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This is a postprint of an article that originally appeared in *Journal of College Student Development* on May 2018. The final version can be found at <https://doi.org/10.1353/csd.2018.0029>.

Hughes, Bryce E., & Hurtado, Sylvia (2018). Thinking about sexual orientation: College experiences that contribute to identity salience. *Journal of College Student Development*.

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Thinking About Sexual Orientation: College Experiences That Predict Identity Salience

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Sexual orientation has been socially prominent in the national media lately, but little is known about how college creates opportunity for thinking about sexual orientation among individual students. Using data from the Diverse Learning Environments survey, administered by the Higher Education Research Institute, we compared samples of heterosexual, lesbian, gay, and bisexual students to determine experiences that predict sexual orientation salience for each group. An inclusive curriculum, cocurricular diversity activities, and bias experiences are all related to increased salience. Participation in an LGBT student organization mattered for LGB students, whereas campus-administered diversity activities were most important for heterosexual students' identity.

The U.S. Supreme Court recently ruled that same-sex couples have a constitutional right to marry, and public polling demonstrates support for the LGBT (lesbian, gay, bisexual, and transgender) community in the country to be at an all-time high (A. Brown, 2017; Liptak, 2013). Among college students specifically, researchers found that support for LGBT rights issues (i.e., marriage equality and adoption by gay and lesbian couples) has increased sharply among first-year college students, with more than 80% in favor of these rights (Eagan et al., 2016). These trends indicate that the climate in American higher education appears considerably welcoming to LGBT students today. However, in spite of greater acceptance,

LGBT students still report marginalization, discrimination, and harassment, much of which originates from interactions with their peers (Rankin, Weber, Blumenfeld, & Frazer, 2010; Tetreault, Fette, Meidlinger, & Hope, 2013). Although progress has been made in transforming institutions of higher education into LGBT-inclusive environments, a great deal of work remains toward reaching this goal.

Student affairs practitioners administer various practices and programs, like LGBT student centers and intergroup dialogue programs (Dessel, Woodford, Routenberg, & Breijak, 2013; Renn, 2007), both to support LGBT students facing a hostile campus climate and to educate the broader student body to influence the attitudes that contribute to that climate. The approach is to raise awareness, respect, and support for diverse sexual orientation identities, which implicitly heightens the identity salience of sexual orientation, or how frequently students think about their sexual orientation identity (Stryker & Serpe, 1994), leading to learning outcomes like a critical awareness of oppression (Hurtado, Alvarez, Guillermo-Wann, Cuellar, & Arellano, 2012). However, much remains to be discovered about the effect of various campus experiences on sexual orientation identity salience and whether these experiences operate differentially for heterosexual students and their sexual minority peers.

In this study we sought to identify college experiences that increase the salience of sexual

orientation for college students, indicated by the likelihood that one's sexual orientation comes to mind (Stryker & Burke, 2000). Sexual orientation identity salience is an essential psychological process that facilitates sexual orientation identity development (Dillon, Worthington, & Moradi, 2011). In addition to identity development, identity salience can result in a critical awareness of oppression and socially responsible leadership, particularly within students from dominant social identity groups (Hurtado et al., 2012). In this study we then build on existing literature by testing the relationship between various college experiences and sexual orientation identity salience across multiple institutional settings, disaggregating by sexual orientation group to examine differences between heterosexual and sexual minority students.

We primarily use the abbreviation LGB (lesbian, gay, and bisexual) as it best describes the sample of students in the study; however, throughout this article we use different variations of the abbreviation due to differences in how authors defined their research foci and samples in research. Many researchers have considered the LGBT community as a whole as affected by a set of broad social power dynamics, but others have focused on the unique experiences pertaining to sexual orientation or gender identity.

Lit Er at ur E rE vi Ew

identity Salience within Sexual Orientation identity Development

Dillon et al. (2011) formulated a universal model of sexual identity development that posits that both individual and social sexual identity development occur through five different identity statuses. The first status, compulsory heterosexuality, a term originally developed by Rich (1980), reflects people who have accepted the socially mandated and

sanctioned assumption that men and women are innately sexually attracted to each other. Many heterosexual individuals never explore this initial commitment and thus experience this identity as invisible or unfelt; these individuals typically reach the fourth status, deepening and commitment, without moving through other development statuses.

Dillon et al. (2011) outlined three sexual identity determinants that together compose sexual identity. These determinants include biopsychosocial processes, individual sexual identity and needs, and social identity, comprising identification with a social group as well as attitudes toward sexual identity groups. For most sexual minorities, and some heterosexual individuals, these determinants do not align with compulsory heterosexuality, leading them to examine this foreclosed commitment and move into a different sexual identity development status.

Typically a person moves into either active exploration or diffusion to cope with the dissonance introduced by experiences that misalign with compulsory heterosexuality (Dillon et al., 2011). Active exploration includes cognitive and behavioral exploration of sexual identity, whereas diffusion is marked by low exploration or commitment to sexual identity. Most people then move through these statuses toward deepening commitment, reflected by a greater commitment to sexual identities and needs, followed by identity synthesis, the integration of sexual identity into one's concept of self.

As Dillon et al. (2011) implied within their discussion of identity synthesis, sexual identity is one of a multitude of identities composing an individual's overall sense of self (Troiden, 1989). The self is both singular and multiple, reflecting the complexity of broader social structures and relationships that people navigate as members of society (Stryker & Burke, 2000). Identity theory then

posits that to maintain a unified sense of self, these multiple selves must be organized into a structure to resist the threat of fragmentation—a hierarchy of salience based on the level of commitment to each identity one holds (Stryker, 1989). Identity theory holds that identity salience is a reflection of an individual's commitment to a particular social identity (Stryker & Burke, 2000). Identities that are higher within a person's hierarchy of salience are also more likely to be invoked in a given situation or set of situations (Stryker & Serpe, 1994), and both negatively and positively evaluated identities fall within this hierarchy (Stryker, 1989). Identifying situations that invoke sexual identity may reveal experiences that are important to the development of sexual orientation identity.

Sexual Orientation and the College Environment

The college environment is likely to affect sexual orientation identity salience just as research has shown how attending college affects people's attitudes toward sexual minorities. Exit polling from the 2012 U.S. Election showed college-educated voters were more likely to support ballot measures in favor of marriage equality (Fox News, 2012). The college environment provides opportunities for people of diverse backgrounds to interact and learn from each other's perspectives (Hurtado et al., 2012), and interacting with LGB people more often contributes to college students' acquiring more tolerant attitudes toward sexual minorities (Engberg, Hurtado, & Smith, 2007). Some of these interactions occur organically as students informally encounter one another, but many are deliberately facilitated by student affairs professionals and faculty within curricular and cocurricular activities.

Curriculum of Inclusion. One important sphere of interaction within the college environment for LGBT students is the college

classroom. The willingness of faculty—and increasingly those student affairs professionals who find themselves in the classroom—to include topics related to sexual orientation signals comfort with the presence of LGBT students in the classroom (Fletcher & Russell, 2001). LGBT students who perceive their instructors as uncomfortable with these topics are likely to be concerned this discomfort may lead the instructor to assess their performance in a detrimental manner (Marine, 2011).

For heterosexual students, classroom experiences may affect the salience of their sexual orientation as these experiences provide structured opportunities to explore issues related to sexual orientation. An inclusive curriculum has been demonstrated to improve students' attitudes toward LGB peers and broader political issues (Engberg et al., 2007; Jayakumar, 2009). Engberg et al. (2007) found that an inclusive curriculum enhanced overall identity salience, though they did not test sexual orientation specifically. Intergroup dialogue is one type of curricular experience demonstrated to increase heterosexual students' awareness of heterosexism and heterosexual privilege (Dessel et al., 2013); however, the effect of an inclusive curriculum on the salience of sexual orientation remains to be empirically tested.

Cocurricular Activities. Outside of the classroom, diversity-related cocurricular experiences have been found to affect students' identity development. For LGBT students, LGBT student organizations provide a supportive community facilitating movement through active exploration of their sexual identities (Renn, 2007). These opportunities also support leadership development toward broader campus activism to agitate for change. Cocurricular experiences also provide heterosexual students opportunities for interactions with others of different sexual orientations, which lead to more accepting and tolerant

attitudes (Engberg et al., 2007; Liang & Alimo, 2005), similar to the classroom environment. Many campuses feature offices like LGBT Resource Centers whose missions include providing resources and educational opportunities for all students to learn about LGBT issues (Marine, 2011); some also offer intergroup dialogue opportunities through the cocurriculum. Yet again, the extent to which cocurricular activities affect the salience of sexual orientation remains untested.

Greek life is another setting where sexual orientation identity may likely be salient. Members of fraternities tend to espouse less tolerant views of sexual minorities (Worthen, 2014), which Hall and La France (2007) determined arose from concerns that sexual minority fraternity members undermine group cohesiveness. That said, other researchers have told a different story. Hesp and Brooks (2009) posited that fraternity members may simply be ignorant to the possibility of gay fraternity brothers. In addition, Worthen (2014) found sorority members held more positive views of gay men than non-Greek participants, and Jayakumar (2009) determined students' positions on LGBT political issues did not differ significantly on the basis of participation in Greek life. Fraternity and sorority member attitudes toward sexual minorities may have been widely studied, but the salience of sexual orientation in this setting is obscure.

Conceptual Framework

The conceptual framework guiding this study is the multicontextual model for diverse learning environments (MMDLE; Hurtado et al., 2012), a framework for understanding campus climate and its relationship to learning and development. The model begins with the premise that identity is central to learning and that increasing the salience of different social identities, particularly for students who belong to privileged social identity groups, can result in

desired learning and developmental outcomes such as a critical awareness of oppression and improved academic performance. Stryker and Burke (2000) determined that identity salience indicated the likelihood that a particular identity would be invoked across a series of situations, reflecting a person's level of commitment to that identity. Thus, with respect to the college environment, some experiences and settings are more likely than others to invoke one's sexual identity.

The MMDLE and the literature reviewed to situate this study help operationalize the campus environment in terms of the types of experiences and settings that would be likely to make sexual orientation more salient. In our literature review we posited that LGBT or political student organizations, leadership experiences, and participation in Greek life could potentially affect the salience of sexual orientation. The MMDLE also incorporates campus-facilitated opportunities to engage with difference as potentially affecting the salience of sexual orientation (Hurtado et al., 2012). These opportunities include courses that incorporate content regarding difference and cocurricular activities organized to increase students' awareness of diversity.

As identities provide cognitive frameworks for interpreting experiences (Markus, 1977), students' judgments of different settings invoking sexual identity on a particular campus may affect their perceptions of the campus climate for the LGBT community (Hurtado et al., 2012). Some interactions with peers, faculty, or staff may signal discomfort with diverse sexual identities, or even threaten a student's psychological safety. The MMDLE discusses the experience of a hostile climate as the intersection of the two individual dimensions of campus climate. The behavioral dimension captures the experience of hostile interactions with others, ranging from more covert microaggressions to more

overt harassment, and the psychological dimension accounts for students' appraisal of these experiences in terms of their broader perceptions of how welcomed or excluded they feel on campus. Experiencing a hostile climate is likely to raise the salience of sexual orientation because it heightens a person's concern for stigma (Troiden, 1989), though researchers on the LGBT climate have yet to test its relationship with identity salience.

The MMDLE also captures several psychological processes that occur within the curricular and cocurricular spheres of interaction that foster student learning and development within a diverse learning environment (Hurtado et al., 2012). These processes include validation, resulting from both the inclusion of diverse perspectives within the curriculum as well as interactions with staff and faculty, and sense of belonging, or the extent to which a student feels connected to the campus as a community (Bollen & Hoyle, 1990). These processes are also theorized to counter the effects of a hostile campus climate and heighten sexual orientation identity salience (Hurtado et al., 2012).

Pur POSE and RE SEar CH QuEST iOn S

The purpose of this study was to identify college experiences that increase the salience of sexual orientation for college students. The research questions that guided this study are the following:

1. Is sexual orientation more salient for LGB students than heterosexual students?
2. What college experiences affect the salience of sexual orientation for LGB and heterosexual students, and do these effects differ between these groups?

MEt HOD

Data Source and Sample

The data for this study came from the 2010 and 2011 administrations of the Diverse Learning Environments (DLE) survey, administered by the Higher Education Research Institute (HERI) at the University of California, Los Angeles. These two data sets were combined to ensure inclusion of a large sample of sexual minority students. To make sure no cases were duplicated in the sample, the two schools that had participated in both administrations, which composed only 3.2% of the total sample, were excluded. The DLE was administered online with an average response rate of 34.0% for students who accessed the survey, and the full combined data set included 20,549 students at 3 community colleges and 13 public and 18 private 4-year institutions who responded to the sexual orientation survey item. Of the sample, 89.0% were heterosexual, 3.3% lesbian or gay, 4.4% bisexual, and 3.3% other, consistent with other estimates of the LGB population in the United States (Gates, 2011).

The sample was then split into two groups constituting heterosexual students and sexual minority students. Since nearly 90% of the students in the sample were heterosexual, we randomly sampled a number of heterosexual students, stratified by institution, equal to the size of the sexual minority group sample. This approach allowed us to analyze variation within each sample as well as compare across both models without having to test a cumbersome number of interaction terms. It also reduced the size of the heterosexual sample to avoid committing Type I statistical errors by erroneously concluding the significance of parameters. Table 1 provides a demographic profile of both samples. We also decided to exclude students who selected other as their sexual orientation, as is general practice

TABLE 1.

Demographic of Student Samples

	Heterosexual Students (%) <i>n</i> = 1,091	LGB Students (%) <i>n</i> = 1,085
<i>Sexual Orientation</i>		
Gay/Lesbian		45.4
Bisexual		54.6
<i>Sex</i>		
Male	32.5	40.0
Female	67.5	60.0
transgender	1.6	3.1
<i>Race/Ethnicity</i>		
asian	31.0	27.0
american		
Black	3.5	2.4
Latino	20.3	24.0
white	38.1	39.2
Multiracial	7.1	7.4

in the literature (Almazan et al., 2009), though we acknowledge the unfortunate exclusion of students who identify their sexual orientation outside gender and sexual binaries (Jourian, 2015).

Finally, despite our efforts to maximize variation in the sample, we identified sample size concerns for a few demographic groups in the sample. We grouped students whose race was unknown with the White reference group, as most students who do not indicate race tend to be White (Smith, Moreno, Clayton-Pedersen, Parker, & Teraguchi, 2005). However, we regretfully determined we needed to exclude Hawaiian (*n* = 1) and American Indian (*n* = 19) students, as we felt it inappropriate to include them with another race group, yet would also be remiss to interpret coefficients that represented such a small number of students. After imputing missing

data, the final samples for analysis included 1,091 heterosexual students and 1,085 LGB students. Full descriptive statistics for both of these samples are presented in Table 2.

Data analysis

Variables. The appendix provides a full list of variables and their respective codings. The dependent variable for this study was a measure of the frequency within the past year students thought about their sexual orientation, ranging from 1 (*never*) to 5 (*very often*). While this item was included in the main survey instrument on the 2010 administration, it was part of a survey module in 2011. Schools that participated in the DLE could add modules for an additional fee; however, since the modules were provided to all participants at a given institution, this difference in administration did not adversely affect interpretation of the data.

Independent variable selection was then guided by the conceptual framework. As identity is central to learning, our first group of variables were demographic characteristics reflecting students' various social identity membership groups, such as sexual orientation, sex, transgender identity, and race. We then included a set of institutional characteristics to account for the types of institutions attended by students, which may predict the experiences available to students and potentially confound the effect of more of these experiences on identity salience.

Next, we included a set of variables to capture participation in Greek life, involvement in LGBT and political student organizations, and engagement in leadership training. These were single items from the survey to which students responded *yes* or *no*. After this group, we included a set of variables that accounted for experiences with the campus climate. These variables consisted of factors measuring conversations across difference as well as discrimination, bias,

using expectation-maximization (EM), a method for imputing missing data that is more robust than mean or regression imputation. EM combines regression imputation with maximum likelihood estimation in a series of iterative steps, leading to imputed estimates of each missing value (Allison, 2002). Missing data on the dependent variable were not imputed, as estimating these values from the independent variables may bias the analysis. Demographics were also not imputed. After excluding students who did not provide their sexual orientation identity, no cases were missing values for other demographic variables. Correlations among variables were also analyzed to identify potential concerns with multicollinearity, but no concerns were identified.

Descriptive statistical tests were performed to identify initial differences between the heterosexual and LGB subsamples. For continuous variables like construct scores and the dependent variable, *t* tests were used to identify mean differences; for categorical variables such as those indicating participation in a particular type of student organization, crosstabulations with chi-square tests were used to test proportion differences. Demographic characteristics of the subsamples are reported in Table 1, and descriptive statistics for all other variables, as well as the results of descriptive tests, are reported in Table 2.

Regression Models. Variables in this study were analyzed using ordinary least squares (OLS) regression with robust standard errors. Although the data are nested in structure—students nested within institutions—null models using HLM revealed very small proportions of between-group variance: 4.4% for the heterosexual sample, 2.8% for the LGB sample. Heck and Thomas (2015) stated that intraclass coefficient values lower than 5.0% mean groups differ very little from each other and OLS regression is

adequate. Our number of schools (34) is also very close to the recommended minimum number (30) to avoid bias in the group-level variance components (Maas & Hox, 2002), and many group sizes are smaller than 5 in Level 1 cases, which can adversely affect the power of a multilevel model to detect significant fixed effects at Level 1 (Kreft & de Leeuw, 1998). Instead of multilevel modeling, Complex Samples in SPSS was used to analyze regression models with robust standard errors to account for the possibility of violations of the assumption of independence given the nested structure of the data.

To determine if regression coefficients differed across the groups between regression models, we employed a test for equality of regression coefficients (Paternoster, Brame, Mazerolle, & Piquero, 1998). This test, which accounts for sample size differences across models, determines if the effect of a particular experience on sexual orientation identity salience that is present for both groups may be significantly more or less pronounced for one group in comparison to the other. We used this test for regression coefficients that were significant in the same direction for both groups.

RE SuLt S and DiSCuSSiOn

In response to the first research question, LGB students on average think about their sexual orientations more frequently than their heterosexual peers ($M = 3.89$ and 2.01 , $p < .001$; see Table 2). Descriptive differences were also observed with respect to college experiences: LGB students were more likely to participate in student-run political clubs and LGBT student organizations, and they reported more frequent harassment, discrimination, and bias and conversations across difference. LGB students were also more likely to experience diversity in the curriculum and cocurriculum.

Research Question 2 was answered using the regression models presented in Table 3. These models explained 13.9% of the variance for the heterosexual sample and 19.5% of the variance for the LGB sample. The low percentages of variance explained, especially for heterosexual students, suggest experiences other than those available in the model may also affect salience and should be addressed in future research.

With regard to demographic differences, two effects were observed for LGB students that were not significant for the heterosexual sample. Sexual orientation was less salient for female sexual minorities than for males, and Asian American LGB students think about their sexual orientation less frequently than White LGB students. As homophobia is embedded within social scripts for masculinity (Kimmel, 2003), it was not surprising to observe this effect of sex for sexual minorities but not heterosexual students. The relationship between race and sexual orientation was unexpected, though many Asian American LGBT individuals grow up in a culture where sexuality is considered taboo (Chan, 1989; Leong, 1996; Maekawa Kodama, McEwen, Liang, & Lee, 2002), and could be expected to think about sexual identity less often. Future research is warranted to explore this intersection.

Institutional characteristics were not significant for either sample, but participation in student organizations did differ between the groups. Participation in leadership trainings and LGBT student organizations related to greater sexual orientation identity salience among LGB students, but not heterosexual students. These findings are both consistent with Renn's (2007) study of LGBT student leaders, but do not seem congruent with the findings of Engberg et al. (2007) regarding the effect of cocurricular engagement on heterosexual student's attitudes toward their

LGBT peers. The lack of effect of LGBT student organizations for heterosexual students is likely confounded by other variables in the model, like conversations across difference and cocurricular diversity activities, which have a significant effect as discussed below.

Among campus climate variables, harassment significantly predicted identity salience for both groups, but in different directions. Harassment positively predicted salience for heterosexual students and negatively predicted salience for LGB students. For the former group, the positive effect may stem from an experience of being perceived to be a sexual minority or empathizing with others who face harassment. For LGB students, greater levels of harassment negatively affect identity salience, whereas bias and discrimination, which are arguably more common, relate to increased sexual orientation identity salience. A higher frequency of conversations across difference related to higher identity salience for both groups of students, and this effect did not differ significantly across the groups. Interacting with people on campus different from oneself provokes self-awareness (Fletcher & Russell, 2001; Liang & Alimo, 2005), which leads to more sympathetic views (Engberg et al., 2007; Jayakumar, 2009).

Participation in cocurricular diversity activities also predicted a higher frequency of thinking about sexual orientation for both samples, though, again, this effect did not differ significantly between the two groups. This factor includes frequency of participation in LGBT Resource Center activities, which should be especially encouraging for campus LGBT center professionals focused on creating greater awareness across heterosexual and LGBT student communities. Exposure to an inclusive curriculum did differ across samples but heightened salience only for sexual minorities—perhaps, for heterosexual students, the cocurriculum fosters more

t a B L E 3.
Initial Correlations and for Regression Models Predicting
Sexual Orientation Salience

	Heterosexual Students (n = 1,091)					LGB Students (n = 1,085)				
	r	p	B	SE	p	r	p	B	SE	p
Intercept			-0.401	0.815				2.505	0.937	*
Demographic Characteristics										
Sexual Orientation: Bisexual						-.145	***	-0.177	0.143	
Sex: Female	-.008		-0.074	0.056		-.158	***	-0.385	0.141	*
Transgender	.031		0.028	0.265		.025		0.263	0.19	
Asian American (Ref: White)	-.029		-0.055	0.072		-.135	***	-0.334	0.103	**
Black (Ref: White)	-.018		-0.382	0.201		.053		0.22	0.224	
Latino/a (Ref: White)	.009		-0.073	0.102		.020		-0.043	0.096	
Multiracial (Ref: White)	-.008		-0.135	0.119		.031		-0.022	0.121	
Institutional Characteristics										
4-Year College (Ref: University)	.100	**	0.143	0.123		-.006		-0.085	0.111	
2-Year College (Ref: University)	.033		0.115	0.201		-.101	**	-0.154	0.250	
Control: Private	.081	**	0.098	0.139		.034		-0.008	0.104	
Selectivity Category	-.074	*	-0.059	0.059		.120	***	0.099	0.072	
Student Organizations										
Joined a Social Fraternity or Sorority	.020		-0.088	0.096		-.024		-0.165	0.084	
Participated in a Leadership Training	.072	*	-0.016	0.066		.037		-0.197	0.068	**
Joined an LGBT Student Organization	.134	***	0.261	0.249		.239	***	0.337	0.076	***
Joined a Student-Run Political Club	.070	*	-0.068	0.17		.093	**	-0.001	0.096	
Campus Climate										
Harassment Score (scaled by 10)	.217	***	0.146	0.043	**	.018		-0.128	0.028	***
Discrimination and Bias Score (scaled by 10)	.199	***	0.053	0.064		.172	***	0.177	0.052	**
Conversations Across Difference Score (scaled by 10)	.199	***	0.109	0.038	**	.242	***	0.197	0.046	***
Spheres of Interaction										
Curriculum of Inclusion Score (scaled by 10)	.171	***	0.09	0.053		.180	***	0.107	0.043	*
Cocurricular Diversity Activities (scaled by 10)	.294	***	0.226	0.064	**	.225	***	0.093	0.032	**
Psychological Processes: Belonging and Validation										
Sense of Belonging Score (scaled by 10)	.012		-0.054	0.034		.013		-0.045	0.044	
Academic Validation Score (scaled by 10)	.064	*	0.02	0.038		.078	*	0.052	0.046	
General Interpersonal Validation Score (scaled by 10)	.093	**	-0.006	0.060		.079	**	0.000	0.043	
Total Variance Explained (R ²)				0.139					0.195	

*p < .05. **p < .01. ***p < .001.

interpersonal interactions, which then has a greater effect on identity salience than coursework. No psychological processes were significant for either group. Both validation constructs were initially correlated with identity salience, but the relationship between validation and identity salience was explained by other variables included in the model, indicating potential indirect effects to be examined in the future.

LiMiTa t iOnS

Several limitations need to be identified that could affect the generalizability of these findings to broader populations. First, our use of cross-sectional data means relationships among variables are not assuredly causal; however, researchers have described salience of sexual orientation as an iterative process: specific experiences make sexual orientation more salient (Stryker & Serpe, 1994), and then, in turn, students whose sexual orientation identities are more salient are likely to seek out many of these experiences (Stryker, 1989). In other words, a cross-sectional model may be appropriate when we discuss relationships among variables that represent phenomena that may both *cause* and *be caused by* identity salience.

Second, we are limited by the use of secondary data in terms of developing the models. Other variables not included on the DLE survey may also contribute to the salience of sexual orientation on campus, such as involvement in residence life (Evans & Broido, 1999; Rhoads, 1994). We were also limited by the language used on the survey for students to identify their sexual orientation, sex, and gender. For sexual orientation, the options were “heterosexual,” “homosexual,” “bisexual,” and “other.” Consistent with HERI’s other surveys, the DLE used sex, defined as “male” and “female,” to capture information related to

students’ sex and gender. An item prompting students to indicate whether they identified as transgender was added to the DLE to recognize the distinction between sex and gender, but it did not include nonbinary gender identity options, like genderfluid. The challenge facing large survey institutes like HERI is collecting data in a consistent manner that allows comparisons across time, yet adapts to changes in how college students describe their experiences, such as identifying outside normative gender and sexuality binaries, like queer and asexual (Jourian, 2015; Savin-Williams, 2005). Despite these limitations, national data sets collect a wide variety of information on large numbers of students across several colleges and universities, allowing scholars to examine important issues without expending many additional resources (Rutkowski, Gonzalez, Joncas, & Davier, 2010; Thomas & Heck, 2001).

COnCLuSiOnS anD iMPLiCat iOnS

In this study we sought to identify college experiences that contributed to students’ sexual orientation identity salience. Overall, we found that the college environment involves activities and experiences associated with how frequently students think about their sexual orientations, and in different ways for heterosexual students than their LGB peers. First, we observed that sexual orientation identity salience can be fostered within campus spheres of interaction. The curriculum and cocurriculum are places where faculty and student affairs professionals facilitate structured opportunities to learn about diversity. Second, conversations across difference was one of the strongest positive predictors of sexual orientation identity salience for both groups, which captures informal experiences as well. Researchers have previously shown these opportunities

contribute to important academic and developmental outcomes for students (Hurtado et al., 2012), such as exposure to diverse viewpoints and multiple perspectives (Liang & Alimo, 2005), and empathy for people from different backgrounds (Engberg et al., 2007; Jayakumar, 2009). We assist campus diversity practitioners with these findings in offering support for dialogue experiences that generate deeper thinking among heterosexual students along with LGB peers. These campus-facilitated experiences also lift the burden of educating the heterosexual majority from the LGB minority, and many dialogue activities can be introduced in the general course of campus programming.

As Stryker (1989) argued, different situations can invoke both positively and negatively evaluated identities; we also observed salience as a result of negative experiences like harassment or discrimination. Identity salience informs students' affective judgments of their environment to identify threats to their safety (Evans & Broido, 1999; Pachankis & Goldfried, 2006). In other words, if sexual orientation becomes salient for students out of a concern for stigmatization, they will perceive the campus to be unsafe and likely disengage from their academics and campus life. Campus leaders' attention to the ways sexual orientation and other social identities become salient to students can help identify both beneficial practices and targets for policies to improve campus climate.

It is encouraging that Greek life does not appear to be an environment in which sexual orientation is made salient when controlling for the climate, even for LGB students. Researchers have previously indicated that the climate within fraternities and sororities can be hostile toward the campus LGB community (Hall & La France, 2007; Worthen, 2014). Our findings align with those of Jayakumar (2009) that showed no relationship between

being a member of a fraternity or sorority and attitude toward LGBT political issues. This finding may also suggest a need for further education on LGBT issues for students who participate in Greek life, especially heterosexual members who may experience low sexual orientation identity salience.

Our findings then have important implications for student affairs practice. By considering the relationship between contextual factors and identity salience (Stryker, 1989), our results help explain how student affairs work influences sexual orientation identity development. By providing students opportunities that heighten sexual orientation identity salience, student affairs practitioners aid in the process of identity development for students by encouraging active exploration (Dillon et al., 2011). For example, LGBT resource professionals provide a wealth of programming to educate people on sexual and gender diversity; by intentionally setting sexual orientation identity salience as a learning outcome of these events, practitioners may better foster identity development and other desired learning outcomes across campus.

Identity salience also has potential to contribute to how practitioners and researchers conduct campus climate assessments. Research on campus climate has already begun to establish that the overall climate consists of multiple, local microclimates (Vaccaro, 2012), which aligns with the assertion that different situations will invoke identities based on how salient those identities are to an individual (Stryker, 1989). Assessments focused on determining how different settings on campus invoke sexual orientation identity could lead to a more complex understanding of the campus climate, similar to recent research at Michigan State University using heat maps to identify locations on campus that students perceive to be unsafe (S. Brown, 2016). Settings and experiences that heighten identity salience

could be identified and examined for targeted interventions toward providing an overall safer learning environment.

Scholars performing future research should then work to solidly establish the link between identity salience and academic outcomes. Sellers, Chavous, and Cooke (1998) have shown how racial identity salience leads to academic success; researchers could build on this by examining other identity dimensions and learning or developmental outcomes. In particular, since identity salience can be stimulated by both supportive activities and hostile climate experiences, researchers working on the connection between salience and success need to account for the different ways salience is heightened to better delineate the link between campus climate and academic success. In particular, as LGB students tend to be aware of the ways faculty avoid or embrace sexual orientation and gender identity as topics in the classroom (Fletcher & Russell, 2001), identity salience may be connected to academic

validation in important ways that support students' academic success. Both validation factors correlated positively and significantly with identity salience initially and consistently with a more inclusive curriculum, indicating indirect effects to be tested in the future. Scholars should confirm whether heightening identity salience mediates the relationship between an LGBT-inclusive curriculum and students' feelings of validation in the classroom, helping explain how identity salience contributes to academic success. By establishing the link between identity salience and personal development through empirical evidence, we will be better positioned to help students realize the democratic outcomes of being educated in a diverse higher education learning environment.

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aPPEndix .

Variable Coding Schemes, and Factor Reliabilities and Loadings

Variable	Scale	Reliability/ Loading
<i>Dependent Variable</i>		
How often in the past year have you thought about your sexual orientation?	1 = <i>never</i> ; 2 = <i>seldom</i> ; 3 = <i>sometimes</i> ; 4 = <i>often</i> ; 5 = <i>very often</i>	
<i>Block 1: Demographic Characteristics</i>		
Sex	1 = male; 2 = female	
Sexual Orientation ^a	1 = heterosexual; 2 = homosexual; 3 = bisexual; 4 = other	
transgender	1 = no; 2 = yes	
race Group ^a	1 = American Indian non-Hispanic; 2 = Asian non-Hispanic; 3 = Black non-Hispanic; 4 = Hawaiian non-Hispanic; 5 = Hispanic—any race; 6 = White non-Hispanic; 7 = two or more races non-Hispanic; 8 = unknown	
<i>Block 2: Institutional Characteristics</i>		
institution type ^a	1 = 4-year university; 2 = 4-year college; 3 = 2-year college	
institutional Control	1 = public; 2 = private	
Selectivity	1 = open access; 2 = less selective (avg. Sat < 1000); 3 = selective (SAT 1000–1200); 4 = more selective (SAT 1200–1300); 5 = most selective (SAT > 1300)	
<i>Block 3: Student Organizations</i>		
Since entering this college, have you:	1 = no; 2 = yes	
joined a social fraternity or sorority?		
participated in leadership training?		
joined an LGBT student organization?		
joined a student-run political club?		
<i>Block 4: Campus Climate</i>		
Harassment (Factor)	1 = <i>never</i> ; 2 = <i>seldom</i> ; 3 = <i>sometimes</i> ; 4 = <i>often</i> ; 5 = <i>very often</i>	$\alpha = .917$
Physical assaults or injuries		.935
Threats of physical violence		.912
anonymous phone calls		.844
Damage to personal property		.794
Reported an incident of discrimination to a campus authority		.685

table continues

^a Dummy coded for analysis.

aPPEn Dix . *continued*

Variable	Scale	Reliability/ Loading
Discrimination and bias (Factor)	1 = <i>never</i> ; 2 = <i>seldom</i> ; 3 = <i>sometimes</i> ; 4 = <i>often</i> ; 5 = <i>very often</i>	$\alpha = .889$
verbal comments		.775
w ritten comments (e.g., e-mails, texts, writing on walls)		.753
Heard disparaging remarks from faculty		.751
w itnessed discrimination		.758
visual images or items		.735
Heard disparaging remarks from		.741
Exclusion (e.g., from gatherings, events)		.716
Heard disparaging remarks from students		.685
Conversations across Diversity (Factor)	1 = <i>not at all</i> ; 2 = <i>occasionally</i> ; 3 = <i>frequently</i>	$\alpha = .761$
How often in the past year did you interact with someone:		
from a religion from your own?		.767
from a socioeconomic class from your own?		.761
of a sexual orientation from your own?		.630
from a country other than your own?		.535
<i>Block 5: Campus Facilitated Activities</i>		
Curriculum of Inclusion (Factor)		$\alpha = .854$
How many courses have you taken at this college that included the following?	1 = <i>none</i> ; 2 = 1; 3 = 2–4; 4 = 5 or more	
Materials/readings about race/ethnicity		.824
Materials/readings about privilege		.705
Opportunities for intensive dialogue between students with backgrounds and beliefs		.635
Materials/readings about gender		.715
Opportunities to study and serve communities in need (e.g., service learning)		.578
Cocurricular diversity activities (Factor)		$\alpha = .903$
Since entering this college, how often have you:	1 = <i>never</i> ; 2 = <i>seldom</i> ; 3 = <i>sometimes</i> ; 4 = <i>often</i> ; 5 = <i>very often</i>	
participated in ongoing campus-organized discussions on racial/ethnic issues (e.g., intergroup dialogue)?		.854
participated in racial/ethnic or cultural center activities?		.844
attended debates or panels about diversity issues?		.797

table continues

^a Dummy coded for analysis.

aPPEn Dix . *continued*

Variable	Scale	Reliability/ Loading
participated in women's/men's center activities?		.809
participated in LGBT center activities?		.762
attended presentations, performances, or art exhibits on diversity?		.637
<i>Block 6: Psychological Processes: Belonging and Validation</i>		
Sense of Belonging (Factor)	1 = <i>strongly disagree</i> ; 2 = <i>disagree</i> ; 3 = <i>agree</i> ; 4 = <i>strongly agree</i>	$\alpha = .887$
I feel that I am a member of this college		.862
I feel a sense of belonging to this campus		.849
I see myself as a part of the campus community		.841
academic validation (Factor)	Multiple codings	$\alpha = .863$
Felt that faculty provided me with feedback that helped me assess my progress in class	1 = <i>never</i> ; 2 = <i>seldom</i> ; 3 = <i>sometimes</i> ; 4 = <i>often</i> ; 5 = <i>very often</i>	.818
Felt that my contributions were valued in class		.810
Felt that faculty encouraged me to ask questions and participate in discussions		.717
Faculty were able to determine my level of understanding of the course material		.753
Faculty show concern about my progress	1 = <i>strongly disagree</i> ; 2 = <i>disagree</i> ; 3 = <i>agree</i> ; 4 = <i>strongly agree</i>	.611
Faculty encourage me to meet with them after or outside of class		.651
General interpersonal validation (Factor)	1 = <i>strongly disagree</i> ; 2 = <i>disagree</i> ; 3 = <i>agree</i> ; 4 = <i>strongly agree</i>	$\alpha = .862$
At least one faculty member has taken an interest in my development		.891
Faculty believe in my potential to succeed academically		.763
At least one member has taken an interest in my development		.882
recognize my achievements		.673
Faculty empower me to learn here		.552
encourage me to get involved in campus activities		.509

^a Dummy coded for analysis.

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- Allison, P. D. (2002). *Missing data series: Quantitative applications in the social sciences*. Thousand Oaks, CA: SAGE.
- Almazan, E., Ayala, G., Badgett, M. V. L., Bye, L., Carpenter, C., Chae, D. H., . . . Sell, R. (2009). *Best practices for asking questions about sexual orientation on surveys*. Los Angeles, CA: The Williams Institute.
- Bollen, K. A., & Hoyle, R. H. (1990). Perceived cohesion: A conceptual and empirical examination. *Social Forces*, *69*, 479-504.
- Brown, A. (2017). *5 key findings about LGBT Americans*. Retrieved from Pew Research Center website: <http://www.pewresearch.org>
- Brown, S. (2016, October 23). "Heat maps" give Michigan State a new view of campus climate. *Chronicle of Higher Education*. Retrieved from <http://www.chronicle.com/article/Heat-Maps-Give-Michigan/238112>
- Chan, C. S. (1989). Issues of identity development among Asian American lesbians and gay men. *Journal of Counseling & Development*, *68*, 16-20.
- Dessel, A. B., Woodford, M. R., Routenberg, R., & Breijak, D. P. (2013). Heterosexual students' experiences in sexual orientation intergroup dialogue courses. *Journal of Homosexuality*, *60*, 1054-1080. doi:10.1080/00918369.2013.776413
- Dillon, F. R., Worthington, R. L., & Moradi, B. (2011). Sexual identity as a universal process. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 649-670). New York, NY: Springer.
- Eagan, M. K., Stolzenberg, E. B., Ramirez, J. J., Aragon, M. C., Suchard, M. R., & Rios-Aguilar, C. (2016). *The American freshman: Fifty-year trends, 1966–2015*. Los Angeles: University of California, Los Angeles, Higher Education Research Institute.
- Engberg, M. E., Hurtado, S., & Smith, G. C. (2007). Developing attitudes of acceptance toward lesbian, gay, and bisexual peers: Enlightenment, contact, and the college experience. *Journal of Gay & Lesbian Issues in Education*, *4*, 49-77. doi:10.1300/J367v04n03_05
- Evans, N. J., & Broido, E. M. (1999). Coming out in college residence halls: Negotiation, meaning making, challenges, supports. *Journal of College Student Development*, *40*, 658-668.
- Fletcher, A. C., & Russell, S. T. (2001). Incorporating issues of sexual orientation in the classroom: Challenges and solutions. *Family Relations*, *50*, 34-40. doi:10.2307/585772
- Fox News. (2012). *2012 Fox News exit polls*. Retrieved from <http://web.archive.org/web/20121215135150/http://www.foxnews.com/politics/elections/2012-exit-poll>
- Gates, G. J. (2011). *How many people are lesbian, gay, bisexual, and transgender?* Los Angeles, CA: The Williams Institute.
- Hall, J. A., & La France, B. H. (2007). Attitudes and communication of homophobia in fraternities: Separating the impact of social adjustment function from hetero-identity concern. *Communication Quarterly*, *55*, 39-60. doi:10.1080/01463370600998673
- Heck, R. H., & Thomas, S. L. (2015). *An introduction to multilevel modeling techniques: MLM and SEM approaches using Mplus* (3rd ed.). New York, NY: Routledge.
- Hesp, G. A., & Brooks, J. S. (2009). Heterosexism and homophobia on fraternity row: A case study of a college fraternity community. *Journal of LGBT Youth*, *6*, 395-415. doi:10.1080/19361650903297344
- Hurtado, S., Alvarez, C. L., Guillermo-Wann, C., Cuellar, M., & Arellano, L. (2012). A model for diverse learning environments. In J. C. Smart & M. B. Paulsen (Eds.), *Higher education: Handbook of theory and research* (Vol. 27, pp. 41-122). New York, NY: Springer.
- Hurtado, S., & Guillermo-Wann, C. (2013). *Diverse learning environments: Assessing and creating conditions for student success—Final report to the Ford Foundation*. Los Angeles: University of California, Los Angeles, Higher Education Research Institute.
- Jayakumar, U. M. (2009). The invisible rainbow in diversity: Factors influencing sexual prejudice among college students. *Journal of Homosexuality*, *56*, 675-700. doi:10.1080/00918360903054095
- Jourian, T. J. (2015). Queering constructs: Proposing a dynamic gender and sexuality model. *The Educational Forum*, *79*, 459-474. doi:10.1080/00131725.2015.1068900
- Kimmel, M. S. (2003). Masculinity as homophobia: Fear, shame, and silence in the construction of gender identity. In P. S. Rothenberg (Ed.), *Race, class, and gender in the United States: An integrated study* (6th ed., pp. 81-93). New York, NY: Worth.
- Kreft, I. G. G., & de Leeuw, J. (1998). *Introducing multilevel modeling*. Thousand Oaks, CA: SAGE.
- Leong, R. (Ed.). (1996). *Asian American sexualities: Dimensions of the gay and lesbian experience*. New York, NY: Routledge.
- Liang, C. T. H., & Alimo, C. (2005). The impact of white heterosexual students' interactions on attitudes toward lesbian, gay and bisexual people: A longitudinal study. *Journal of College Student Development*, *46*, 237-250. doi:10.1353/csd.2005.0028
- Liptak, A. (2013, March 26). Justices say time may be wrong for gay marriage case. *The New York Times*. Retrieved from <https://nyti.ms/2qnKYJ8>
- Maas, C. J. M., & Hox, J. J. (2002). Sample sizes for multilevel modeling. In J. Blasius, J. J. Hox, E. de Leeuw, & P. Schmidt (Eds.), *Social science methodology in the new millennium: Proceedings of the fifth international conference on logic and methodology* (pp. 1-19). Opladen, Germany: Leske + Budrich Verlag.
- Maekawa Kodama, C., McEwen, M. K., Liang, C. T. H., & Lee, S. (2002). An Asian American perspective on psychosocial student development theory. In M. K. McEwen, C. Maekawa Kodama, A. N. Alvarez, S. Lee, & C. T. H. Liang (Eds.), *New Directions for Student Services: No. 97. Working with Asian American college students* (pp. 45-60). Hoboken, NJ: Wiley.
- Marine, S. (2011). Stonewall's legacy: Bisexual, gay, lesbian, and transgender students in higher education. *ASHE Higher Education Report*, *37*(4). doi:10.1002/aehe.3704
- Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology*, *35*, 63-78. doi:10.1037/0022-3514.35.2.63
- Pachankis, J. E., & Goldfried, M. R. (2006). Social anxiety in young gay men. *Journal of Anxiety Disorders*, *20*, 996-1015. doi:10.1016/j.janxdis.2006.01.001
- Patronoster, R., Brame, R., Mazerolle, P., & Piquero, A. (1998). Using the correct statistical test for the equality of regression coefficients. *Criminology*, *36*, 859-866. doi:10.1111/j.1745-9125.1998.tb01268.x

- Rankin, S. R., Weber, G., Blumenfeld, W., & Frazer, S. (2010). *2010 state of higher education for lesbian, gay, bisexual, and transgender people*. Charlotte, NC: Campus Pride.
- Renn, K. A. (2007). LGBT student leaders and queer activists: Identities of lesbian, gay, bisexual, transgender, and queer identified college student leaders and activists. *Journal of College Student Development, 48*, 311-330. doi:10.1353/csd.2007.0029
- Rhoads, R. A. (1994). *Coming out in college: The struggle for a queer identity*. Westport, CT: Bergin & Garvey.
- Rich, A. (1980). Compulsory heterosexuality and lesbian existence. *Signs, 5*, 631-660.
- Rutkowski, L., Gonzalez, E., Joncas, M., & Davier, M. V. (2010). International large-scale assessment data issues in secondary analysis and reporting. *Educational Researcher, 39*, 142-151. doi:10.3102/0013189X10363170
- Savin-Williams, R. C. (2005). *The new gay teenager*. Cambridge, MA: Harvard University Press.
- Sellers, R. M., Chavous, T. M., & Cooke, D. Y. (1998). Racial ideology and racial centrality as predictors of African American college students' academic performance. *Journal of Black Psychology, 24*, 8-27. doi:10.1177/00957984980241002
- Smith, D. G., Moreno, J., Clayton-Pedersen, A. R., Parker, S., & Teraguchi, D. H. (2005). *"Unknown" students on college campuses*. San Francisco, CA: James Irvine Foundation.
- Stryker, S. (1989). Further developments in identity theory: Singularity versus multiplicity of self. In J. Berger, M. Zelditch, & B. Anderson (Eds.), *Sociological theories in progress: New formulations* (pp. 35-57). Newbury Park, CA: SAGE.
- Stryker, S., & Burke, P. J. (2000). The past, present, and future of an identity theory. *Social Psychology Quarterly, 63*, 284-297. doi:10.2307/2695840
- Stryker, S., & Serpe, R. T. (1994). Identity salience and psychological centrality: Equivalent, overlapping, or complementary concepts? *Social Psychology Quarterly, 57*, 16-35. doi:10.2307/2786972
- Tetreault, P. A., Fette, R., Meidlinger, P. C., & Hope, D. (2013). Perceptions of campus climate by sexual minorities. *Journal of Homosexuality, 60*, 947-964. doi:10.1080/00918369.2013.774874
- Thomas, S. L., & Heck, R. H. (2001). Analysis of large-scale secondary data in higher education research: Potential perils associated with complex sampling designs. *Research in Higher Education, 42*, 517-540. doi:10.2307/40196441
- Troiden, R. R. (1989). The formation of homosexual identities. *Journal of Homosexuality, 17*(1-2), 43-74. doi:10.1300/J082v17n01_02
- Vaccaro, A. (2012). Campus microclimates for LGBT faculty, staff, and students: An exploration of the intersections of social identity and campus roles. *Journal of Student Affairs Research and Practice, 49*, 429-446. doi:10.1515/jsarp-2012-6473
- Worthen, M. G. F. (2014). Blaming the jocks and the Greeks? Exploring collegiate athletes' and fraternity/sorority members' attitudes toward LGBT individuals. *Journal of College Student Development, 55*, 168-195. doi:10.1353/csd.2014.0020