\) Model 1 (IV \(\rightarrow\) DV). \(^c\) Model 2 (IV \(\rightarrow\) ME). \(^d\) Model 3 (IV + ME \(\rightarrow\) DV).

\(^†\) \(p < .10. \) * \(p < .05. \) ** \(p < .01. \)
Table 16

*Hierarchical Regression Analysis Predicting Heterosexual Respondents’ Study Outcomes from Perceived Sexual Orientation Dissimilarity and Collective Identity*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Informal Communication (n=260)</th>
<th>Relationship Conflict (n=260)</th>
<th>Task Conflict (n=260)</th>
<th>Peer Relations (n=260)</th>
<th>Withdrawal (n=260)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Step 1 β</td>
<td>Step 2 β</td>
<td>Step 1 β</td>
<td>Step 2 β</td>
<td>Step 1 β</td>
</tr>
<tr>
<td>Predictors and Controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.02</td>
<td>-.02</td>
<td>-.00</td>
<td>-.00</td>
<td>.11†</td>
</tr>
<tr>
<td>Race</td>
<td>.08</td>
<td>.07</td>
<td>.13*</td>
<td>.11†</td>
<td>.04</td>
</tr>
<tr>
<td>Group size</td>
<td>-.20**</td>
<td>-.20**</td>
<td>.11†</td>
<td>.10†</td>
<td>-.17**</td>
</tr>
<tr>
<td>Peer familiarity</td>
<td>.14*</td>
<td>.14*</td>
<td>-.10†</td>
<td>-.10†</td>
<td>.21**</td>
</tr>
<tr>
<td>Collective identity (CI)</td>
<td>-.04</td>
<td>-.05</td>
<td>.05</td>
<td>.04</td>
<td>-.02</td>
</tr>
<tr>
<td>Perceived dissimilarity (PD)</td>
<td>.01</td>
<td>.01</td>
<td>.12*</td>
<td>.13*</td>
<td>.17**</td>
</tr>
<tr>
<td>Two-Way Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDxCI</td>
<td>-.03</td>
<td>-.13*</td>
<td>-.10</td>
<td>.03</td>
<td>-.05</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.08</td>
<td>.08</td>
<td>.10</td>
<td>.12</td>
<td>.07</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.08</td>
<td>.00</td>
<td>.10</td>
<td>.02</td>
<td>.07</td>
</tr>
<tr>
<td>$\Delta F$</td>
<td>3.63**</td>
<td>2.83**</td>
<td>4.14**</td>
<td>3.06**</td>
<td>5.95**</td>
</tr>
</tbody>
</table>

*Note. Continuous predictor variables were centered prior to analysis. Standardized coefficients are reported.

†p < .10. * p < .05. ** p < .01.*
Table 17

Regression Analysis Testing the Simple Mediation Model between Perceived Sexual Orientation Dissimilarity (IV), Values Dissimilarity (Mediator) and Study Outcomes for Heterosexual Respondents Only

<table>
<thead>
<tr>
<th>Variable</th>
<th>Informal Communication (n = 259-261)</th>
<th>Relationship Conflict (n = 259-261)</th>
<th>Task Conflict (n = 259-261)</th>
<th>Peer Relations (n = 259-261)</th>
<th>Withdrawal (n = 259-261)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(\beta^a)</td>
<td>(\beta^b)</td>
<td>(\beta^c)</td>
<td>(\beta^a)</td>
<td>(\beta^b)</td>
</tr>
<tr>
<td>Controls and Predictors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.02</td>
<td>-.02</td>
<td>-.02</td>
<td>-.01</td>
<td>-.02</td>
</tr>
<tr>
<td>Race</td>
<td>.07</td>
<td>-.05</td>
<td>.08</td>
<td>.13*</td>
<td>-.05</td>
</tr>
<tr>
<td>Group size</td>
<td>-.20**</td>
<td>-.04</td>
<td>-.20**</td>
<td>.11↑</td>
<td>-.04</td>
</tr>
<tr>
<td>Peer familiarity</td>
<td>.14*</td>
<td>-.29**</td>
<td>.17**</td>
<td>-.11↑</td>
<td>-.29**</td>
</tr>
<tr>
<td>Perceived dissimilarity</td>
<td>.01</td>
<td>.16**</td>
<td>-.01</td>
<td>.12↑</td>
<td>.16**</td>
</tr>
<tr>
<td>Values dissimilarity</td>
<td>------</td>
<td>------</td>
<td>.09</td>
<td>------</td>
<td>------</td>
</tr>
</tbody>
</table>

\(R^2\)                    | .08    | .12    | .09    | .06 | .12   | .10   | .07 | .12   | .09 | .12    | .12    | .19    | .06    | .12   | .06   |                |

Model F                    | 4.32** | 6.69** | 3.99** | 3.40** | 6.69** | 4.40** | 3.58** | 6.69** | 4.27** | 6.34** | 6.69** | 9.90** | 3.07** | 6.69** | 2.80** |

Note. Standardized coefficients are reported.

\(^a\)Model 1 (IV \(\rightarrow\) DV). \(^b\)Model 2 (IV \(\rightarrow\) ME). \(^c\)Model 3 (IV+ ME \(\rightarrow\) DV).

\(^\dagger\)p < .10. \(*\)p < .05. \(**\)p < .01.
Table 18

Hierarchical Regression Analysis Testing a Mediated Moderation Model between Perceived Sexual Orientation Dissimilarity (IV),
Collective Identity (Moderator), Values Dissimilarity (Mediator) and Relationship Conflict for Heterosexual Respondents Only

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Model 2&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Model 3&lt;sup&gt;d&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>(n=258)</td>
<td>(n=258)</td>
</tr>
<tr>
<td></td>
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<td>Step 2 β</td>
<td>Step 1 β</td>
</tr>
<tr>
<td>Predictors and Controls</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.00</td>
<td>-.00</td>
<td>-.04</td>
</tr>
<tr>
<td>Race</td>
<td>.13*</td>
<td>.11†</td>
<td>-.03</td>
</tr>
<tr>
<td>Group size</td>
<td>.11†</td>
<td>.10†</td>
<td>-.03</td>
</tr>
<tr>
<td>Peer familiarity</td>
<td>-.10†</td>
<td>-.10†</td>
<td>-.30**</td>
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<tr>
<td>Collective identity (CI)</td>
<td>.05</td>
<td>-.05</td>
<td>-.06</td>
</tr>
<tr>
<td>Perceived dissimilarity (PD)</td>
<td>.12*</td>
<td>.10</td>
<td>.16**</td>
</tr>
<tr>
<td>Two-Way Interaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDxCI</td>
<td></td>
<td>-.16*</td>
<td>-.06</td>
</tr>
<tr>
<td>Mediator</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Values dissimilarity</td>
<td></td>
<td>.19**</td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.06</td>
<td>.09</td>
<td>.13</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.06</td>
<td>.03</td>
<td>.13</td>
</tr>
<tr>
<td>ΔF</td>
<td>2.83**</td>
<td>4.14*</td>
<td>6.04**</td>
</tr>
</tbody>
</table>

Note. Continuous predictor variables were centered prior to analysis. Standardized coefficients are reported.

<sup>a</sup> Because a similar, non-significant pattern of results was found for heterosexual identity, only data related to collective identity are presented.
<sup>b</sup> Model 1 (IV → DV). <sup>c</sup> Model 2 (IV → ME). <sup>d</sup> Model 3 (IV + ME → DV).
<sup>†</sup> p < .10. <sup>*</sup> p < .05. <sup>**</sup> p < .01.
Table 19

Regression Analysis Testing the Simple Mediation Model between Heterosexual Identity (untransformed IV), Perceived Sexual Orientation Dissimilarity (Mediator) and Study Outcomes for Heterosexual Respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Informal Communication (n=260-262)</th>
<th>Relationship Conflict (n=260-262)</th>
<th>Task Conflict (n=260-262)</th>
<th>Peer Relations (n=260-262)</th>
<th>Withdrawal (n=260-262)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta^b )</td>
<td>( \beta^c )</td>
<td>( \beta^d )</td>
<td>( \beta^b )</td>
<td>( \beta^c )</td>
</tr>
<tr>
<td>Controls and Predictors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.01</td>
<td>.09</td>
<td>-.01</td>
<td>-.02</td>
<td>.09</td>
</tr>
<tr>
<td>Race</td>
<td>.07</td>
<td>-.02</td>
<td>.07</td>
<td>.14 ( ^{*} )</td>
<td>-.02</td>
</tr>
<tr>
<td>Group size</td>
<td>-.20 ( ^{**} )</td>
<td>.13 ( ^{*} )</td>
<td>-.20 ( ^{**} )</td>
<td>.12 ( ^{*} )</td>
<td>.13 ( ^{*} )</td>
</tr>
<tr>
<td>Peer familiarity</td>
<td>.14 ( ^{*} )</td>
<td>-.08</td>
<td>.14 ( ^{*} )</td>
<td>-.11 ( ^{*} )</td>
<td>-.08</td>
</tr>
<tr>
<td>Heterosexual identity (HI)</td>
<td>.06</td>
<td>-.21 ( ^{**} )</td>
<td>.07</td>
<td>-.13 ( ^{*} )</td>
<td>-.21 ( ^{**} )</td>
</tr>
<tr>
<td>Perceived dissimilarity (PD)</td>
<td>-----</td>
<td>-----</td>
<td>.02</td>
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</tr>
</tbody>
</table>

\( R^2 \) | .08 | .09 | .08 | .06 | .09 | .07 | .05 | .09 | .07 | .10 | .09 | .13 | .06 | .09 | .06 |

Model \( F \) | 4.46 \( ^{**} \) | 5.12 \( ^{**} \) | 3.73 \( ** \) | 3.29 \( ** \) | 5.12 \( ** \) | 3.26 \( ** \) | 2.54 \( ^{*} \) | 5.12 \( ** \) | 3.24 \( ** \) | 5.50 \( ** \) | 5.12 \( ** \) | 6.14 \( ** \) | 3.08 \( ** \) | 5.12 \( ** \) | 2.85 \( ** \) |

Note. Standardized coefficients are reported.

\( ^{a} \) Because a non-significant pattern of results was found for collective identity, only data related to heterosexual identity are presented.

\( ^{b} \) Model 1 (IV \( \rightarrow \) DV). \( ^{c} \) Model 2 (IV \( \rightarrow \) ME). \( ^{d} \) Model 3 (IV + ME \( \rightarrow \) DV).

\( ^{\dagger} p < .10. \) \( ^{*} p < .05. \) \( ^{**} p < .01. \)
Table 20

Regression Analysis Testing the Simple Mediation Model between Heterosexual Identity (transformed IV), Perceived Sexual Orientation Dissimilarity (Mediator) and Study Outcomes for Heterosexual Respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Informal Communication (n=260-262)</th>
<th>Relationship Conflict (n=260-262)</th>
<th>Task Conflict (n=260-262)</th>
<th>Peer Relations (n=260-262)</th>
<th>Withdrawal (n=260-262)</th>
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<td>Controls and Predictors</td>
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<tr>
<td>Gender</td>
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<td>βᵈ</td>
<td>βᵇ</td>
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<td>.07</td>
<td>.13*</td>
<td>-.03</td>
</tr>
<tr>
<td>Group size</td>
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<td>.13*</td>
<td>-.20**</td>
<td>.12†</td>
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</tr>
<tr>
<td>Peer familiarity</td>
<td>.14*</td>
<td>-.07</td>
<td>.14*</td>
<td>-.11†</td>
<td>-.07</td>
</tr>
<tr>
<td>Heterosexual identity (HI)</td>
<td>.04</td>
<td>-.13*</td>
<td>.04</td>
<td>-.07</td>
<td>-.13*</td>
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<tr>
<td>Perceived dissimilarity (PD)</td>
<td>-----</td>
<td>-----</td>
<td>.02</td>
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</tbody>
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<table>
<thead>
<tr>
<th></th>
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<td>.07</td>
<td>.06</td>
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</tr>
<tr>
<td>Race</td>
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<td>3.57**</td>
<td>2.88**</td>
<td>2.09†</td>
<td>3.57**</td>
<td>3.06**</td>
<td>5.07**</td>
<td>3.57**</td>
<td>6.01**</td>
<td>2.84*</td>
<td>3.57**</td>
<td>2.74**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Standardized coefficients are reported.

a Because a non-significant pattern of results was found for collective identity, only data related to heterosexual identity are presented.

b Model 1 (IV → DV). c Model 2 (IV → ME). d Model 3 (IV + ME → DV).

† p < .10. * p < .05. ** p < .01.
Appendix A

Electronic Message (Email) Cover Letter

Subject Line: Dissertation Help

Dear Professor,

I am writing to request your participation in a dissertation study on students’ experiences of working in collaborative groups with other students. Specifically, I am investigating students' reactions to and experience with group work undertaken as part of a course or degree requirement for school. This dissertation research is being conducted at Teachers College, Columbia University, under the supervision of Dr. Elissa Perry, Associate Professor of Psychology and Education. It has been approved by the Teachers College Institutional Review Board (#12-256).

The primary goal of my research is to examine how group and individual factors influence students’ perceptions of their workgroup. To that end, I am interested in your students’ experiences and am contacting you in the hope that you will help me recruit students from your respective classes to participate in my study. The students do not need to be working in a group in your specific class in order to be eligible to participate.

Please let me know if you are willing to assist me with my dissertation research. If so, I would like to arrange a 5 minute visit to your class to describe the study and distribute a sign up sheet for students who wish to participate. Conversely, I can also send you a message to forward to students in your classes that includes a link a survey, if that would be easier for you.

The survey should not take longer than 10 minutes to complete. Additionally, students’ privacy will be maintained throughout this process and their responses will be kept confidential. I am interested in looking at the data in the aggregate and am not interested in examining the responses of any specific students or any specific courses.

THANK YOU for your time and willingness to help me complete this study. If you have any questions or would like a copy of the study results, please do not hesitate to email me at fdg2102@columbia.edu. Your participation would be greatly appreciated and will really help me in completing my dissertation.

Sincerely,

Frank Golom
Doctoral Candidate, Social-Organizational Psychology
Teachers College, Columbia University
Fdg2102@columbia.edu
Appendix B

General Solicitation

Subject Line: Have You Worked as Part of a Group for a Class During the 2011-2012 Academic Year? Participate in this study to be eligible to win one of twenty $25 gift cards!

Dear Student,

At some point during our undergraduate and graduate careers, most of us are asked to complete group work of some kind in our classes. Despite their importance to our learning, these group experiences are often understudied.

I am writing to request your participation in a study investigating students' reactions to and experiences with group work undertaken as part of a course or degree requirement for school. This research is being conducted at Teachers College, Columbia University, under the supervision of Dr. Elissa Perry, Associate Professor of Psychology and Education, as part of my dissertation requirements. It has been approved by the Teachers College Institutional Review Board (#12-256).

The primary goal of my research is to examine how group and individual factors influence students’ perceptions of their workgroup. To that end, I am interested in your experiences and am contacting you in the hope that you will be willing to participate in this study. As a small token of appreciation, those who participate in the study will be eligible to enter a lottery to win one of twenty, $25 VISA gift cards.

Please click on the link below to be directed to the survey. It is relatively short and should take no longer than 10 minutes to complete:

Your participation in this study is entirely voluntary and your responses will be kept completely confidential. I am interested in looking at the data in the aggregate and am not interested in examining your specific responses in any way. If you have any questions or comments, please email me at fdg2102@columbia.edu.

THANK YOU for your time and consideration in completing the survey. Your participation is greatly appreciated and will hopefully shed important new light on the experience of working in collaborative student groups.

Sincerely,

Frank Golom
Doctoral Candidate, Social-Organizational Psychology
Teachers College, Columbia University
Fdg2102@columbia.edu
Appendix C

Targeted Solicitation

Subject Line: Group Experiences Study

Dear Student,

As Professor [insert last name] may have shared with you, I have asked him/her to invite you and your classmates to participate in a study I am conducting about the experience of working in collaborative student groups. At some point during our undergraduate and graduate careers, most of us are asked to complete group work of some kind in our classes. Despite their importance to our learning, these group experiences are often understudied.

I am investigating students’ reactions to and experiences with group work undertaken as part of a course or degree requirement for school. This research is being conducted at Teachers College, Columbia University, under the supervision of Dr. Elissa Perry, Associate Professor of Psychology and Education, as part of my dissertation requirements. It has been approved by the Teachers College Institutional Review Board (#12-256).

The primary goal of my research is to examine how group and individual factors influence students’ perceptions of their workgroup. To that end, I am interested in your experiences and am contacting you in the hope that you will be willing to participate in this study. As a small token of appreciation, those who participate in the study will be eligible to enter a lottery to win one of twenty, $25 VISA gift cards.

Please click on the link below to be directed to the survey. It is relatively short and should take no longer than 10 minutes to complete:

Your participation in this study is entirely voluntary and your responses will be kept completely confidential. I am interested in looking at the data in the aggregate and am not interested in examining your specific responses in any way. If you have any questions or comments, please email me at fdg2102@columbia.edu.

THANK YOU for your time and consideration in completing the survey. Your participation is greatly appreciated and will hopefully shed important new light on the experience of working in collaborative student groups.

Sincerely,

Frank Golom
Doctoral Candidate, Social-Organizational Psychology
Teachers College, Columbia University
Fdg2102@columbia.edu
Appendix D

List of Measures

Items below are written in the present tense. On the actual survey, these items were written in both the past and present tenses (e.g., were/are). A single asterisk (*) denotes that an item that was added by the principal investigator. A double asterisk (**) denotes an item that was amended. An (R) denotes an item that was reverse-coded. Struck-through items were removed from the scale based on findings from the reliability analyses (i.e., Cronbach’s alpha if item deleted).

Perceived dissimilarity (Cunningham, 2007)
Items rated on a 7-point scale: 1 (very dissimilar) to 7 (very similar)

How similar are you to other members of your workgroup with respect to…
1. Gender
2. Race
3. Age
4. Sexual orientation (R)
5. Religious affiliation
6. Socioeconomic status
7. Personal values (R)
8. Personality

Identity subscale of the Collective Self-Esteem Scale (Luhtanen & Crocker, 1992; α = .81)
Items are rated on a 7-point Likert scale: 1 (strongly disagree) to 7 (strongly agree).

1. The sexual orientation group I belong to is an important reflection of who I am.
2. In general, belonging to my sexual orientation group is an important part of my self-image.
3. Overall, my sexual orientation group membership has very little to do with how I feel about myself. (R)
4. The sexual orientation group I belong to is unimportant to my sense of what kind of person I am. (R)

Lesbian, gay, bisexual identity scale (Mohr & Fassinger, 2000; α = .88)
Items are rated on a 7-point Likert scale: 1 (strongly disagree) to 7 (strongly agree).

Homonegativity subscale
1. I would rather be straight if I could. (R)
2. I am glad to be an LGB person.
3. Homosexual lifestyles are not as fulfilling as heterosexual lifestyles. (R)
4. I’m proud to be part of the LGB community.
5. I wish I were heterosexual. (R)

Need for privacy subscale
1. I prefer to keep my same-sex romantic relationships rather private. (R)
2. I keep careful control over who knows about my same-sex romantic relationships. (R)
3. My private sexual behavior is nobody's business. (R)
4. If you are not careful about whom you come out to, you can get very hurt. (R)
5. I think very carefully before coming out to someone. (R)
6. My sexual orientation is a very personal and private matter. (R)

Need for acceptance subscale
1. I will never be able to accept my sexual orientation until all of the people in my life have accepted me. (R)
2. I often wonder whether others judge me for my sexual orientation. (R)
3. I can't feel comfortable knowing that others judge me negatively for my sexual orientation. (R)
4. Being an LGB person makes me feel insecure around straight people. (R)
5. I think a lot about how my sexual orientation affects the way people see me. (R)

Difficult process subscale
1. Coming out to my friends and family has been a very lengthy process. (R)
2. Admitting to myself that I'm an LGB person has been a very painful process. (R)
3. Developing as an LGB person has been a fairly natural process for me.
4. Admitting to myself that I'm an LGB person has been a very slow process. (R)
5. I have felt comfortable with my sexual identity just about from the start.

Heterosexual identity (Simoni & Walters, 2001; α = .93)
Items are rated on a 7-point Likert scale: 1 (strongly disagree) to 7 (strongly agree).

1. I do not understand what lesbians, gay men and bisexuals want from straight people. (R)
2. I feel as comfortable around lesbians, gay men and bisexuals as I do around straight people.
3. I involve myself in causes regardless of the sexual orientation of the people involved in them.
4. I feel depressed after I have been around lesbians, gay men and bisexuals. (R)
5. There is nothing that I want to learn from gay men, lesbians and bisexuals. (R)
6. I seek out new experiences even if I know a large number of lesbians, gay men and bisexuals will be involved in them.
7. I enjoy watching the different ways that gays/lesbians/bisexuals and straight people approach life.
8. I do not feel that I have the social skills to interact with lesbian, gay and bisexual individuals effectively. (R)
9. A gay, lesbian or bisexual person who tries to get close to you is usually after something. (R)
10. I used to believe that gay men, lesbians and bisexuals could live together and work closely together with straight people, but now I have my doubts. (R)
11. I’d rather socialize with straight people only. (R)
12. Lesbian/gay/bisexual people and straight people have much to learn from each other.
13. I limit myself to straight people’s activities. (R)
14. When I must interact with a lesbian, gay man or a bisexual person, I usually let him or her make the first move. (R)
15. I feel hostile when I am around gay men, lesbians and bisexuals. (R)
16. Gays/lesbians/bisexuals and straight people can have successful close relationships. Nowadays, I go out of my way to avoid associating with gay men, lesbians and bisexuals. (R)
18. I believe that lesbian, gay and bisexual individuals are inferior to straight people. (R)
19. When I am the only straight person in a group of lesbians, gay men and bisexuals, I feel anxious. (R).
20. Gays/lesbians/bisexuals and straight people differ from each other in some ways, but no one sexual orientation is superior.
21. I don’t understand why lesbians, bisexuals and gay men blame all straight people for their social misfortunes. (R)
22. I believe straight people look and express themselves better than gay people. (R)
23. I feel comfortable talking to lesbians, bisexuals and gay men.
24. I value the relationships that I have with my gay male, lesbian and bisexual friends.

Cohesion (Riordan & Shore, 1997; \(\alpha = .93\))
Items are rated on a 7-point Likert scale: 1 (strongly disagree) to 7 (strongly agree).

Most of the members of my workgroup:
1. Get along well with each other.
2. Respect each other.
3. Trust each other.
4. Do their fair share of the work.
5. Cooperate to get the job done.
6. Are willing to share ideas and information.
7. In my workgroup, there is strong teamwork.

Communication (Smith et al., 1994)
Frequency of communication (\(\alpha = .68\))
Items are rated on a 5-point scale: 1 (never) to 5 (daily)

Please indicate the frequency of:
1. Formal face-to-face meetings between you and other members of your workgroup.
2. Informal face-to-face meetings between you and other members of your workgroup.
3. Formal written communication between you and other members of your workgroup.
4. Informal written communication between you and other members of your workgroup.
5. Telephone conversations between you and other members of your workgroup.
6. Meetings involving more than one member (but less than all members) of your workgroup.

Degree of informality ($\alpha = .74$)
Items are rated on a 7-point Likert scale: 1 (strongly disagree) to 7 (strongly agree)

1. Workgroup meetings tend to be very formal in nature. (R)
2. Meetings between members of this workgroup are very informal.
3. Communication between members of this workgroup is always in writing. (R)
4. The workgroup employs informal rather than formal communication channels.

Conflict (Jehn et al., 1999)
Items are rated on a 5-point scale: 1 (none) to 5 (a great deal)

Relationship conflict ($\alpha = .92$)
1. How much emotional conflict is there among the members of your workgroup?
2. How much anger is there among the members of the workgroup?
3. How much personal friction is there in the workgroup during discussions?
4. How much are personality clashes between members of the workgroup evident?
5. How much tension is there in the workgroup during decisions?

Task conflict ($\alpha = .87$)
1. How much disagreement is there among the members of your workgroup over their opinions?
2. How many disagreements over different ideas are there?
3. How many differences about the content of decisions does the workgroup have to work through?
4. How many differences of opinion are there within the workgroup?

Quality of peer relations (Chattopadhyay, 1999; $\alpha = .89$)
Items are rated on a 7-point Likert scale: 1 (strongly disagree) to 7 (strongly agree)

Trust
1. The members of my workgroup approach their jobs with professionalism and dedication.
2. I can rely on my workgroup members not to make my job more difficult by careless work.
3. Given my workgroup’s track record, I can see no reason to doubt their competence and preparation.

Attraction
1. I like the members of my group very much.
2. I think I would enjoy socializing with members of my workgroup.
3. I would like to think of members of my workgroup as good friends.
Work withdrawal (Hanisch & Hulin, 1990; $\alpha = .62$)
Items are rated on a 5-point scale: 1 (never) to 5 (constantly)

1. How often do you make excuses to get out of workgroup meetings?
2. How often do you look at the clock or your watch during workgroup meetings?
3. How often do you do other unrelated work during your workgroup meetings?*
4. How often do you mentally check-out of workgroup meetings?*
5. How often do you text or email non-members during your workgroup meetings?*
6. How often are you late for workgroup meetings?
7. How often do you miss meetings of your workgroup?
8. How often do you think about leaving your workgroup for another group?
Appendix E

List of Control and Demographic Variables

Group size
Please indicate the total number of members in your workgroup, including you.

Peer familiarity
Please indicate whether you were assigned to work with or chose to work with the members of your workgroup (Assigned, Chosen).

Group tenure
Please indicate the number of weeks the members in your workgroup worked or have worked together.

Affiliation
Please indicate which school you attend (Teachers College, Columbia University, Columbia University, Other, please specify).

Simple demographic variables
Sexual orientation (Gay, Lesbian, Bisexual, Heterosexual/Straight, Other)
Race (White/Caucasian, Black/African-American, Hispanic/Latino, Asian/Pacific Islander, Native American/Alaskan Native, Biracial/Multiracial, Other)
Gender (Female, Male, Transgender, Other)
Age

Marker variable (Garling et al., 2003; $\alpha = .87$)
Items are rated on a 5-point scale: 1 (strongly disagree) to 5 (strongly agree)

1. I feel a moral obligation to protect the environment.
2. I feel that I should protect the environment.
3. I feel it is important that people in general protect the environment.
4. Our environmental problems cannot be ignored.
Appendix F

*Study Questionnaire*

Group Experiences Study

Thank you for agreeing to participate in this study on the experience of working in collaborative student groups. The questions in this study pertain to your reactions toward and experiences with group work undertaken as part of a course or degree requirement for school. They also include some items about how you see yourself relative to the workgroup. There are no right or wrong answers to any of the questions. You are encouraged to answer them as honestly as possible.

The survey consists of several sections and should take no longer than 10-15 minutes to complete. Your participation is completely voluntary and you may stop taking this survey at any time. No identifying information will be connected to your survey responses in any way. Additionally, all of your responses will be kept strictly confidential.

If at any time you have comments or concerns regarding the conduct of this research (Protocol #12-256) or questions about your rights as a research subject, you should contact the Teachers College, Columbia University Institutional Review Board / IRB. The phone number for the IRB is (212) 678-4105. Or, you can write to the IRB at Teachers College, Columbia University, 525 W. 120th Street, New York, NY, 10027, Box 151.

Thank you in advance for your participation!

Sincerely,

Frank Golom
Doctoral Candidate, Social-Organizational Psychology
Teachers College, Columbia University
Fdg2102@columbia.edu

By clicking yes below, you agree to participate in the current study.

☐ Yes
☐ No
Before you proceed, please create an anonymous code using the instructions below. Only you will know your unique code, thereby ensuring that your responses will be completely anonymous.

First enter the first two letters of your mother’s first name. (e.g., LO)  
Then, enter the last two letters of your father’s first name. (e.g., DA)  
Last, enter the day you were born (two digits). (05)

In the example above, the full code would be LODA05. Please enter your full unique code in the space below.
To be eligible to participate in the current study, you need to have worked or be currently working as part of a 3 - 8 person group in at least one of your courses during the last academic year (September 1, 2011 through August 31, 2012). This includes Fall 2011, Spring 2012 and Summer 2012. The group should have been responsible for producing one or more tangible pieces of work during your time together (e.g., case study, report, paper, presentation, research, in-class assignments, etc).

Given the description above, please indicate whether you are eligible to participate in the current study?
- Yes
- No
Next, please choose one student workgroup that you were a member of during the last academic year (September 1, 2011 through August 31, 2012) that meets the eligibility requirements on the previous page.

You will be asked to answer a number of questions in this survey based on your experience of working in this group.

To remind yourself what your experience in the group was or is like, please take a moment to think about your work with this group. When you are done, describe the group briefly in the space below. Write as much or as little as you need to recall your experiences as a group member.
Please rate how strongly you agree or disagree with each of the following statements.

Most of the members of my workgroup:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Got/get along well with each other.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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</tr>
<tr>
<td>Respected/respect each other.</td>
<td>○</td>
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<td>○</td>
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<tr>
<td>Trusted/trust each other.</td>
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<tr>
<td>Did/do their fair share of the work.</td>
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<td>○</td>
<td>○</td>
<td>○</td>
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<td>○</td>
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<tr>
<td>Cooperated/cooperate to get the job done.</td>
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<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Were/are willing to share ideas and information.</td>
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<td>○</td>
<td>○</td>
<td>○</td>
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</table>

In my workgroup, there was/is strong teamwork.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
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</table>
Please indicate the frequency with which you and members of your workgroup engaged/engage in the following behaviors, on average.

Formal face-to-face meetings between you and other members of your workgroup.
- Never
- Once or twice a semester
- Once or twice a month
- Once or twice a week
- Daily

Informal face-to-face meetings between you and other members of your workgroup.
- Never
- Once or twice a semester
- Once or twice a month
- Once or twice a week
- Daily

Formal written communication between you and other members of your workgroup.
- Never
- Once or twice a semester
- Once or twice a month
- Once or twice a week
- Daily

Informal written communication between you and other members of your workgroup.
- Never
- Once or twice a semester
- Once or twice a month
- Once or twice a week
- Daily

Telephone conversations between you and other members of your workgroup.
- Never
- Once or twice a semester
- Once or twice a month
- Once or twice a week
- Daily
Meetings involving more than one member (but less than all members) of your workgroup.

- Never
- Once or twice a semester
- Once or twice a month
- Once or twice a week
- Daily

Please rate how strongly you agree or disagree with each of the following statements.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workgroup meetings tended/tend to be very formal in nature.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Meetings between members of this workgroup were/are very informal.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Communication between members of this workgroup was/is always in writing.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>The workgroup employed/employs informal rather than formal communication channels.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Please answer each of the following questions using the scale provided.

How much emotional conflict was/is there among the members of your workgroup?
- None
- A little
- Some
- A fair amount
- A great deal

How much anger was/is there among the members of the workgroup?
- None
- A little
- Some
- A fair amount
- A great deal

How much personal friction was/is there in the workgroup during discussions?
- None
- A little
- Some
- A fair amount
- A great deal

How much were/are personality clashes between members of the workgroup evident?
- None
- A little
- Some
- A fair amount
- A great deal

How much tension was/is there in the workgroup during decisions?
- None
- A little
- Some
- A fair amount
- A great deal
How much disagreement was/is there among the members of your workgroup over their opinions?
☐ None
☐ A little
☐ Some
☐ A fair amount
☐ A great deal

How many disagreements over different ideas were/are there?
☐ None
☐ A little
☐ Some
☐ A fair amount
☐ A great deal

How many differences about the content of decisions did/does the workgroup have to work through?
☐ None
☐ A little
☐ Some
☐ A fair amount
☐ A great deal

How many differences of opinion were/are there within the workgroup?
☐ None
☐ A little
☐ Some
☐ A fair amount
☐ A great deal
Please rate how strongly you agree or disagree with each of the following statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The members of my workgroup approached/approach their jobs with professionalism and dedication.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I relied/rely on my workgroup members not to make my job more difficult by careless work.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Given my workgroup’s track record, I saw/see no reason to doubt their competence and preparation.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I liked/like the members of my group very much.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I enjoyed/enjoy socializing with members of my workgroup.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I thought/think of members of my workgroup as good friends.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Please answer each of the following questions using the scale provided.

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Constantly</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often did/do you make excuses to get out of workgroup meetings?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often did/do you look at the clock or your watch during workgroup meetings?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often did/do you do other unrelated work during your workgroup meetings?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often did/do you mentally check-out of workgroup meetings?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often did/do you text or email other non-group members during your workgroup meetings?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often were/are you late for workgroup meetings?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often did/do you miss meetings of your workgroup?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How often did/do you think about leaving your workgroup for another group?

| How similar were/are you to other members of your workgroup with respect to... |
|---------------------------------|--------|--------|-----------------|------------------|------------------|------------------|--------|
|                                | Very dissimilar | Dissimilar | Somewhat dissimilar | Neither dissimilar nor similar | Somewhat similar | Similar | Very similar |
| Gender                         | ○      | ○      | ○                | ○                             | ○                | ○                 | ○      |
| Race                           | ○      | ○      | ○                | ○                             | ○                | ○                 | ○      |
| Age                            | ○      | ○      | ○                | ○                             | ○                | ○                 | ○      |
| Sexual orientation             | ○      | ○      | ○                | ○                             | ○                | ○                 | ○      |
| Religious affiliation          | ○      | ○      | ○                | ○                             | ○                | ○                 | ○      |
| Socioeconomic status           | ○      | ○      | ○                | ○                             | ○                | ○                 | ○      |
| Personal values                | ○      | ○      | ○                | ○                             | ○                | ○                 | ○      |
| Personality                    | ○      | ○      | ○                | ○                             | ○                | ○                 | ○      |
Please indicate whether your workgroup is still working together or has completed its work.
- The group is still working together
- The group has completed its work and no longer works together

Please indicate the number of weeks the members in your workgroup worked or have worked together. Please use a number (e.g., 5). Do not spell it out in words.

Please indicate the number of members in your workgroup, including you. Please use a number (e.g., 5). Do not spell it out in words.

In general, please indicate whether you were assigned to work with or chose to work with the members of your workgroup.
- Group members were assigned to work together (e.g., by an instructor/TA)
- Group members chose to work together
- Other ____________________

What is your student status?
- Undergraduate student
- Graduate student
- Other ____________________

Which college or university do you attend (or did you attend when you were in the workgroup you selected)?
- Teachers College, Columbia University
- Columbia University
- Other ____________________

What is your racial/ethnic background?
- White/Caucasian
- Black/African-American
- Hispanic/Latino
- Asian/Pacific Islander
- Native American/Alaskan Native
- Biracial/Multiracial
- Other ____________________

How old are you? Please use a number (e.g., 25). Do not spell it out in words.
What is your gender?
- Male
- Female
- Transgender
- Other ____________________

What is your sexual orientation?
- Gay
- Lesbian
- Bisexual
- Straight/Heterosexual
- Other ____________________
The next set of questions are intended to ask you about your identity and how you see yourself in the world. Please rate how strongly you agree or disagree with each of the statements.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The sexual orientation group I belong to is an important reflection of who I am.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>In general, belonging to my sexual orientation group is an important part of my self-image.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Overall, my sexual orientation group membership has very little to do with how I feel about myself.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>The sexual orientation group I belong to is unimportant to my sense of what kind of person I am.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>The racial group I belong to is an important</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Reflection of who I am. Overall, my racial group membership has very little to do with how I feel about myself.</td>
<td></td>
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</tr>
<tr>
<td><img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In general, belonging to my gender group is an important part of my self-image.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The gender group I belong to is unimportant to my sense of what kind of person I am.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The university I belong to is an important reflection of who I am. Overall, being a member of my university has very little to do with how I feel about myself.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /> <img src="path_to_circles" alt="Circle Symbols" /></td>
</tr>
</tbody>
</table>
The next set of questions have been auto-generated by the survey to ask you about one randomly selected aspect of your identity (e.g., your race, gender or sexual orientation). Please rate how strongly you agree or disagree with each of the statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I prefer to keep my same-sex romantic relationships rather private.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>I will never be able to accept my sexual orientation until all of the people in my life have accepted me.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>I would rather be straight if I could.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Coming out to my friends and family has been a very lengthy process.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>I keep careful control over who knows about my same-sex romantic relationships.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>I often wonder whether others judge me for my sexual orientation.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>I am glad to be an LGB person.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
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<td>---</td>
<td>---</td>
</tr>
<tr>
<td>My private sexual behavior is nobody's business.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can't feel comfortable knowing that others judge me negatively for my sexual orientation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homosexual lifestyles are not as fulfilling as heterosexual lifestyles.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Admitting to myself that I'm an LGB person has been a very painful process.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If you are not careful about whom you come out to, you can get very hurt.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being an LGB person makes me feel insecure around straight people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I'm proud to be part of the LGB community.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Developing as an LGB person has been a fairly natural process for me. I think very carefully before coming out to someone. I think a lot about how my sexual orientation affects the way people see me. Admitting to myself that I'm an LGB person has been a very slow process. My sexual orientation is a very personal and private matter. I wish I were heterosexual. I have felt comfortable with my sexual identity just about from the start.
The next set of questions have been auto-generated by the survey to ask you about one randomly selected aspect of your identity (e.g., your race, gender or sexual orientation). Please rate how strongly you agree or disagree with each of the statements.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
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<th>Neither Agree nor Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not understand what lesbians, gay men and bisexuals want from straight people.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>I feel as comfortable around lesbians, gay men and bisexuals as I do around straight people.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>I involve myself in causes regardless of the sexual orientation of the people involved in them.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>I feel depressed after I have been around lesbians, gay men and bisexuals.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>There is nothing that I want to learn from gay men, lesbians and bisexuals.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>I seek out new experiences even if I know a large number of lesbians, gay men and bisexuals will be involved in them.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>I enjoy watching the different ways that gays/lesbians/bisexuals and straight people approach life.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>I do not feel that I have the social skills to interact with lesbian, gay and bisexual individuals effectively.</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>A gay, lesbian or</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
</tbody>
</table>
bisexual person who tries to get close to you is usually after something.

I used to believe that gay men, lesbians and bisexuals could live together and work closely together with straight people, but now I have my doubts.

I’d rather socialize with straight people only.

Lesbian/gay/bisexual people and straight people have much to learn from each other.

I limit myself to straight people’s activities.

When I must interact with a lesbian, gay man or a bisexual person, I usually let him or her make the first move.

I feel hostile when I am around gay men, lesbians and bisexuals.

Gays/lesbians/bisexuals and straight people can have successful close relationships.

Nowadays, I go out of my way to avoid associating with gay men, lesbians and bisexuals.

I believe that lesbian, gay and bisexual individuals are inferior to straight people.

When I am the only straight person in a group of lesbians, gay men and bisexuals, I feel anxious.
Gays/lesbians/bisexuals and straight people differ from each other in some ways, but no one sexual orientation is superior.

I don’t understand why lesbians, bisexuals and gay men blame all straight people for their social misfortunes.

I believe straight people look and express themselves better than gay people.

I feel comfortable talking to lesbians, bisexuals and gay men.

I value the relationships that I have with my gay male, lesbian and bisexual friends.
This section contains four additional questions about your views on the environment. We are interested in whether people's environmental attitudes impact their work with others. Please rate how strongly you agree or disagree with each of the statements.

I feel a moral obligation to protect the environment.
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I feel that I should protect the environment.
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I feel it is important that people in general protect the environment.
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Our environmental problems cannot be ignored.
- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

THIS IS THE END OF THE SURVEY. PLEASE CLICK THE NEXT BUTTON TO SUBMIT YOUR ANSWERS.

ONCE YOU CLICK NEXT YOU WILL NOT BE ABLE TO RETURN TO THE SURVEY AGAIN.
Thank you for participating in this survey research. Your involvement is greatly appreciated. The specific aim of the current study is to investigate whether the demographic differences between members of a workgroup influence individuals' perceptions of the group's process and their behavior in it. The study also examines whether identification with specific demographic groups impacts this relationship between dissimilarity and group process outcomes.

Please note that all of your responses to the questions in this survey will be kept confidential and will only be used for this research. If you have any further questions or concerns about this project, please feel free to contact me, Frank Golom, at fdg2102@columbia.edu.

Additionally, as a token of my appreciation for your participation in the study, you are eligible to receive one of twenty $25 VISA gift cards. You may click on the link below to be redirected to a separate website to enroll in the gift card lottery. You may also visit this link to enter your name, email address and course information if you were offered extra credit by your instructor as part of your participation.

Your responses to the previous survey items will not be connected to the information you provide at this link in any way.

https://docs.google.com/a/tc.columbia.edu/spreadsheet/viewform?formkey=dGRoNmJaR3hScWJvU3BfX21vX2RVcVE6MQ

THANK YOU AGAIN FOR YOUR PARTICIPATION!!!