Relationally Constructing Sexual Identity: The Effect of Friendship Networks on Same-Sex Sexuality Development

Alena Kuhlemeier
Alena Kuhlemeier
Candidate

Sociology
Department

This thesis is approved, and it is acceptable in quality and form for publication:

Approved by the Thesis Committee:

Dr. Kristin Barker, Chairperson

Dr. Brian Soller

Dr. Kimberly Huyser
RELATIONALLY CONSTRUCTING SEXUAL IDENTITY: THE EFFECT OF FRIENDSHIP NETWORKS ON SAME-SEX SEXUALITY DEVELOPMENT

by

Alena Kuhlemeier

B.A. Sociology, Pomona College, 2011

THESIS

Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts Sociology

The University of New Mexico
Albuquerque, New Mexico

December 2015
ACKNOWLEDGMENTS

I would like to thank each of my committee members for all of the time and effort they put in over the last year in helping me develop and hone my project. Their guidance and support was invaluable and helped instill in me the confidence that I had an important story to tell and the skills to tell that story. Having a fellow graduate student to work with and an unfailingly supportive friend to push me across the finish line was also a necessary part of this process. Thank you, Rose, for so generously filling both of those roles.
RELATIONALLY CONSTRUCTING SEXUAL IDENTITY: THE EFFECT OF FRIENDSHIP NETWORKS ON SAME-SEX SEXUALITY DEVELOPMENT

by

Alena Kuhlemeier

B.A. Sociology, Pomona College, 2011
M.A., Sociology, University of New Mexico, 2015

ABSTRACT

Drawing upon social network and sexual identity literature, this study investigates the extent to which social integration can influence the development of non-normative sexuality. Existing literature demonstrates the significance of social support in predicting health outcomes. This study seeks to broaden existing understandings of the importance of friendships to encompass their influence on identity development among adolescents questioning their sexual identity. Specifically, this study uses logistic regression to analyze data from two waves of the National Longitudinal Study of Adolescent Health. Logistic analyses examine the interactive effects of adolescent same sex attraction and each of three distinct friendship network variables on whether or not an individual adopted a non-normative sexual identity in adulthood. Next, the same analyses were performed with each set of results disaggregated by gender. Finally, friendship variable interactions were reexamined using multinomial logistic regression and a categorical construction of the dependent variable.
Results indicate that respondents who report same-sex attraction are increasingly likely to adopt a non-normative identity as the number of people who nominate the respondent as a friend increases. This finding was driven by male respondents. The number of friend nominations was an insignificant predictor among female respondents. Female respondents were, instead, more highly influenced by the extent to which their closest friendships were reciprocated. This study’s findings point to the importance of further investigating the relationship between social network characteristics and processes of identity formation among adolescents.
TABLE OF CONTENTS

LIST OF FIGURES ............................................................................................................. vii
LIST OF TABLES ................................................................................................................ viii
INTRODUCTION ..................................................................................................................... 1
BACKGROUND AND CONCEPTUAL FRAMEWORK ............................................................. 3
    Identity Formation in Adolescence .................................................................................. 3
    The Dual Role of Friendship in Identity Formation ....................................................... 6
    The Gendered Nature of Social Support within Friendships ........................................... 11
    Friendship in the Context of Non-Normative Sexual Identity Development ............. 13
CURRENT STUDY ................................................................................................................... 16
DATA AND METHODS ........................................................................................................... 18
    Sample ............................................................................................................................. 18
    Dependent Variable ....................................................................................................... 19
    Independent Variables ................................................................................................. 21
    Control Variables .......................................................................................................... 23
    Analytic Strategy ............................................................................................................ 24
RESULTS .............................................................................................................................. 26
    Descriptive Statistics for Logistic Models ...................................................................... 26
    Logistic Regression Results ........................................................................................... 27
    Bivariate Results for Multinominal Logistic Models ...................................................... 35
    Multinominal Logistic Regression Results ..................................................................... 37
DISCUSSION .......................................................................................................................... 43
REFERENCES ......................................................................................................................... 49
LIST OF FIGURES

Figure 1: Adjusted Predictions of Non-Normative Sexual Identity Across Number of Friendship Nominations (Male) ................................................................. 32

Figure 2: Adjusted Predictions of Non-Normative Sexual Identity Across Types of Friendship Reciprocity (Female) ................................................................. 34
LIST OF TABLES

Table 1: Means/Proportions of Analytic Variables in Logistic Regression,
By Gender ........................................................................................................26

Table 2: Coefficients and Standard Errors from Logistic Regression
Models Predicting Non-Normative Sexual Identity, All Genders ..................28

Table 3: Coefficients and Standard Errors from Logistic Regression
Models Predicting Non-Normative Sexual Identity, Men ..........................31

Table 4: Coefficients and Standard Errors from Logistic Regression
Models Predicting Non-Normative Sexual Identity, Women ......................33

Table 5: Means/Proportions of Analytic Variables in Multinomial Logistic
Regression, By Sexual Identity ........................................................................36

Table 6: Coefficients and Standard Errors from Multinomial Logistic
Regression Models Predicting Sexual Identity by Friendship Reciprocity ....38

Table 7: Coefficients and Standard Errors from Multinomial Logistic
Regression Models Predicting Sexual Identity by In-Degree .........................40

Table 8: Coefficients and Standard Errors from Multinomial Logistic
Regression Models Predicting Sexual Identity by Centrality .........................41
INTRODUCTION

Research from a diverse array of fields has found a strong link between social integration, friendship, and measures of health and well-being (Dumont and Provost 1999; Kawachi and Berkman 2001; Hartling 2008). This link is even more pronounced among individuals who identify as lesbian, gay, or bisexual (LGB) (Gillespie, Frederick, Harari, and Grov 2015). The epidemic levels of mental and behavioral health issues facing LGB communities, and LGB adolescents in particular, is often attributed to the extreme stigma and associated social isolation that are faced by many of those who adopt a normative sexual identity (Cochran, Sullivan, and Mays 2003).

It has been much less common for researchers to seek out the links between social integration and processes of sexual identity formation. Particularly among adolescents, theorists have proposed that friendship and peer association are pivotal aspects of growth and identity development in this period. But research has neglected attempts to empirically test this theory among adolescents questioning their sexuality and navigating the processes of adopting a non-normative sexual identity. This study seeks to remedy this omission in the scholarship by using high school social network data to examine the extent to which friendships are an important part of understanding how individuals that report experiencing a same-sex attraction in high school come to adopt or reject a non-heterosexual identity as an adult.

Sociologists have long argued that identity is an aspect of human experience that is rarely biologically determined or immutable, and is often socially and interpersonally constructed. Despite having a rich history in sociological thought, this approach has not gained much traction in popular understandings of sexuality and sexual orientation
Supporters of LGB rights frequently challenge the notion of homosexuality or queerness as a chosen status or controllable, arguing instead that it should be understood as biological or genetic in origin, and thus an uncontrollable aspect of one’s identity (Haider-Markel and Joslyn 2008). In constructing this dichotomy regarding the sources of non-heterosexuality, societal understandings have failed to account for the role of social integration and friendship in enabling or inhibiting the development of a non-normative sexual identity.

By combining network data that describes high school peer associations with follow-up information on sexual identity collected thirteen years later, this study uses a longitudinal perspective to establish the importance of expanding current understandings of the social construction of sexuality. Sociologists often conceive of the social construction of sexuality solely in terms of its historically or structurally situated meanings (Foucault 1990). It is also possible to view sexuality as socially constructed at the level of individual identity. I propose viewing identity development or the prevention of that development, in and of itself, to be fundamentally influenced by an individual’s level of social connectedness and integration.

Elaborating this connection between peer relationships and identity development has the potential to greatly expand our understanding of the interconnected ways in which social support and social integration inform health outcomes of all kinds among LGB youth. In exploring possible determinants of whether LGB identity is facilitated or stifled among youth, researchers can inform the efforts of those working with these communities in the areas of both prevention and treatment of the mental and behavioral health disorders that frequently plague LGB communities (Cochran et al. 2003).
BACKGROUND AND CONCEPTUAL FRAMEWORK

Identity Formation in Adolescence

Adolescence has long been proposed as the period in which people actively construct a coherent identity around those aspects of themselves that they, as individuals, and society hold most significant. Specifically, identity formation in this period is focused on investigating opportunities for development “in the areas of love, work, and worldviews” (Arnett 2000). Generally, adolescents and young adults use the liminality of this period, and the associated mix of freedom and safety that accompanies it in our current cultural context, to explore one’s beliefs and attitudes and piece together a sense of self (Arnett 2000; Settersten and Ray 2010).

Identity development scholarship points to the importance of this period for constructing all aspects of one’s identity, but the exploration of sexual identity is particularly salient in this period for many adolescents and young adults. Although the exploration of any type of sexuality among adolescents carries with it a certain degree of cultural discomfort, adolescent exploration of same-sex oriented sexuality is particularly fraught. Consistently, empirical evidence has demonstrated that individuals that identify as LGB (lesbian, gay, bisexual) face severe stigma on both a structural and an interpersonal level (Friend 1998; Filax 2003; Lyons et al. 2011; Hatzenbuehler 2014).

The stigma that these individuals endure is frequently compounded by the overlapping contexts of high school and adolescence. LGB youth in high school are victimized and discriminated against at alarmingly high rates (Chesir-Teran and Hughes 2009; Wilkinson and Pearson 2009; Kosciw et al. 2012). This atmosphere of hostility can
represent a source of profound disconnection for individuals questioning their sexuality.

Judith Jordan (1995:2) describes the causes of this disconnection thusly,

the divisive and fragmenting forces in the culture that push people into shame and isolation. Importantly among these forces are racism, sexism, heterosexism, ageism, and classism; all of the judgments which render groups marginalized, denigrated, or objectified contribute to an experience of disconnection and isolation.

Other scholars have posited that the mechanism through which these divisive forces produce disconnection between marginalized communities and larger society is in the way that these forces perpetuate structural and interpersonal stigma that erode social support and the resources that flow from that support (Link and Phelan 2001; Illingworth and Murphy 2004; Williams et al. 2005). This type of chronic disconnection has significant implications for stigmatized individuals’ sense of self-worth, and even more concretely, for their physical and mental health (Jordan 1992; Jordan 2001; Hartling 2008).

But active discrimination, and the disconnection it produces, are not the only ways in which LGB youth are marginalized in high school. High schools often represent microcosms of the larger society, and reproduce the invisibility of queer lives and narratives such that, “the culture of silence that shrouds the lives of queer people also shrouds queer youth in schools” (Filax 2003: 149). This invisibility or silencing of LGB voices, experiences, and narratives necessarily constricts the resources available to LGB and questioning youth who are trying to make sense of non-normative sexual feelings and experiences. Normative ideas of sexuality “shape young people’s recognition and interpretations of attractions to same-sex peers or may encourage young people to deny or suppress same-sex attraction” (Wilkinson and Pearson 2013: 183-4). Without friends
and role models who have gone through non-normative sexual identity development, adolescents are left with little opportunity to construct and identity from inchoate feelings of same-sex romantic attraction.

Sexual identity formation is a process that is not only highly contingent on its structural context, but also on gender dynamics. Scholars have argued that women’s same-sex sexuality should be considered to be fundamentally different from and more fluid than men’s (Diamond 2008). Thus, the developmental pathways to same-sex sexuality that operate for members of each gender should also be considered separately. Adolescent girls have been found to be more likely to ignore sexual feelings compared to adolescent boys, in part due to cultural messages that discourage or demonize female sexuality (Diamond 2008; Wilkinson and Pearson 2013). By ignoring these feelings, girls are often not able to identify their sexual feelings and sexualities until later ages, compared to boys.

This delay has also been noted in terms of girls identifying any nascent feelings of same-sex sexuality. Often, “gay men recall childhoods characterized by gender atypicality, ‘feelings of differentness,’ and early same-sex attractions, fewer lesbian/bisexual women recall such experiences” (Diamond 2008: 49). When women do begin to experience same-sex attraction, they are more likely to express an emotional, rather than physical, attraction to another woman. Among men, physically-based same-sex attraction is more commonly reported. This gender difference in recognizing same-sex sexuality has been attributed to greater variability in women’s sexual attractions compared to men’s. Women’s sexual development is characterized by a much less linear process than has been observed among men.
The more fluid, contextual, and emotionally-based nature of female same-sex sexuality and the more linear and physical nature of male same-sex sexuality has potentially profound implications for those who are experiencing this developmental process and grappling with integrating nascent feelings of attraction into a coherent identity.

*The Dual Role of Friendship in Identity Formation*

Clearly, high school context and gender are significant factors in understanding the development of non-normative sexual identity, but friendships and peer networks also play an important role. Scholars have posited that friendships are of profound significance to adolescent development to the extent that they serve two main functions. Friendships both act as a source of support for adolescents and as a source of reference or role model (Lyons et al. 2011). Each of these functions has substantial implications for adolescents’ processes of identity construction and development. The support of significant others can facilitate the maintenance of an emotional space that is affirming and has positive effects on an individual’s sense of self-esteem and self-worth. Friends’ function as a source of reference for adolescents is also profoundly impactful to the extent that friends provide models that an adolescent can use to understand themselves and their experiences, to help shape their own attitudes, beliefs, and behaviors, and to construct an identity and sense of self.

Friendships are frequently considered an important part of an adolescent’s life insofar as they act as a source of reference for the adolescent in constructing their attitudes, beliefs, and behaviors. For decades, social learning theorists have argued that
individuals learn from and model themselves on the people with whom they interact and respect the most (Bandura 1977; Lyons et al. 2011). In discussion of the importance of friends for those engaging in non-normative sexuality development, the focus is exclusively on friends’ function as role models (Rowe 2014).

Social factors are assumed to influence one’s identity only in terms of the way an individual enacts that identity. Regarding the results of his study of gay men’s autobiographical narratives, Rowe (2014:445) wrote,

In stories about relationships with friends, lovers, and colleagues the men show that significant others provide role-modeling opportunities. They seek out others with whom they can identify, [and have] new experiences to share, and in the process learn styles, belief systems, and ethical stances. In cultivating relationships with significant others, they craft themselves.

These assumptions lead to the conclusion that, for individuals navigating the construction of a stigmatized identity, the most important and influential relationships one can have are with others upon whom one can model one’s beliefs and behaviors and from whom one can learn strategies of coping with stigma (Kaufman and Johnson 2004). Since most LGB individuals cannot learn the intricacies of gay culture from their parents, they must seek out LGB peers and mentors from whom to learn that culture (Rowe 2014).

Despite scholarly focus on the importance of friends as a function of their referential value, I argue that any friendship, not just friendships with other LGB people, can provide a relational context that can facilitate the development a non-normative sexual identity among individuals who have experienced same-sex attraction. It is through the provision of a supportive and personally affirming relational space that friendships are able to nurture, rather than inhibit, identity exploration and development.
(Wright and Perry 2006). As such, all significant and mutually fulfilling friendships can stimulate and nurture non-normative sexual identity building.

The support that can be provided in friendship has been viewed as a strong contributor to adolescents’ capacity to be resilient in the face of structural and interpersonal stigma associated with adopting a non-normative sexual identity. Despite being traditionally thought of as a characteristic inherent to individuals, community psychologists have proposed that resilience actually flows from one’s relationships and connections with other people (Jordan 1986; Hartling 2008). Social support scholars propose that the supportive character of friendship can influence individuals’ capacity for resilience in two distinct ways. Friendship can provide both structural and functional support (Thoits 1995).

Structural support captures and individual’s degree of social integration within a larger network of friends. Sociologists, dating as far back as Durkheim, have argued that social integration and the structural support that one receives from being socially embedded is key for understanding patterning of health outcomes along with a host of other social phenomena (Berkman, Glass, Brissette, and Seeman 2000; Ueno 2005). Focus on the type of support that flows from aspects of network structure, “rests on the testable assumption that the social structure of the network itself is largely responsible for determining individual behavior and attitudes by shaping the flow of resources which determine access to opportunities and constraints on behavior” (Berkman et al. 2000: 845). This type of support, which is derived from the larger network, can be operationalized in term of the number of friends one has or the position one occupies within the network.
It is well-established that measures of structural support and social integration have clear and consistent connections to health outcomes. But, it is also possible that the same mediating mechanisms that underlie the connection between structural support and health also underlie the connection between structural support and identity formation. Ueno (2005) found that the strengthening of a sense of belonging mediated the connection between social integration and positive mental health outcomes among adolescents. Given strong theoretical links between feelings of belonging and sense of self and identity, it would be logical to extend the argument and propose a connection between structural support and the ability to construct a cohesive identity. The established importance of social support as a buffer against stress (Kawachi and Berkman 2001) implies that structural support can be especially relevant for those adolescent negotiating the construction of a stigmatized identity.

The significance of friendship can also be understood in terms of the functional support it can provide (Thoits 1995). Functional support encompasses three subtypes of support: instrumental, informational, and emotional. But the most consistent and powerful measure of social support is whether or not a person has one primary intimate and confiding relationship (Thoits 1995). During adolescence, youth increasingly turn to their peers, rather than their parents or family members for this type of relationship and emotional support (Papini, Farmer, Clark, Micka, and Barnett 1990; Giordano 2003). In a period of life when youth are looking outside of their families for emotional support, “close friendships support basic needs for belonging, empathy, and mutual engagement” as well as providing “companionship, help, intimacy, reliable alliance, self-validation, and emotional security” (Graber, Turner, and Madill 2015:2).
Friendships that fulfill these basic needs are the types of friendships that are envisioned as the basis for adolescents’ relationally derived resilience (Jordan 1995; Jordan 2001; Hartling 2008). One empirical study found that adolescents’ ability to thrive in school-based settings is contingent on their connectedness to family and friends (McNeely, Nonnemaker, and Blum 2002). Relationships characterized by true connection are seen as a qualitatively more profound in their impact, due to the bi-directionality and growth-promoting quality of that type of relationship. Scholars posit that the benefits of connectedness are a function of its ability to cultivate an individual’s sense of self-worth, by making clear that one is “known and valued” (Hartling 2008).

Researchers have operationalized this subjective understanding of mutually supportive and empathetic relationships using measures of friendship reciprocity that capture the extent to which an individual’s friend also considers that individual a friend (Abbott and Freeth 2008; Vaquera and Kao 2008). Reciprocated friendships have been found to be a superior resource in that they are characterized by a greater degree of trust and emotional support than are unreciprocated friendships. Despite lacking systematic examination of their significance in relation to identity, reciprocated friendships clearly have the unique capacity to be a site of connection that acts both to foster a sense of positive self-worth and personal growth. The idea that one might be better able to grow and develop in the context of relationship “suggests not just a return to a previously existing state, but movement through and beyond stress or suffering into a new and more comprehensive personal and relational integration” (Jordan 1992: 1). In this way, close friendships and the support they provide, have the power to facilitate the construction of coherent identities among adolescents during a time of profound upheaval.
The Gendered Nature of Social Support within Friendships

Earlier, we explored the potential impact of gender on non-normative sexuality development as it related to the specifically gendered ways in which men and women experience sexuality itself. But gender might also be relevant in non-normative sexuality development to the extent that it shapes one’s experiences of friendship and social support. Research has consistently substantiated the notion that gender can have profound impacts on the experience of friendship among youth. Boys tend to have larger social networks compared to girls, but girls tend to be more invested and have greater intimacy in their relationships (Thoits 1995). In a study of 168 seven and ten year olds, Bryant (1985) found that having a greater number of casual friends was more likely to encourage optimal social-emotional functioning in boys. Girls seemed to benefit more socio-emotionally from having fewer relationships of greater emotional intensity.

Similarly, in a context of extreme adversity, researchers have found that increased psychological resilience was only facilitated by close, intimate friendships among girls, whereas boys experienced no added benefits to resilience when they possessed close friendships (Graber et al. 2015). Some literature suggests that boys do not reap the benefits of close friendships because boy’s peer group culture does not prioritize intimacy. Eschewing the importance of intimacy means that boys are less adept at building, navigating, and deriving benefit from close relationships (Giordano 2003; Vaquera and Kao 2008). Instead, boys’ peer culture often prioritizes the proving and protecting masculinity, which often hinders even the development of intimate relationships. On the other hand, norms of femininity tend to encourage the development of these types of relationships.
Norms of masculinity might have a further impact on the role of friendship among boys in that status within a social network is likely to be a more important predictor of friendship satisfaction and overall well-being for boys, compared to girls. By occupying a central position in a social network, men are most able to exercise particularly masculine traits (Cornwell and Laumann 2011). Centrality within a network indicates that one possesses a number of weak ties that bridge multiple networks. Possession of these types of ties creates an impression of one as independent but influential, and is thus especially relevant for occupational attainment and mobility (Cornwell and Laumann 2011). As such, being central in a network is more conducive to the fulfilling of male gendered focal concerns and the attainment of masculine ideals associated with status and power (Steffensmeier, Schwartz, and Roche 2013). Boys derive the most benefit from having a large number of friends and high status within a group of friends, which can largely be traced back to the effects of gender socialization processes.

Conversely, girls and women are socialized to prioritize relationships with others over status concerns (Chodorow 1978; Gilligan 1982, Steffensmeier et al. 2013). Empirical studies among adolescents have continued to substantiate the salience of these findings (Bearman and Moody 2004; Soller 2014). Women also experience more of the negative effects of social network ties as a result of investing a greater level of emotion in their relationships and the well-being of their friends (Rook 1984; Kawachi and Berkman 2001). Accordingly, women are more heavily impacted by the level of reciprocity they experience in their friendships, with the greatest benefit derived from those relationships characterized by the most reciprocity (Vaquera and Kao 2008). Girls are most well-served, in terms of mental health and overall well-being, by the quality of their closest
friendships, rather than the quantity of their friendships or their status within the larger network (Belle, Burr, and Cooney 1987; Vaquera and Kao 2008; Graber et al. 2015).

**Friendship in the Context of Non-Normative Sexual Identity Development**

Psychologists and other scholars that study interpersonal relationships generally agree that individual development occurs in connection with others (Papini et al. 1990; Jordan 2001; Graber et al. 2015). It is in emotionally connected relationships with others that “we grow, learn expand, and gain a sense of meaning” (Jordan 2001: 97). Although these arguments have not been extensively tested among LGB communities, individual-level connection is especially significant in the structural contexts of disconnection created by heterosexism and homophobia. Although the fostering of identity in relationship is an important consideration, it is not contingent on the extent to which one’s friend can act as a role model or source of reference for enacting a queer identity.

Nor is the fostering of identity in relationship necessarily dependent on the type of social integration—identity development can be fostered as a function of embeddedness within larger social networks or within the context of closer, more intimate relationships. The literature on structural support certainly indicates the need for consideration of the importance of involvement and the support found in social networks for interactive identity building. We need to conceptualize “network function in terms of their ability to provide support for critical social identities” when social identity refers to “our sense of who we are in the world and reflect whether we feel that we fit in with the world in a way that is personally satisfying and socially viable” (Hirsch and Rapkin 1986: 396).
LGB individuals can reap particular benefit from social network embeddedness in constructing a stigmatized sexual identity. Having a wider network of relatively close friends can help to affirm identity and offset the effects of minority stress (Gillespie et al. 2015). Minority stress in the context of sexual identity stigma has been considered that stress that LGB youth and adults experience as a product of negative interactions with prejudiced individuals, on the basis of their sexuality (Meyer 1995). Repeated experience of minority stress and the internalization of stigmatizing beliefs together create a level of psychological distress that often delays or forestalls non-normative sexual identity formation (Wright and Perry 2006). On the other hand, for individuals grappling with LGB identity, possession of significant friendships or integration in an accepting social network provide a relational context that is emotionally supportive and affirming, and thus more likely to nurture the development of a non-normative sexual identity (Wright and Perry 2006).

But more intimate friendships are also clearly an important consideration in thinking about identity building within relationships. Best friendships, especially when they are reciprocated (Vaquera and Kao 2008), can “allow the adolescent to create a better understanding of the self, and they provide a support system to help the adolescent work through daily stresses” (Bagwell, Schmidt, Newcomb, and Bukowski 2001: 26). But best friendships can also take on a particularly important role among LGB adolescents because this type of close, mutually fulfilling relationship can provide a safe space to foster a stigmatized identity that might be inhibited or entirely suppressed in a less supportive context. Gillespie et al. (2015) found that friendship satisfaction and mutuality was far more beneficial, in terms of overall life satisfaction, among LGB
respondents compared to heterosexual respondents. Since friendship functions both as a source of relational resilience, in the context of larger networks and in individual relationship, and as a source of reference that informs one’s own attitudes, beliefs, and behaviors, they can create a relational context with the power to promote the development of nascent non-normative sexuality into acknowledgment of and self-acceptance around that non-normative sexuality.
CURRENT STUDY

Existing literature illustrates that scholars have conceptualized the importance of friendship and social integration for adolescents and those grappling with non-normative sexual identities, but they do not go very far in integrating these insights, nor do they investigate whether friendship and social integration might play a causal role in sexual identity development. This study addresses this gap in the literature. I will build upon and connect existing literatures to suggest that social relationships profoundly shape non-normative sexuality development to the extent that they provide access to and models of existing queer narratives as well as fostering resilience in the face of anti-gay stigma through the provision of multiple types of support. In recognition of the ways in which experiences of friendship and enactment of sexuality are profoundly gendered, I will also investigate the extent to which these processes vary for men and women. To do this, I will address the following research questions:

Research Question 1: What is the relationship between same-sex attraction in high school and the development of non-normative sexual identity in adulthood?

Research Question 2: Which aspects of individuals’ social network and interpersonal relationships are salient for understanding the development of sexual identity among youth who reported experiencing romantic attraction to a member of the same sex?

Research Question 3: Are certain network variables more salient, along gender lines, in predicting sexual identity?

To address these research questions, I will individually examine the impact of three theoretically relevant friendship variables (reciprocated best-friendship, number of
incoming friendship nominations, and centrality within one’s friendship network) in conjunction with reported experience of same-sex attraction, on sexual identity in adulthood. Each of these analyses will be stratified by gender to take into account the gendered nature of both sexuality and friendship.

I expect to find substantiation of a fairly self-evident correlation between reported same-sex attraction in high school and a non-heterosexual identity in adulthood. On the other hand, I do not expect that the friendship variables, by themselves, will have any significant relationship with non-heterosexual identity in adulthood. I expect that each of the friendship variables, best friend reciprocity, in-degree, and centrality, will increase the likelihood of adopting a non-heterosexual identity among individuals who had reported same-sex attraction in high school. Further, the literature suggests that is likely that close, intimate friendships will be of greater significance for female respondents whereas male respondents will be more influenced by the size of their network and their status within it. As such, I expect that female respondents that reported same-sex attraction will be more likely to develop a non-heterosexual identity if they experienced a high level of reciprocity in their most intimate friendships. Conversely, I expect that reciprocity will be of low importance for male respondents, whereas high levels of in-degree and centrality will facilitate the growth of nascent same-sex attraction into a solidified non-normative sexual identity.
DATA AND METHODS

Sample

This study will use two waves of data collected as part of the National Longitudinal Study of Adolescent Health (hereafter, Add Health), a longitudinal survey concerned with issues related to adolescent health and development. Wave 1 data consist of responses to the parent, adolescent in-school, and adolescent in-home questionnaires administered between 1994 and 1995. Respondents were interviewed again in 2008 for Add Health’s fourth wave of data collection. At Wave 1, the mean age of the sample was 15.9 years. By Wave 4, the respondents’ mean age was 28.8 years. The period between the administration of Wave 1 and Wave 4 captures the developmental period of “emerging adulthood” (Arnett 2000).

Respondents were chosen from a clustered random sample of high schools across the United States. The sample is clustered insofar as school enrollment determined eligibility to take the survey. The sample is implicitly stratified in that certain schools had a higher chance of being selected based on the size and type of school, its census region, level of urbanity, and its racial and ethnic composition. All those students who were interviewed at Wave 1 were eligible to be interviewed at Wave 4. At Wave 4, 80.3% of eligible respondents were able to be located and interviewed. After excluding those cases who were not reinterviewed at Wave 4 as well as those cases with missing data on independent variables and longitudinal survey weights, the study’s final sample consisted of 3,511 respondents.
**Dependent Variable**

The dependent variable, sexual identity at Wave 4, was measured based on self-report. The options available to respondents were based on a Kinsey-inspired scale. Respondents could report that they were 100% heterosexual, mostly heterosexual but still attracted to members of the same sex, bisexual, mostly homosexual but still attracted to members of the opposite sex, 100% homosexual, or that they were not interested, sexually, in men or women (asexual). For the purposes of this study, those that reported being asexual were dropped from the analysis because this study is concerned with sexual identity, not its absence.

For the first stage of testing, this scale will be condensed into a binary variable, which reflects whether or not the individual reported categorizing their sexual identity non-normatively. Only those individuals who reported that they identified as “100% heterosexual” were considered to have a normative sexual identity. Those respondents who identified as “Mostly heterosexual,” “Bisexual,” “Mostly homosexual,” or “100% homosexual,” were grouped together to reflect identification with a non-normative sexuality. I have included even those respondents who identified as “mostly heterosexual” in the non-normative category because using “mostly” as a qualifier to describe one’s sexual identity indicates some understanding of one’s sexuality as a fluid or variable phenomenon. This type of interpretation of sexuality does not represent a normative understanding.

In further analyses, I will condense these same categories into three groups, following the strategy of Wilkinson and Pearson (2013). Those individuals who reported being 100% heterosexual and 100% homosexual each comprised their own groups. The
individuals who identified with one of three categories in the middle of the spectrum (mostly heterosexual, bisexual, mostly homosexual), were grouped together in one group designed to tap those identities that are not so definite in their gender-based sexual attractions. Instead, these individuals adopted identities that were more flexible—encompassing the possibility that they could be sexually attracted, in varying degrees, to both men and women.

It is my assumption that these categories are nominal, not ordinal. Each of these separate identities represents qualitatively different approaches to human sexuality. This study’s dependent variable was constructed by Add Health in a way that presupposes the ordinality of Kinsey’s taxonomy of sexuality. To subvert this assumption, I treated this variable as nominal, and in doing so, utilized a different conceptualization of sexuality. More recent theorists of sexuality have proposed that, rather than existing on one continuum (homosexual at one extreme and heterosexual at another), sexual orientation can be better captured in two different scales, one that captures degree of homosexuality and another capturing the degree of heterosexuality (Shively and DeCecco 1977; Sell 1997).

Using a two scale system of sexuality is based on the idea that one can possess varying degrees of both homosexuality and heterosexuality. For example, in this system, those who identify as bisexual possess a high degree of both homosexual and heterosexual feeling. Conversely, those who identify as asexual possess a low degree of both homosexual and heterosexual feeling. A multidimensional design such as this one “does not view homosexuality and heterosexuality as polar opposites, but rather as two orthogonal characteristics” (Suppe 1984: 10). Shively and DeCecco (1977) designed this
multidimensional system to correct the assumption that an individual’s expression of homosexuality can only occur at the expense of their expression of heterosexuality, or vice versa. To more closely adopt a multidimensional approach to sexuality, it is necessary that I treat the categories of this dependent variable as nominal.

**Independent Variables**

One of the main independent variables of focus will be respondents’ report of same-sex attraction when they were interviewed at Wave 1. This variable was constructed based on a comparison of respondent’s gender versus the gender to which they reported being attracted. Thus, this variable captures all men who reported being romantically attracted to men, and all women who reported being romantically attracted to women. I deemed this a better measure of same-sex feeling in high school, rather than actual dating or sexual behavior because of the difficulties of openly acting on something as stigmatized as same-sex feeling in a high school context (Friend 1998; Kosciw et al. 2012).

The other main independent variables used in this analysis consist of a series of social network variables, most of which were pre-constructed by the designers of Add Health based on the network data collected during the administration of the survey’s first wave. The first network variable employed was a measure of reciprocated best friendship. I constructed this variable based on a number of the pre-constructed variables in the network data—(1) whether or not the respondent nominated a male or female best friend, (2) whether or not the male and female individuals who were nominated as best friends reciprocated any friendship ties, (3) whether or not the male and female individuals who
were nominated as best friends reciprocated the tie as a best friend. This categorical variable is intended to capture an increasing level of reciprocity in these relationships, such that 1=the respondent (R) did not nominate a best friend, 2=R nominated a best friend, but that friend did not reciprocate (reference category), 3=R nominated a best friend who reciprocated as a friend, 4=R nominated a best friend who reciprocated as a best friend. This measure of reciprocated friendship is ideal because it is based on actual tie nominations by respondents within the surveyed school, rather than the respondents’ perceptions of reciprocity within their friendships.

The other variables used in this analysis, Bonacich centrality and in-degree were pre-constructed measures. Bonacich centrality measures the respondent’s centrality within the network, weighted by the centrality of the other individuals to whom they are tied. By taking a more global perspective and accounting for the centrality of the individuals to whom the respondent is tied, this measure of centrality can get at the respondent’s social status. For example, high social status might be indicated if the respondent is tied to individuals who hold central positions in the network. Importantly, an individual’s Bonacich centrality score is calculated based on the connectedness and central position of the peers that the individual nominated as their friends. As such, this measure is predicated on outgoing nominations and individual respondents’ subjective perceptions of their friendships.

In-degree is a measure of the number of people within the school that nominated the respondent as a friend. Unlike Bonacich centrality, in-degree is a network measure that is determined exclusively by incoming friendship nominations. By measuring all of those individuals within a school that have nominated the respondent as a friend, in-
degree allows researchers to construct a measure that roughly captures a respondents’ popularity and the extent to which their peers like and feel close to them. Add Health contains an abundance of network variables such as these, but these three variables, reciprocity of best friendships, centrality within one’s network, and the number of people who consider the respondent a friend, hold the greatest degree of theoretical relevance for adolescent identity formation.

Control Variables

This study also included a number of control variables. Socio-demographic characteristics including age, race, gender, parental education, and parental occupation were controlled for in this analysis. A variable was created for the respondent’s age at Wave 1, based on the respondent’s birth date and the date of the administration of the survey. Measures of parental occupational status and parental education were combined to capture socioeconomic status. When the adolescent respondents did not know their parents’ occupational status or level of education, parental responses were substituted. Since parental responses were only available at Wave 1, the SES measure was based on Wave 1 data. Race was measured based on a constellation of responses from the various stages of Wave 1 data collection. Responses given on the in-school questionnaire as well as the in-home questionnaire were used to create a measure of race and ethnicity. I coded these categories such that Latino ethnicity is considered a racial category along with white (reference category), black, and other race (Hitlin, Brown, and Elder 2007).
Analytic Strategy

To test this study’s hypotheses, I first employed logistic regressions in two stages with each of the theoretically relevant network variables. The first stage of my analysis simply tested the effect of the main independent variables (same-sex attraction at Wave 1 and each of the network variables, separately) on the adoption of a marginalized sexual identity, controlling for demographic variables. The second set of models incorporated interactions between same-sex attraction and each of the network variables to capture the multiplicative effect of these measures. Since this study is also seeking to test the empirical relevance of gender in understanding the extent to which social network variables and pre-existing same-sex attraction might impact the adoption of non-normative sexual identity, each of these stages was further stratified by gender. Separate models were run for male and female respondents for each of the network variables to capture the interactive effect of gender with each of the covariates.

I conducted further analyses using multinomial logistic regression in an attempt to provide a more complex understanding of these processes. These analyses used a more nuanced version of the sexual identity variable, which incorporates three nominal categories of sexual orientation: 100% heterosexual, bisexual-flexible, and 100% homosexual. Multinomial logistic regression models will predict the log-odds of coming to describe one’s identity as 100% homosexual or using one the “bisexual-flexible” identities compared to 100% heterosexual. The models will use the same independent variables, but a differently constructed dependent variable and be analyzed with a method more appropriate to that particular construction. Due to the already small sample sizes in
the 100% homosexual category, I did not stratify the results by gender, so as to ensure that the sample sizes would be large enough for each regression.
RESULTS

Descriptive Statistics for Logistic Regression Models

First, I examined the means of each continuous variable and proportions of each binary variable included in the final logistic regressions. Given the theoretical relevance of gender in these analyses, it was important to further subdivide descriptive results by male and female respondents. These results are included in Table 1. In looking at the outcome variable, which was measured at Wave 4, it is interesting to note that even though the overall percentage of the sample that identified with using a non-normative identity label was 13%, only 6% of male respondents did so, compared to 19% of female respondents.

Table 1: Means/Proportions of Analytic Variables for Logistic Regression by Gender

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Proportion</td>
<td>SD</td>
<td>Proportion</td>
</tr>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Normative Sexual Identity (W4)</td>
<td>0.13</td>
<td>-</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same-Sex Attraction (SSA) (W1)</td>
<td>0.06</td>
<td>-</td>
<td>0.07</td>
</tr>
<tr>
<td><strong>Network Variables (W1)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friendship Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Best Friend Reported</td>
<td>0.26</td>
<td>-</td>
<td>0.29</td>
</tr>
<tr>
<td>(reference)</td>
<td>0.23</td>
<td>-</td>
<td>0.25</td>
</tr>
<tr>
<td>Best Friend Reciprocates</td>
<td>0.2</td>
<td>-</td>
<td>0.19</td>
</tr>
<tr>
<td>Best Friend Reciprocates as Best Friend</td>
<td>0.31</td>
<td>-</td>
<td>0.26</td>
</tr>
<tr>
<td>In-Degree</td>
<td>4.6</td>
<td>3.68</td>
<td>4.35</td>
</tr>
<tr>
<td>Beta-Centrality</td>
<td>0.8</td>
<td>0.63</td>
<td>0.75</td>
</tr>
<tr>
<td><strong>Control Variables (W1)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>15.9</td>
<td>1.7</td>
<td>15.99</td>
</tr>
<tr>
<td>SES</td>
<td>-0.03</td>
<td>0.88</td>
<td>0.02</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White (reference)</td>
<td>0.55</td>
<td>-</td>
<td>0.56</td>
</tr>
<tr>
<td>Black</td>
<td>0.27</td>
<td>-</td>
<td>0.25</td>
</tr>
<tr>
<td>Latino</td>
<td>0.09</td>
<td>-</td>
<td>0.09</td>
</tr>
<tr>
<td>Other</td>
<td>0.08</td>
<td>-</td>
<td>0.09</td>
</tr>
<tr>
<td>N</td>
<td>3,511</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Waves I and IV of the National Longitudinal Study of Adolescent Health

Reported same-sex attraction at Wave 1 was not only less prevalent than a non-normative sexual identity at Wave 4, but also less gender segregated. In the overall
sample, 6% of respondents reported that they had been romantically attracted to a person of the same sex at Wave 1. By gender, 7% of male respondents and 5% of female respondents reported that they had experienced a romantic attraction to a person of the same sex.

Between these two categories, there was not a substantial amount of overlap. Of the individuals who claimed a non-normative sexual identity by Wave 4, only 13.6% had reported experiencing same-sex romantic attraction at Wave 1. And of the individuals who reported same-sex romantic attraction at Wave 1, 67.7% of those individuals claimed a 100% heterosexual identity by Wave 4.

Overall, respondents were fairly evenly distributed between each of the friendship categories. Female respondents were more likely than male respondents to have nominated a best friend. A greater proportion of female respondents than male respondents nominated a best friend who reciprocated that tie, also as a best friend. On average, respondents had 4.6 incoming friendship nominations. This average was 4.4 nominations for male respondents and 4.8 nominations for female respondents.

*Logistic Regression Results*

*Overall effects of friendship network variables*

The results for the main effects of each network variable under study in the total sample, which includes respondents of both genders, are reported in Table 2. These are the full models for each network variable, calculated prior to the introduction of interaction effects and the disaggregation of the models by gender.
In the overall effects models for each of the network variables, there is a clear and significant relationship between reporting same-sex attraction at Wave 1 and non-normative sexuality development by the administration of Wave 4. Examination of the main effects of the network variables reveals that only one, the number of a respondent’s incoming friendship nominations, has a significant effect on the sexual identity. In fact, this coefficient indicates an inverse relationship, in which a one unit increase in the number of incoming friendship nominations results in a 0.03 decrease in the log-odds of a respondent developing a non-normative sexual identity. In other words, prior to including a consideration of same-sex attraction, the more incoming friendship nominations a
respondent has, the less likely that respondent is to come to identify with a non-normative sexual identity by Wave 4.

It is important to note that the lack of significance of the coefficients associated with the other friendship network variables presents an important piece of the story as well. The fact that the coefficients for each of the friendship reciprocity categories in Model 1 was non-significant, indicates that there were no statistically significant differences in the types of friendships held by respondents who came to adopt a non-normative sexual identity, compared to those who did not. So, individuals who came to identify as non-heterosexual in 2008 experienced reciprocated friendships to the same degree as respondents who came to identify as heterosexual. Similarly, the non-significant coefficient associated with beta-centrality indicates that there was no significant difference in how central a respondent was in their friendship network between those with a non-normative sexual identity at Wave 4, and those with a normative one.

The main effects models also indicate significant relationships between a number of the control variables and non-normative sexual identity development. Across each of the network variable models, identifying as female increases the likelihood of identifying with a non-heterosexual orientation. On the other hand, identifying racially as Black significantly decreases the likelihood of adopting a non-normative sexual identity. Also, the younger the respondent was in 1994 and 1995 at the administration of Wave 1, the higher their log-odds of identifying with a non-heterosexual orientation.
Interactive effects of friendship network variables and same-sex attraction

Table 2 also includes my findings regarding the interactive effects of Wave 1 same-sex attraction and each of the network variables. The results of these interactions reveal that the number of incoming friendship nominations remains the only network variable that has any significant effect on non-normative sexual identity development. The singular effect of in-degree on sexual identity remains negative and significant. Interestingly, the relationship changed direction with the incorporation of the interactive effect with same-sex attraction, such that the correlation is positive and significant. This means that having a high number of incoming friendship nominations increased the likelihood of adopting a non-normative sexual identity, but only among individuals who experienced same-sex attraction. The likelihood of adopting a non-normative sexual identity significantly decreased with increasing number of incoming friendship nominations among those individuals who did not experience same-sex attraction in high school.

For the results reported in Table 2, my consideration of gender was limited to using it as a control variable. The coefficients that resulted from gender as a control variable make it clear that gender has an important role in understanding the dynamics of these relationships, but they do not elucidate what that role is. To investigate this question of the role of gender, I ran these same analyses, but disaggregated the results by gender.

Interactive effects by gender

The interactive effects, but not main effects, of each of the network variables and reported same-sex attraction on sexual identity development among male respondents are
reported in Table 3. The interactive effects of levels of friendship reciprocity and same-sex attraction on subsequent sexual identity among male respondents seem to indicate the insignificant role of reciprocity for men in this study. For male respondents, levels of friendship reciprocity, when considered with reports of same-sex attraction, had no significant impact in predicting non-normative sexual identity development.

| Table 3: Coefficients and Standard Errors from Logistic Regression Models Predicting Non-Normative Sexual Identity in Young Adulthood, Men |
|---------------------------------------------------------------|-----------------|-----------------|-----------------|
|                                                              | Friendship Reciprocity | In-Degree | Centrality |
|                                                              | b      | SE    | b     | SE    | b     | SE    |
| Same-Sex Attraction (SSA)                                     | 1.403* | 0.635 | -0.251 | 0.615 | 0.600 | 0.525 |
| Network Variables                                             |        |       |       |       |       |
| Friendship Reciprocity                                        |        |       |       |       |       |
| No Best Friend                                                | 0.394  | 0.400 |       |       |       |
| Best Friend Reciprocates                                      | 0.364  | 0.441 |       |       |       |
| Best Friend Reciprocates as Best Friend                       | -0.198 | 0.477 |       |       |       |
| In-Degree                                                     |        |       | -0.095* | 0.039 |       |
| Centrality                                                    |        |       |       |       | 0.033 | 0.239 |
| Interaction Effects                                           |        |       |       |       |       |
| Friendship Variables                                         |        |       |       |       |       |
| SSA*No Best Friend                                            | -1.115 | 1.034 |       |       |       |
| SSA*Best Friend Reciprocates                                 | -0.213 | 1.027 |       |       |       |
| SSA*Best Friend Reciprocates as Best Friend                  | 0.005  | 0.989 |       |       |       |
| SSA*In-Degree                                                 |        |       | 0.281** | 0.087 |       |
| SSA*Centrality                                               |        |       |       |       | 0.492 | 0.505 |
| Control Variables                                            |        |       |       |       |       |
| Age                                                           | -0.089 | 0.070 | -0.108 | 0.073 |       |
| SES                                                           | 0.121  | 0.144 | 0.137  | 0.139 | 0.094 | 0.140 |
| Race/Ethnicity                                                |        |       |       |       |       |
| Black                                                          | -0.001 | 0.376 | 0.034  | 0.355 | 0.040 | 0.359 |
| Latino                                                        | 0.527  | 0.409 | 0.695+ | 0.369 | 0.730+ | 0.391 |
| Other                                                         | 0.234  | 0.446 | 0.191  | 0.444 | 0.218 | 0.437 |
| N                                                             | 1,179  | 1,252 | 1,252  |       |       |

Source: Waves I and IV of the National Longitudinal Study of Adolescent Health
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Shifting the focus reveals that the lack of significance of reciprocity for boys is not emblematic of the irrelevance of friendship, more generally, among boys grappling with non-heterosexual identities. Examination of the interactive findings for number of
incoming friendship nominations and same-sex attraction shows that this variable has a significant impact on non-normative sexual identity development for male respondents. In-degree had a negative and significant effect on identity development among male respondents. This indicates that, among those male respondents that reported same-sex attraction, having a high number of people who consider one a friend significantly increases the likelihood of adopting a non-normative sexual identity.

Among all male respondents in the sample, having a greater number of incoming friend nominations decreased the likelihood of non-normative sexual identity adoption. But, when considered in combination with having experienced same-sex attraction, the coefficient changes direction. As can be seen in Figure 1, among those male respondents who have experienced same-sex attraction, an increase in number of incoming friendship nominations greatly increases the likelihood that a respondent will come to adopt a non-
heterosexual orientation. This figure shows the opposite trend for those male respondents who did not experience same-sex attraction. These respondents were much less dramatically affected by their number of incoming friendship nomination and they were less likely to adopt a non-normative sexual identity in the presence of a greater number of incoming friendship nominations.

The interactive effects of each of the network variables and reported same-sex attraction on sexual identity development among female respondents are reported in Table 4. Previous models showed no significant association between level of friendship reciprocity and the dependent variable, but these gender-disaggregated findings demonstrate a number of significant relationships between same-sex attraction,

![Table 4: Coefficients and Standard Errors from Logistic Regression Models Predicting Non-Normative Sexual Identity in Young Adulthood, Women](image)

Source: Waves I and IV of the National Longitudinal Study of Adolescent Health

+p<0.1 , *p<0.05 , **p<0.01 , ***p<0.001
reciprocity, and sexual identity development among female respondents. Compared to those respondents who reported same-sex attraction and identified a best friend that did not reciprocate friendship, respondents who reported same-sex attraction and named a best friend that reciprocated that tie (as a best friend) were significantly more likely to develop a non-normative sexual identity. Thus, those female, same-sex attracted respondents that experienced complete reciprocity in their best friendship were significantly more likely than those female same-sex attracted respondents that did not experience reciprocity in their best friendship. As can be seen in Figure 2, female respondents who did not nominate a best friend at all were also significantly more likely to develop a non-normative sexual identity than those individuals in the reference category, whose best-friend tie was not reciprocated.
Unlike for male respondents, in-degree was a largely irrelevant predictor of non-normative sexual identity adoption among female respondents. In examining the interactive effects of in-degree and same-sex attraction for female respondents, the coefficients for in-degree and its interaction term proved to be insignificant in predicting non-normative sexual identity development. Interestingly, beta-centrality was not a significant predictor of sexual identity among neither male nor female respondents.

**Bivariate Results for Multinomial Regression Models**

To begin investigation of the impact of using a more complex construction of the dependent variable, I also examined bivariate results for the multinomial logistic regression. In Table 5, the means and proportions of the main independent variables are broken down by the three identity categories that comprise the dependent variable. Overall, 87% of respondents identify as 100% heterosexual, 12% were placed in the bisexual-flexible category, and 1% of respondents identified as 100% homosexual. As might be expected, those individuals who came to identify as 100% homosexual were more likely to have reported same-sex attraction at Wave 1 (23% of these individuals compared to 13% of Bisexual-Flexible respondents and 4% of 100% Heterosexual respondents).
The distribution of respondents within the friendship categories is relatively even, but the modal categories for each identity are potentially of interest. The majority of those respondents that identified as 100% heterosexual, possessed friendships characterized by the highest degree of reciprocity. Thirty-two percent of heterosexual respondents nominated a person as their best friend who returned that friendship nomination, also nominating that respondent as a best friend. Among bisexual-flexible respondents, there were two modal friendship categories—not reporting a best friend and having a best friend that reciprocated that level of friendship. Thirty one percent of bisexual-flexible respondents fell in each of these categories. There were two modal categories among the homosexual respondents as well—31% of respondents did not report a best friend and 31% of respondents reported having a best friend who reciprocated as a friend, but not a best friend.

Regarding the respondents’ mean number of incoming friendship nominations, the other main network variable in this analysis, there is little variation across identity.
categories. It does seem that those respondents who identified as homosexual had the highest mean number of nominations (4.8 incoming nominations) and those who identified as bisexual-flexible had the lowest mean number of incoming friendship nominations (4.4 incoming nominations). It is important to note that the statistical power of these analyses and comparisons are constrained by the small sample sizes in two of these dependent variable categories. Of the 3,492 respondents eligible for the multinomial logistic analyses, 427 respondents were sorted into the bisexual-flexible category and only 40 respondents were sorted into the 100% homosexual category.

**Multinomial Logistic Regression Results**

The second set of analyses that I performed employed multinomial logistic regression to investigate whether the previous logistic analyses obscured any nuance in the dependent variable by collapsing the identity categories into a dichotomous variable. I have broken down the findings from these analyses by the friendship network variable that served as the main explanatory variable. Each table presents the findings from baselines analyses compared to the results produced from the introduction of interaction terms.

**Effects of friendship reciprocity**

Table 6 shows the results from the multinomial analyses that took the impact of friendship reciprocity into consideration. Results from these models demonstrate the effect of level of friendship reciprocity on “bisexual-flexible” respondents and “100%
homosexual” respondents, compared to those respondents who identified as “100% Heterosexual.”

The first of these models shows the results of baseline analyses, prior to the introduction of the interaction terms. As could have been expected, regression coefficients indicate that those individuals who came to identify with one of the bisexual-flexible categories were significantly more likely than those respondents who identified as “100% Heterosexual” to have experienced and reported same-sex attraction at Wave 1. Further, those respondents who came to identify as “100% Homosexual” were twice as likely as the “Bisexual-Flexible” respondents to have reported same-sex attraction at Wave 1.

Based on findings from the main effects model, there did not seem to be much difference between bisexual-flexible respondents, homosexual respondents, and the
respondents that comprised the heterosexual reference category, in regard to friendship reciprocity. It does seem that there was a marginally significant difference between the heterosexual respondents and homosexual respondents, such that homosexual respondents were slightly more likely to have had relationships in which the individual they nominated as their best friend, returned that friendship nomination.

The findings presented in the interactive friendship reciprocity model are also largely insignificant. Interestingly, the coefficient for the term capturing the interaction of one’s best friend reciprocating as a best friend and experiencing same-sex attraction was a marginally significant predictor of identity among those who identified with one of the bisexual-flexible categories. In other words, those individuals who experienced same-sex attraction and also had a high level of reciprocity in their best friendship were marginally more likely to identify as bisexual-flexible rather than heterosexual, compared to respondents who experienced a lower level of reciprocity in their best friendship.

*Effects of number of incoming friendship nominations*

Results for the multinomial logistic analyses examining the effect of in-degree on sexual identity at Wave 4 are presented in Table 7. As was the case in the friendship reciprocity models, both bisexual-flexible and homosexual respondents were significantly more likely than heterosexual respondents to have reported same-sex attraction at Wave 1, with the magnitude of this association being larger among those homosexual-identified respondents.
The baseline association between number of incoming friendship nominations and sexual identity at Wave 4 demonstrates a negative and significant relationship between bisexual-flexible identity and number of incoming friendship nominations. A comparable association was not found among homosexual respondents. So, those individuals who came to adopt a bisexual-flexible identity were more likely to have fewer incoming friendship nominations, compared to heterosexual respondents. On the other hand, there were no significant differences in incoming friendship nominations between homosexual and heterosexual respondents.

With the introduction of interaction effects, one can see that the magnitude and level of significance of same-sex attraction coefficient were drastically reduced. When taking into account number of incoming friendship nominations, same-sex attraction was not as strong of a predictor of a bisexual-flexible identity, and became an insignificant predictor of homosexual entity. The interaction terms themselves demonstrate that a number of incoming friendship nominations, when considered with the experience of

<table>
<thead>
<tr>
<th>Table 7: Coefficients and Standard Errors from Multinomial Logistic Regression Models Predicting Sexual Identity by In-Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-Degree</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Same-Sex Attraction (SSA)</td>
</tr>
<tr>
<td>In-Degree</td>
</tr>
<tr>
<td>SSA*In-Degree</td>
</tr>
<tr>
<td>Control Variables</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>SES</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

N = 2,879

Source: Waves I and IV of the National Longitudinal Study of Adolescent Health
+p<0.1, *p<0.05, **p<0.01, ***p<0.001
same-sex attraction, was not a significant predictor of identity among bisexual-flexible respondents. Interestingly, this interaction was highly significant in predicting identity among homosexual respondents. Among individuals who reported same-sex attraction at Wave 1, increases in number of incoming friendship nominations were associated with a concordant increase in the likelihood of identifying as “100% Homosexual,” instead of “100% Heterosexual,” by Wave 4.

Effects of beta-centrality

Table 8 presents findings from the multinomial logistic analyses that examined the effect of respondents’ centrality on later identity development. These results mirror those from the centrality models from the earlier logistic regressions. Use of a more nuanced analytical tool revealed no further findings that would indicate that an individual’s network centrality is a significant piece in understanding processes of sexual identity formation among adolescents.

<table>
<thead>
<tr>
<th>Table 8: Coefficients and Standard Errors from Multinomial Logistic Regression Models Predicting Sexual Identity by Centrality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Effects</strong></td>
</tr>
<tr>
<td><strong>Centrality</strong></td>
</tr>
<tr>
<td>Same-Sex Attraction (SSA)</td>
</tr>
<tr>
<td>Centrality</td>
</tr>
<tr>
<td>SSA*Centrality</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>SES</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
</tr>
<tr>
<td>Black</td>
</tr>
<tr>
<td>Latino</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

N = 2,879

Source: Waves I and IV of the National Longitudinal Study of Adolescent Health
*p<0.1, *p<0.05, **p<0.01, ***p<0.001
The main effects show that reported same-sex attraction at Wave 1 is, again, positively and significantly associated both with bisexual-flexible and homosexual identities at Wave 4. Having a central position in one’s friendship network seems to be negatively associated with bisexual-flexible identity and positively associated with identifying as homosexual, but neither of these findings was statistically significant.

The addition of the interaction term to consider the joint impact of centrality and same-sex attraction did little to change the results. The coefficients for the interaction terms for both bisexual-flexible and homosexual respondents were positive, which indicates that experiencing same-sex attraction and possessing a central position in the network increased the likelihood of identifying as bisexual-flexible or homosexual. But neither of these coefficients was significant either, which precludes the ability to make any firm statements about the influence of network centrality.
DISCUSSION

This study’s findings demonstrate the importance of expanding sociological understandings of what it means for sexuality to be socially constructed. Sociologists’ focus on the structural factors that contribute to the social construction of sexuality, can occasionally work to preclude discussion of the more micro-level ways that sexuality and sexual identity, in particular, are constructed. This study has established the relevance of considering the ways in which sexual identity is constructed in interpersonal interactions. It has established the relevance of investigating the role of friendships and friendship networks in efforts to build a more complex and detailed understanding of processes of sexual identity formation among adolescents.

Previous literature has shown the importance of supportive friendships and social integration for health outcomes among adolescents, and especially among those adolescents that identify with a stigmatized identity. Identity literatures, especially those that are related to LGB identity, focus on the importance of friendships in terms of their capacity to model and validate queer identities among individuals in the midst of identity development processes.

This study seeks to contribute to a dialogue on friendship, sexuality, and identity by integrating these otherwise disparate literatures. I have suggested that it is necessary to consider the supportive aspects of friendship in concert with its referential aspects to be able to construct a more complete understanding of the ways in which non-normative sexual identity development is facilitated or impeded among adolescents who are grappling with romantic attraction to members of the same sex. This study demonstrates the salience of these factors for queer identity formation among adolescents.
In the primary analyses, I tested three separate friendship network variables, level of friendship reciprocity, number of incoming friendship nominations, and centrality within the network. I performed these analyses again, and disaggregated the results by gender. I found that, among the entire sample of youth who reported same-sex attraction, the number of incoming friendships significantly predicted an individual adopting an LGB identity by their late 20s. The opposite was true among those respondents who did not report same-sex attraction in high school. These respondents were significantly less likely to adopt an LGB identity at greater numbers of peer friendship nominations.

In primary analyses, in-degree seemed to be the only significant friendship variable, but the story became more complex with the stratification of the models by gender. These subsequent analyses showed that friendship reciprocity was a significant predictor of LGB identity adoption among women who had reported same-sex attraction, but was inconsequential for male respondents. Further, it seemed that the significance of in-degree for the larger sample was driven by the male respondents in the sample. Conversely, the number of incoming friendship nominations was irrelevant in predicting LGB identity among female respondents.

These findings are certainly compelling, but should be considered in the context of some of the study’s limitations. My analysis hinges on the question asked in the first administration of the survey regarding respondents’ experience of romantic attraction. Even though these questions were answered on a computer, rather than in the context of a conversation with the interviewer, it is possible that the stigmatized nature of same-sex romantic attraction led to underreporting of this phenomenon. Undoubtedly, this
underreporting would not have been randomly distributed across the sample, and thus may have biased the results.

Add Health certainly represents a profoundly rich source of network data, but these network data also suffer from a number of limitations that likely impacted my study. For pragmatic reasons, the administrators of Add Health did not collect data on respondents’ friendships outside of the context of their school, including outside peer, familial, and mentoring relationships. Data such as these might have provided a more detailed understanding of the roles of different types of social connectedness in identity development. Also, Add Health’s network data were only collected among those schools that had a greater than 50% response rate to the survey. This strategy allowed for richer and more consistent network data, but it also entailed sacrificing network data from a larger and more diverse set of schools.

This study also suffers from assumptions that might be seen as being rooted in a more traditional orientation to sexual identity development. It ignores the possibility of the fluidity of sexual identity and identification practices over the life course. It assumes a relatively linear path of development that begins with a nascent feeling of same-sex attraction that solidifies into a coherent identity as one nears the end of young adulthood. As such, my quantitative findings might be significantly enhanced by further research that might take a different methodological tack and investigate some of the more qualitative aspects of the experience of sexuality development among adolescents.

Despite these limitations, the study’s results provide a compelling basis for continuing to investigate the many facets of the relationship between friendship and identity development. These results point to the importance of merging social support
literature that links friendship to measures of health and well-being with queer identity
literature that conceives of friends’ importance in terms of their facilitation of interactive
identity building. The merging of these literatures will allow sociologists to broaden our
understanding of what it means for sexual identity to be socially constructed. This
analysis opens up additional ways in which we can think of individuals’ sexuality
emerging in the context of their interpersonal relationships and social networks.

The construction of non-normative sexuality within relationships is facilitated or
hindered not only in terms of one’s ability to access similar others and the scripts and
narratives of queer identity that they have to offer. The construction of non-normative
sexuality within relationships also occurs as a function of the support that individuals
receive from these relationships, whether or not they are with similar others. This became
abundantly clear in the elucidation of gender differences. The same aspects of social
support that are the most influential in predicting health and well-being among men and
women, extensive networks for men and small intimate networks for women, were also
the most influential in predicting the development of LGB identity among men and
women, respectively.

Clearly, friendship and social connection are important for identity development
processes among same-sex attracted youth beyond the extent to which they provide
opportunities for relationally learning the specifics of enacting a non-normative sexual
identity. Friendship and social connection also provide youth a supportive and affirming
context in which to relationally build the resilience necessary for adopting a non-
normative sexual identity in the face of societal, cultural stigma that might otherwise
preclude the development and expression of that identity.
This study raises a number of pressing questions for further research. Its findings made clear that there are significant connections between friendship, identity building, and well-being, but it was beyond the scope of this study to elucidate the order, nature, and direction of these causal links. If subsequent research addresses these elements, it would be able to inform, in a more precise way, our understanding of the causal pathway that characterizes queer identity building. Identification of these pathways might have direct implications for those individuals who work with vulnerable, sexual minority youth populations. As a community that is faced with overwhelming rates of youth homelessness and behavioral and mental health problems, LGB youth might benefit greatly from programs and services that are informed by a greater understanding of how the myriad interactions of social support, health and well-being, gender, and sexuality impact their identity development. Creating situations that might best foster and nurture those identities have the potential to profoundly impact these other areas of their lives.

Further research might also investigate alternative avenues through which queer identity formation could be supported among adolescents, in the absence of or in addition to peer relationships. Often, the “feelings of differentness” that individuals feel even prior to recognizing nascent non-normative sexuality, preclude the development of social ties and close friendships with peers (Everett 2015). For example, if an individual questioning their identity feels alienated from his or her peers, it might be possible that that individual can derive the resilience one might otherwise get from supportive peer relationships, instead from an empathetic adult and mentor. If further research can identify additional possible mechanisms of this kind, it has the potential to inform direct service efforts and allow service providers to be better able to work with and assist these youth. Clearly, it is
imperative for researchers to continue to investigate the myriad ways in which the role of friendships in the lives of adolescents’ is intimately intertwined with experiences of identity formation and health—both for the benefit of our sociological understanding of identity, but also for the benefit of adolescents who grapple with issues related to adopting a stigmatized sexual identity in their daily lives.
REFERENCES


