

Beyond “Born This Way?” Reconsidering Sexual Orientation Beliefs and Attitudes

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Previous research on heterosexuals’ beliefs about sexual orientation (SO) has been limited in that it has generally examined heterosexuals’ beliefs from an essentialist perspective. The recently developed Sexual Orientation Beliefs Scale (SOBS; [Arseneau, Grzanka, Miles, & Fassinger, 2013](#)) assesses multifarious “lay beliefs” about SO from essentialist, social constructionist, and constructivist perspectives. This study used the SOBS to explore latent group-based patterns in endorsement of these beliefs in 2 samples of undergraduate students: a mixed-gender sample ($n = 379$) and an all-women sample ($n = 266$). While previous research has posited that essentialist beliefs about the innateness of SO predict positive attitudes toward sexual minorities, our research contributes to a growing body of scholarship that suggests that biological essentialism should be considered in the context of other beliefs. Using a person-centered analytic strategy, we found that college students fell into distinct patterns of SO beliefs that are more different on beliefs about the homogeneity, discreteness, and informativeness of SO categories than on beliefs about the naturalness of SO. Individuals with higher levels of endorsement on all 4 SOBS subscales (a group we named *multidimensional essentialism*) and those who were highest in discreteness, homogeneity, and informativeness beliefs (i.e., *high-DHI*) reported higher levels of homonegativity when compared with those who were high only in naturalness beliefs. We discuss the implications of these findings for counseling and psychotherapy about SO, as well educational and social interventions.

Keywords: sexual orientation, lay beliefs, latent profile analysis, LGBT issues, homonegativity

Prior research on heterosexuals’ beliefs about sexual orientation (SO) and their attitudes toward sexual minorities primarily focused on psychological essentialism (i.e., the belief that SO category membership is natural, innate) (e.g., [Haslam & Levy, 2006](#)). Expanding on this research, the Sexual Orientation Beliefs Scale (SOBS; [Arseneau, Grzanka, Miles, & Fassinger, 2013](#)) was designed to also examine social constructionist (i.e., that SO categories are uniquely constructed in specific sociohistorical contexts), and constructivist (i.e., that individuals have agency in determining

their own SO category membership) “lay beliefs” in both heterosexual and lesbian, gay, bisexual, and transgender (LGBT) populations. [Arseneau, Grzanka, Miles, and Fassinger \(2013\)](#) found a multidimensional framework of beliefs about SO that varied slightly between LGBT and heterosexual, cisgender samples, but which highlighted the distinctions between multifarious beliefs, including the discreteness, homogeneity, naturalness, and “informativeness” of SO categories. The present study was designed to further investigate these beliefs by: (a) identifying individuals’ patterns of endorsement of these four beliefs, and (b) examining how these patterns relate to prejudicial attitudes toward LGB individuals using a person-centered analytic strategy (i.e., latent profile analysis; [Zeiders, Roosa, Knight, & Gonzales, 2013](#)). Broadly speaking, this research aimed to further clarify the relationships between SO beliefs and attitudes toward sexual minorities against the backdrop of a rapidly transforming social climate about SO in the United States.

If you define equality in the legal terms articulated by major LGBT rights organizations such as the [Human Rights Campaign \(n.d.\)](#), sexual minorities’ battle for equal rights is nearly over. Sexual minorities can serve openly in the U.S. Armed Forces, the Defense of Marriage Act was overturned at the federal level ([Peralta, 2013](#)), and same-sex couples’ right to marry in all states was decided by the Supreme Court in *Obergefell v. Hodges* (2015). Some evidence also suggests that attitudes toward LGB individu-

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als have shifted rapidly and in favor of the inclusion of LGB people into social systems and structures once reserved exclusively for heterosexuals; for example, a substantial (and growing) minority of young Evangelical Christians support same-sex marriage (Hinch, 2014). Similarly, the citizens of Arizona's 9th congressional district elected the first openly bisexual member of the U.S. House of Representatives in 2012 (Broverman, 2012). And while legal victories for transgender individuals remain elusive (e.g., state and federal protections for employment discrimination), and LGBT people of color generally have poorer outcomes on a variety of key health and well-being metrics than their White counterparts (Sears & Badgett, 2012), the general tone of the country suggests a new era of sexual politics. To paraphrase conservative gay writer Bruce Bawer (1993), it seems that cisgender, White, and affluent LGB Americans have achieved their proverbial place at the table (cf., APA Division 44's 2014 convention theme).

"Lay beliefs" about SO have been consistently invoked in appeals for equal treatment under the law in the U.S. (Hacking, 2002; Osmundson, 2011), at least partially because lay beliefs about the origins of group differences are thought to influence attitudes toward social groups (Demoulin, Leyens, & Yzerbyt, 2006). Perhaps most famously enshrined in popular culture by the Lady Gaga song *Born This Way* (Gaga, 2011, track 2), the essentialist notion that sexual minorities (and heterosexuals, presumably) cannot choose their SO has become an implied assumption about human sexuality (Jones, 2015). These messages circulate in popular culture and may influence the way students, counselor trainees, and clients conceptualize SO and sexuality-related issues. In an attempt to assess the effects of such biological essentialist messages from popular culture on SO beliefs and attitudes, Jang and Lee (2014) conducted an experiment in which they exposed some participants to Lady Gaga's *Born This Way* song and found that respondents' beliefs about the origins of SO changed relative to participants in other conditions. Notably, Jang and Lee did not observe direct evidence of changes in attitudes toward gays and lesbians, however.

This contemporary discourse about the naturalness of SO stands in stark contrast to the centuries of cultural and scientific debate over the origins and meaning of SO (Bland & Doan, 1998; Somerville, 1994). Nonetheless, since the declassification of homosexuality as a mental illness in 1973, psychiatrists, psychologists, and other mental health professionals have also reinforced essentialist beliefs about SO by challenging so-called "reparative" or conversion therapies aimed at changing an individual's SO, and by embracing human sexual diversity as a normal, biological phenomenon (Brian & Grzanka, 2014; Johnson, 2012; Moradi, Mohr, Worthington, & Fassinger, 2009; Waidunas, 2015). This has occurred against the backdrop of continued efforts to uncover the biogenetic factors related to SO (e.g., Rice, Friberg, & Gavrillets, 2012), as well as scientists' attempts to distinguish between sexual identity and sexual desire by way of phallometric tests and other so-called "truth machines" (Terry, 1999; Waidunas & Epstein, 2015).

Interestingly, psychological research generally confirms that essentialist beliefs about social identities correspond with putative judgment (Heyman & Giles, 2006) and stereotyping (Bastian & Haslam, 2006; Haslam, Bastian, Bain, & Kashima, 2006; see also Demoulin, Leyens, & Yzerbyt, 2006). Although this trend is consistent across research on race/racism (Williams & Eberhardt,

2008) and gender/sexism (Haslam, Rothschild, & Ernst, 2000), the inverse has been observed in research about essentialism and SO. Evidence suggests that, in contrast with those who believe SO is a choice, those who believe homosexuality is inborn hold more positive attitudes toward sexual minorities (Hegarty & Pratto, 2001; Jayaratne et al., 2006). For example, Haslam and Levy (2006) found that beliefs in the universality and immutability of SO (both forms of essentialist beliefs) were correlated with affirmative attitudes toward lesbians and gay men. However, they found that belief in the discreteness of SO (another essentialist belief) was correlated with antigay attitudes. This suggests that beliefs about SO are more complex than merely endorsing a unidimensional conceptualization of essentialist beliefs.

Essentialism is typically positioned as one end of a bipolar spectrum of beliefs about social categories, with social constructionism on the other end (e.g., Bohan, 1993). Although most previous research on beliefs about social categories (e.g., Bastian & Haslam, 2006; Haslam et al., 2000; Hegarty & Pratto, 2001) has only assessed essentialist beliefs, it has demonstrated that different kinds of essentialist beliefs may correspond with positive or negative attitudes. Covert or "modern" prejudicial attitudes (Herek, 2004; Morrison & Morrison, 2002) are particularly important to consider in terms of multiple SO beliefs, because conflicting evidence suggests that explicitly negative attitudes toward sexual minorities are less common in the U.S. (Hinch, 2014) while violence and systemic discrimination toward sexual minorities and gender nonconforming individuals persist (Sears & Badgett, 2012). Using a series of items specifically designed for their study, Hegarty and Pratto (2001) found a negative association between immutability beliefs and homonegativity as assessed by Herek's (1994) Attitudes Toward Lesbians and Gays scale. However, they found a positive correlation between what they called "fundamentality" scores and homonegativity; fundamentality, according to Hegarty and Pratto (2001), denotes both a belief in the ability to classify individuals as homosexual or heterosexual and that there are "fundamental psychological differences between the members of these two groups" (p. 128). Much of this empirical work has elided beliefs about bisexuality, but Hubbard and de Visser (2014) recently explored relationships between essentialist beliefs and attitudes toward bisexuals. Using modified versions of Haslam and Levy's (2006) items, they suggested three "clusters" of essentialist beliefs about bisexuality: discreteness, immutability, and universality. They reported that only one kind of essentialist belief—belief in discreteness—predicted negative attitudes toward bisexuals.

In order to better understand a wider range of beliefs about SO, Arseneau et al. (2013) developed the SOBS with the intention of assessing essentialist, social constructionist, and constructivist beliefs. They included items in the SOBS that reflected social constructionist themes (e.g., "Social and environmental factors are the main basis of an individual's sexual orientation") and constructivist themes (e.g., "Individuals choose their sexual orientation"). While strong social constructionist arguments stress the role of social and cultural structures, systems, and practices in producing reality (Berger & Luckman, 1966; Foucault, 1978), constructivism emphasizes the individual's power to determine one's destiny (Fouad, 2007; Martin & Sugarman, 1997). In terms of lay beliefs about SO, constructivism undermines the simplicity of an essentialism/

social constructionism binary because, while those belief systems stress forces outside of the individual's control, constructivism foregrounds individual agency. Building on Haslam and Levy's (2006) explanation of universality, immutability, and discreteness as different forms of essentialist beliefs, Arseneau et al. (2013) found that beliefs in the homogeneity, informativeness, entitativity (i.e., "group-ness"), social and personal importance, naturalness, and discreteness of SO categories represent related-but-distinct beliefs. The Form 2 version of the instrument, appropriate for use in mixed-SO samples, includes four subscales (homogeneity, discreteness, informativeness, and naturalness) that all point in the essentialist direction, but most of the subscales incorporate reverse-scored items that reflect constructivism (e.g., "People may reasonably identify as two sexual orientations at the same time") and/or social constructionist themes (e.g., "Social and environmental factors are the main basis of an individual's sexual orientation"). In an important extension of earlier work in which only essentialist beliefs were assessed often with items and scales developed specifically for a given study that were not independently validated (e.g., Hegarty & Pratto, 2001), the SOBS represents an initially validated tool for the systematic, empirical analysis of a range of SO beliefs.

Although the SOBS confirmed the multidimensionality of SO beliefs and expanded on Haslam and Levy (2006) and others' work (Haslam, Rothschild, & Ernst, 2000; Hegarty & Pratto, 2001, 2004), it has not been used to examine how these multidimensional beliefs may *co-occur within individuals* to create *patterns* of SO beliefs, nor how these patterns of beliefs relate to individuals' attitudes toward sexual minorities. The current study addresses this limitation of the existing literature by utilizing a person-centered approach. In contrast to a variable-centered approach, which focuses on a specific variable and links said variable to a specified outcome, a person-centered approach takes into account multiple variables and provides information about *patterns* of responses and how these patterns, as opposed to individual variables, relate to a specified outcome—in this case, modern homonegativity (Zeiders et al., 2013). Related to our understanding the multidimensional structure of SO, a person-centered approach allows us to consider how the multiple aspects of the SOBS (e.g., belief in discreteness and naturalness) may co-occur. Note that prior research (e.g., Haslam & Levy, 2006; Hubbard & de Visser, 2014) has suggested that discreteness predicts negative attitudes toward sexual minorities, whereas belief in the naturalness of SO predicts positive attitudes. But what if these beliefs co-occurred within individuals? A person-centered approach, such as latent profile analysis (LPA), allows for this kind of simultaneity to emerge in the data. This is informative because it allows for the examination of whether or not certain beliefs may be more likely to co-occur within individuals, while concurrently examining differences in configurations of beliefs across individuals. Related to our understanding of the relation between SO beliefs and attitudes toward sexual minorities, a person-centered approach may circumvent limitations of prior studies that have found significant associations between different SO beliefs and attitudes toward sexual minorities but have not investigated whether the same individuals may hold these seemingly incon-

gruent beliefs (e.g., homogeneity and naturalness). Accordingly, our research questions were as follows:

1. What kinds of response patterns emerge among SOBS respondents? Are there discernible "groups" of respondents in terms of the four SOBS subscales?
2. If such patterns exist, how might these patterns relate to demographic or attitudinal variables, such as modern homonegativity?

Method

Participants

We recruited two independent samples for this study. The first (Sample 1, $n = 384$) was recruited at a large, public university in the Southwestern U.S. These archival data were used for part of the initial validation of Arseneau et al.'s (2013) SOBS; however, person-centered response patterns were not analyzed in the initial validation study. Accordingly, these data represent a valuable archive of SOBS responses for the purposes of LPA, which is described below. Undergraduate research assistants conducted pencil-and-paper surveying in public spaces. Participation was incentivized by the chance to "share your beliefs about sexuality" and win one of 10 \$50 cash prizes. The sample was 66% White, 13% Asian/Asian American, 13% Latino, 4% Black/African American, and 6% multiracial or other race. Fifty-five percent of the respondents identified as men, and 45% identified as women. Only four identified as transgender and were removed from the sample, along with one respondent who did not identify their gender identity. This choice was made so as to enable comparisons between responses from cisgender men and women without conflating gender and gender identity. In terms of SO, the sample was 89% heterosexual, 9% gay or lesbian, 3% bisexual, 1% queer; 2% some other SO.

Sample 2 ($n = 266$) was recruited separately from Sample 1 at the same Southwestern university using identical recruitment procedures. However, participation was limited to women-identified respondents, because this survey was part of a larger study of SO beliefs, internalized sexism, body image, and other gender-specific constructs. The sample was 68% White, 12% Asian/Asian American, 1% Native American, 5% Black/African American, 10% Latino, and 4% multiracial or other race. Race data were missing for 10 participants. In terms of SO, the sample was 88% heterosexual, 3% lesbian, 7% bisexual, 1% queer, and 2% some other SO.

Measures

Samples 1 and 2 completed the SOBS (Arseneau et al., 2013) and a demographic questionnaire via paper-and-pencil surveys. The demographic questionnaire included items for race, gender, SO, year in college, and socioeconomic status (SES) as assessed by the MacArthur Subjective Social Status Scale (Adler, Epel, Castellazzo, & Ickovics, 2000). Whereas the survey completed by Sample 1 only included items developed for the initial validation of the SOBS, Sample 2 also completed a scale to assess modern homonegativity toward gay men (Morrison & Morrison, 2002).

Sexual orientation beliefs. We used the SOBS Form 2 (Arseneau et al., 2013) to assess individuals' beliefs about SO. The 31-item SOBS Form 2 is appropriate for use with heterosexual and sexual minority respondents and includes four separately scored subscales: discreteness, homogeneity, naturalness, and informativeness. Sample items for each subscale include: "Sexual orientation is a category with distinct boundaries: A person is either gay/lesbian or heterosexual" (discreteness); "People who share the same sexual orientation pursue common goals" (homogeneity); "It is impossible to truly change one's sexual orientation" (naturalness); and "It's useful to group people according to their sexual orientation" (informativeness). Items are rated on a 5-point, Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Means, standard deviations, and Cronbach's alphas for all subscales in both samples are reported in Table 1.

Homonegative attitudes. To examine individuals' homonegative attitudes, we used the 12-item Modern Homonegativity Scale (MHS; Morrison & Morrison, 2002). As opposed to overt negative attitudes toward lesbian women and gay men, the MHS assesses negative attitudes toward gay men and lesbians that reflect subtler, contemporary themes. The MHS attends to three intertwined themes: (a) the notion that gay men and lesbians make superfluous or illegitimate arguments for changes in our society, such as the right to marry; (b) actual examples of heterosexism are rare; and (c) gay men and lesbians overstate the importance of their SO and therefore prevent themselves from integrating fully into society. There are two different versions (MHS-G and MHS-L) which are identical except for the use of the words "gay men" and "lesbian;" in the interest of minimizing questionnaire length, we opted for the version assessing attitudes toward gay men. Higher scores on the 5-point, Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating greater homonegative attitudes. Prior work using the MHS has demonstrated adequate reliability ($\alpha = .87$), and evidence of construct validity (Morrison & Morrison, 2002). In the current study (Sample 2 only) we found a mean of 4.08 ($SD = .68$) and a Cronbach's alpha of .89.

Results

Our preliminary analyses in SPSS 22 (IBM Corp., 2013) revealed that data were normally distributed (no items skewed $> \pm 1.5$) and that less than 1% percent of the data were missing for any single item. Expectation maximization was used to impute missing values, per best practices (Schlomer, Bauman, & Card, 2010). To identify distinct profiles of SO beliefs, we conducted latent profile analyses (LPA) in Mplus, version 7.2. (Muthén &

Muthén, 1998–2014). LPA is a technique used to identify patterns of continuous variables under the assumption that latent, unobserved subgroups with similar associations among variables exist in a given population (Geiser, Lehmann, & Eid, 2006). LPA models proceed in a series of steps, starting with a one-profile model solution and increasing in the number of profiles. To determine the best fitting model, the current study used several criteria (Tein, Cox, & Cham, 2013; Tofghi & Enders, 2006). First, we examined the Bayesian information criteria (BIC) and the adjusted BIC (ABIC). BIC and ABIC values closer to zero indicate a better fitting solution. Second, we examined the Lo-Mendell-Rubin likelihood ratio test (LRT); a significant Lo-Mendell-Rubin LRT suggests that the model with k number of profiles fits the data better than the model with $k-1$ number of profiles. Finally, in determining the best fitting solution, we examined the pattern of means for each profile to identify the most conceptually relevant and theoretically meaningful solution. Consistent with recommendations (Collins & Lanza, 2010), we first conducted an LPA with no predictors in the model. Next, we refit the model with predictors. Below we describe findings for each sample.

Sample 1: Mixed-Gender Sample

Table 2a presents LPA fit indices and statistics for the one to six profile solutions for the mixed-gender sample. The BIC values suggested that the two-profile solution was the best fitting model, whereas the Lo-Mendell-Rubin LRT suggested it was the four-profile solution. Based on a review of each profile's means, we determined that the two-profile solution was the best fitting model, as the three-profile and four-profile solutions included a group that contained only one individual and the additional group (in the 4-profile solution) did not significantly contribute to our conceptual understanding of SO belief orientation patterns. Further, the three- and four-profile solutions had lower class probabilities as compared with the two-profile solution. Moving forward with the two-profile solution, we then included SO and gender as predictors of each profile. As seen in Figure 1a, the means of the two-profile solution revealed two unique groups that differed on all four indicators: discreteness, $t(377) = 12.04, p < .001$, homogeneity, $t(377) = 22.89, p < .001$, naturalness, $t(377) = -3.78, p < .001$, and informativeness, $t(377) = 11.74, p < .001$. The first profile ($n = 163$), which we referred to as the *multidimensional essentialism* profile, reported relatively high levels on all indicators. The second profile ($n = 216$), referred to as the *naturalness-only* profile, reported lower levels of discreteness, homogeneity, and informativeness, but higher levels of naturalness. As for the predictors of profile membership, gender did not differentiate the groups; however, SO did. Specifically, heterosexual individuals had a lower likelihood of membership in the *naturalness-only* profile, as compared with the *multidimensional essentialism* profile, $b = -1.012$, standard error (SE) = .48, $p < .05$.

Sample 2: Women-Only Sample

Table 2 (women-only sample) presents LPA fit indices and statistics for the one- to six-profile solutions for the women-only sample. The BIC values suggested that the three-profile solution was the best fitting model, whereas the Lo-Mendell-Rubin LRT suggested it was the two-profile solution. Careful examination of

Table 1
Means (M), Standard Deviations (SD), and Cronbach's Alphas for the Sexual Orientation Beliefs Scale (SOBS)

SOBS subscale	Mixed-gender sample			Women-only sample		
	α	M	SD	α	M	SD
Discreteness	.88	2.58	.86	.86	2.55	.83
Homogeneity	.84	2.44	.7	.7	2.48	.68
Naturalness	.79	3.35	.61	.75	3.27	.58
Informativeness	.77	2.92	.62	.76	2.94	.58

Table 2
Model Fit Indices for the Latent Profile Analyses

Class	BIC	ABIC	Lo-Mendell-Rubin LRT <i>p</i> value
(a) Mixed-gender sample (<i>N</i> = 379)			
1	3,209.69	3,184.30	—
2	3,092.00	3,050.76	.000
3	3,096.24	3,039.13	.000
4	3,102.34	3,029.36	.02
5	3,111.88	3,023.05	.47
6	3,118.80	3,014.10	.37
(b) Women-only sample (<i>N</i> = 266)			
1	2,182.82	2,157.46	—
2	2,105.10	2,063.88	.001
3	2,089.21	2,032.14	.15
4	2,098.77	2,025.85	.11
5	2,106.488	2,017.712	.22
6	2,114.073	2,009.444	.36

Note. BIC = Bayesian information criterion; ABIC = Adjusted Bayesian information criterion; LRT = Likelihood ratio test.

the patterns of means for both the two-profile and three-profile solution revealed a substantively meaningful (and theoretically relevant) group that emerged in the three-profile solution. Thus, this solution was chosen as the best fitting model. Given our interest in examining predictors of the profile solution, we then refit the three-profile model with our predictor variable: modern

homonegativity. Note that we also examined SO as a predictor; however, the model would not provide an estimate given the limited distribution of orientations (89% heterosexual) across the sample and within each class. Figure 1b presents our final three-profile solution. Similar to Sample 1, two unique groups emerged that exhibited a *multidimensional essentialism* profile ($n = 179$) and a *naturalness-only* profile ($n = 51$). A third unique profile emerged ($n = 36$), however, that was not evident in the mixed-gender sample. This group reported the highest levels of discreteness, homogeneity, and informativeness, but moderate levels of naturalness ($M = 2.97$). Given this, the profile was referred to as the *high-discreteness, homogeneity, and informativeness (high-DHI)* profile. Examination of mean-level differences in each of the sexual orientation beliefs across profiles indicated that all three groups differed on discreteness, $F(2, 262) = 52.29$, $p < .001$, homogeneity, $F(2, 262) = 173.08$, $p < .001$, naturalness, $F(2, 262) = 6.63$, $p < .01$, and informativeness, $F(2, 262) = 103.16$, $p < .001$. As for predictors, results revealed that modern homonegativity predicted profile membership. Specifically, higher homonegativity was associated with a higher likelihood of membership in the *multidimensional essentialism* profile, $b = 1.32$, ($SE = .39$), $p < .01$, and the *high-DHI* profile, $b = 2.87$ ($SE = 1.05$), $p < .01$, as compared with the *naturalness-only* profile.

Discussion

In the current study, the use of the SOBS (Arseneau et al., 2013), which provides a multifarious assessment of beliefs about

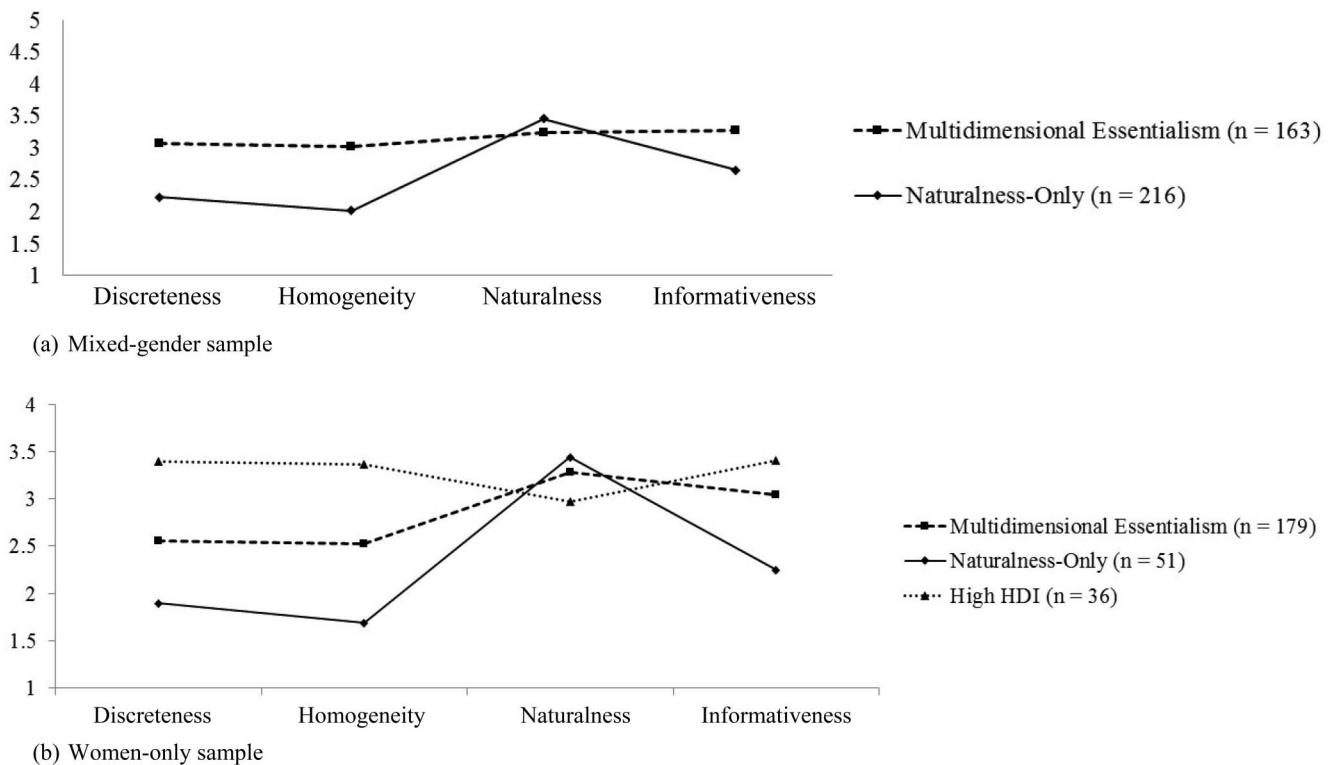


Figure 1. Final LPA solutions for mixed-gender sample (1a) and women-only sample (1b). (a) Mixed-gender sample. (b) Women-only sample.

SO, allowed us to examine complex patterns of beliefs about SO as reflected in three latent response profiles: multidimensional essentialism, high-DHI, and naturalness-only. Unlike previous variable-centered research that has focused on differences in naturalness beliefs about SO (e.g., Hegarty & Pratto, 2001), our person-centered approach revealed that differences in naturalness beliefs were not what most distinguished the response profiles we observed in two independent samples. That is, the three profiles of beliefs about SO were more similar in beliefs about the naturalness of SO than they were in other beliefs (i.e., discreteness, homogeneity, and informativeness) about SO. Notably, our person-centered approach showed that beliefs that have previously been shown to correspond with different attitudes (i.e., discreteness and naturalness) co-occurred within similar profiles across both samples. In addition, higher levels of homonegativity were associated with the multidimensional essentialism (ME) and high-discreteness, homogeneity, and informativeness (high-DHI) profile, rather than the naturalness-only (NO) profile.

These results join a growing body of literature from across the social sciences that complicates the relationship between certain forms of psychological essentialism and attitudes toward sexual minorities, including homonegativity and internalized heterosexism (Morandini et al., 2015). In the mixed-gender sample, heterosexuals were more likely to belong to the ME profile, whereas sexual minorities were more likely to belong to the NO profile, which reported slightly (but significantly) higher levels of naturalness beliefs, but significantly lower levels of endorsement of the other three SOBS subscales. In other words, both profiles were more similar in their endorsement of naturalness beliefs and more different in terms of the other three belief domains. In terms of demographic factors, heterosexuals were more likely to belong to the ME profile in the mixed-gender sample.

In the women-only sample, we found that the ME and NO profiles emerged alongside a third meaningful profile in which respondents were high on discreteness, homogeneity, and informativeness, but lowest on naturalness scores (albeit still well above the scale's 2.5 midpoint). The inclusion of attitudinal measures in this sample's questionnaire allowed us to examine how homonegative attitudes might predict membership in one or more of the response profiles. Indeed, higher levels of modern homonegativity predicted membership in this high-DHI profile and the ME profile when compared with the NO profile. Although previous research highlights the differences between essentialist attitudes about race, gender, and SO, our findings qualify such claims and suggest that certain forms of essentialist beliefs—namely the relative discreteness and informativeness of social categories, and the homogeneity of group members—may be more related to negative attitudes toward LGB people. Belief in “natural kinds” (Hacking, 2002), on the other hand, may not be as powerful of a predictor of attitudes, especially in the realm of SO. At least among our independent samples, differences in beliefs in the discreteness, homogeneity, and informativeness of SO categories were larger among our three different profile types than differences in beliefs about the naturalness of SO. Thus, it may be that most individuals already believe that sexual minorities are “born this way,” regardless of their own SO or their attitudes toward gay men, specifically. This is consistent with research on “biomedicalization” (Clarke et al., 2003), which argues that social life—including attitudes, behaviors, and knowledge itself—is increas-

ingly organized on biogenetic terms. In other words, believing that sexual minorities are “born this way” may tell us less about a person's attitudes toward sexual minorities (Jang & Lee, 2014) and more about the sociohistorical context in which they are expressing those beliefs, that is, the contemporary U.S. in the early 21st century. Accordingly, future research with the SOBS should examine how other beliefs about SO can both predict and mitigate negative attitudes toward sexual minorities.

In methodological terms, this study offers an example of a person-centered analytic approach, LPA. This person-centered approach allowed for the identification of both qualitative and quantitative differences in belief profiles, the prevalence of a given belief profile, and the link between belief profiles and homonegative attitudes. Our study observed three unique response patterns (or profiles) that shared a strong endorsement of biogenetic essentialist beliefs (e.g., naturalness) but differed qualitatively in their endorsement of other SO beliefs. As for prevalence, LPA also allowed us to see that the NO profile was the most common response pattern in the mixed-gender sample, whereas the ME profile was more common in the women-only sample; future research should explore which (if either) profile is most common in a sample that is more representative of the general population, and whether or not the (smallest) high-DHI profile also replicates in other samples. Furthermore, the LPA indicated that the ME and high-DHI profiles were associated with more negative attitudes toward sexual minorities in the women-only sample. Whereas previous variable-centered research has illuminated how different beliefs may predict different attitudes, our person-centered approach showed that many individuals held these different beliefs at the same time, including beliefs that have previously been thought to predict different attitudes (e.g., discreteness and naturalness) (Haslam & Levy, 2006; Hubbard & Hegarty, 2014). Although LPA (and latent class analysis, LCA, which is appropriate for use with dichotomous as opposed to continuous variables), remains a nascent approach in counseling psychology (McAleavey et al., 2012; cf., Davis et al., 2015; Herman, Trotter, Reinke, & Ialongo, 2011; Rice, Ray, Davis, DeBlaere, & Ashby, 2015; Richardson, Rice, & Devine, 2014), our work demonstrates its strength as a tool for counseling psychologists, who routinely use multidimensional scales in their research and whose research questions often lend themselves to a person-centered approach (Zeiders et al., 2013).

Although in one sample we found that those who most endorsed the naturalness of SO held less homonegative attitudes, it was this group's lower endorsement of other SOBS dimensions—informativeness, homogeneity, and discreteness—that most distinguished them from those who held expressed higher levels of modern homonegativity. We observed greater variability in beliefs about these three dimensions than we observed in naturalness, and indeed those who scored lower on informativeness, homogeneity, and discreteness also exhibited lower levels of homonegativity. Although our findings are preliminary, they point to important implications for education, research, clinical practice, and social policy. For example, modern homonegativity (Morrison & Morrison, 2002) is a particularly important construct in the context of training therapists to work in culturally competent and sensitive ways with LGBT clients (Johnson, 2012). Because modern homonegativity describes subtler prejudice as opposed to outright hatred or disgust, it may more effectively capture those implicit attitudes that can negatively affect the therapeutic alliance and

create an unsafe, heteronormative space for LGBT clients (e.g., Shelton & Delgado-Romero, 2011). Future work should explore how targeting beliefs in the informativeness, discreteness, and homogeneity of sexual minority group members may be an efficacious way of reducing therapists' negative attitudes toward LGBT individuals, particularly their clients. For example, regression and structural equation modeling could facilitate the exploration of how discreteness, homogeneity, and informativeness beliefs may moderate the relationship between naturalness beliefs and homonegativity.

Although our findings have research and clinical implications, there are limitations that provide direction for future research. These data are cross-sectional and therefore do not enable us to make causal inferences about the relationships between the variables under investigation, that is, naturalness, discreteness, homogeneity, informativeness, modern homonegativity, and sexual orientation identity. Future experimental and longitudinal research may allow us to systematically assess the efficacy of different pedagogical and psychoeducational interventions about SO. For example, which interventions are the most effective at reducing homonegative attitudes: interventions that target SO beliefs about discreteness, informativeness, and homogeneity; interventions that foreground "born this way" (naturalness) ideology; or interventions that introduce a wide range of SO beliefs? Although necessarily limited by a small sample size and culturally bounded by a British context, Hegarty's (2010) classroom-based study of United Kingdom undergraduate students' changing attitudes toward sexual minorities during an LGBT psychology course that deemphasized biological explanations of SO provides some initial empirical support for this kind of an educational intervention.

Furthermore, because our samples were composed of mostly college-aged students who are middle-class and White, our data are limited inasmuch as they may reflect the beliefs and attitudes of a small sample of the U.S. population. Additionally, although we observed variability in levels of modern homonegativity in our sample, this particular instrument (i.e., the MHS; Morrison & Morrison, 2002) may be susceptible to social desirability and cohort effects among this group of young, educated people in the U.S. Furthermore, we used the version of the MHS that targets attitudes toward gay men, so these results tell us nothing about attitudes toward lesbians. Future projects should employ other measures of homonegative and binegative bias, including implicit measures that may be better equipped to measure what Neville, Awad, Brooks, Flores, and Bluemel (2013) have called "ultramodern" prejudice, particularly among highly educated and privileged members of liberal or progressive communities (p. 455). Finally, most of our participants were heterosexual, and future research with sexual minorities may reveal different profiles of SO beliefs and attitudes, including internalized homonegativity (e.g., Morandini et al., 2015).

Our research contributes to ongoing, multidisciplinary conversations about the role of SO beliefs in social and public policy. Recently, when sexual minority public figures have expressed that they might not be "born this way," they have come under attack (e.g., actress Cynthia Nixon, who said that for her being gay is a "choice"; Witchel, 2012). Whereas queer liberationists in the 70s and 80s demanded a rethinking of sexuality and sexual politics that embraced a deconstructionist approach to understanding our contemporary SO system (Stein & Plummer, 1994; Sullivan, 2003),

mainstream LGB politics has traded radical sexual politics for a kind of "strategic essentialism" when it comes to the nature of SO (Duggan, 1994, p. 6): We are just like you, so give us your rights and privileges. Jang and Lee (2014) observed an effect on SO beliefs from simply listening to the song *Born This Way*, suggesting that SO beliefs may be changed through even subtle or covert messages in popular culture—although the direct effects of these messages on attitudes remains elusive. In his critique of Macklemore, Ryan Lewis, and Mary Lambert's Grammy Award-nominated single *Same Love*, a song which emphasizes the similarities between straight and LGB people as well as the immutability of SO, writer Brandon Ambrosino (2014) posits:

Part of what it means to be human is to be adaptable and elastic, to try on new identities, to try new experiences, to play with the paradigm, to bend the norm to its snapping point and see if it cracks under the pressure of its own linguistic limitations. The reinventiveness of our human condition is one of our greatest traits, and it's worth protecting both legally and philosophically. I wonder how our LGBT discourses would be enhanced were we to fully embrace the dynamism of our sexuality (n.p.).

Our findings underscore his point and remind us that we should be mindful—in our various roles as researchers, clinicians, and educators—that biogenetic or "naturalness" explanations of SO are not the only way to think about SO, despite the evidence of increased prevalence of these beliefs among the public (Jones, 2015). Instead, these findings invite future empirical and pedagogical investigation into the power of challenging ideas about who LGB people are, rather than basing equality arguments on what makes people LGB (Osmundson, 2011). As direct service providers, educators, and advocates for social justice (Mallinckrodt, Miles, & Levy, 2014), counseling psychologists are uniquely positioned to complicate the discourse on SO beliefs and to encourage a more nuanced message about SO that affords space for a diversity of scientific knowledge and lay beliefs. These results and the growing literature on SO beliefs (e.g., Hubbard & de Visser, 2014; Hubbard & Hegarty, 2014; Morandini et al., 2015) illustrate that psychologists should be careful about assuming that our students, clients, and peers share our discipline's generally essentialist conceptualization of SO (i.e., that people are "born this way") and be especially conscious of challenging the idea that SO categories are discrete; that there is a such a thing as "normal" bisexual, lesbian, or gay person; and that SO is the defining aspect of LGB individuals.

References

- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy white women. *Health Psychology, 19*, 586–592. <http://dx.doi.org/10.1037/0278-6133.19.6.586>
- Ambrosino, B. (2014, July 28). I wasn't born this way. I choose to be gay; Macklemore sends the wrong LGBT message in "Same Love." *The New Republic*. Retrieved from <http://www.newrepublic.com/article/116378/macklemores-same-love-sends-wrong-message-about-being-gay>
- Arseneau, J. R., Grzanka, P. R., Miles, J. R., & Fassinger, R. E. (2013). Development and initial validation of the sexual orientation beliefs scale (SOBS). *Journal of Counseling Psychology, 60*, 407–420. <http://dx.doi.org/10.1037/a0032799>

- Bastian, B., & Haslam, N. (2006). Psychological essentialism and stereotype endorsement. *Journal of Experimental Social Psychology*, 42, 228–235. <http://dx.doi.org/10.1016/j.jesp.2005.03.003>
- Bawer, B. (1993). *A place at the table: The gay individual in American society*. New York, NY: Touchstone.
- Berger, P. L., & Luckman, T. (1966). *The social construction of reality*. Garden City, NY: Doubleday.
- Bland, L., & Doan, L. (Eds.). (1998). *Sexology uncensored: The documents of sexual science*. Cambridge, UK: Polity Press.
- Bohan, J. (1993). Regarding gender: Essentialism, constructionism, and feminist psychology. *Psychology of Women Quarterly*, 17, 5–21. <http://dx.doi.org/10.1111/j.1471-6402.1993.tb00673.x>
- Brian, J. D., & Grzanka, P. R. (2014). The machine in the garden of desire. *American Journal of Bioethics: Neuroscience*, 5, 17–18.
- Broverman, J. (2012, November 12). Krysten Sinema becomes nation's first openly bi congresswoman. *Advocate.com* Retrieved from <http://www.advocate.com/politics/politicians/2012/11/12/krysten-sinema-becomes-nations-first-openly-bi-congresswoman>
- Clarke, A., Shim, J., Mamo, L., Fosket, J. R., & Fishman, J. R. (2003). Biomedicalization: Technoscientific transformations of health, illness and U.S. biomedicine. *American Sociological Review*, 68, 161–194. <http://dx.doi.org/10.2307/1519765>
- Collins, L. M., & Lanza, S. T. (2010). *Latent class and latent transition analysis for the social, behavioral, and health sciences*. New York, NY: Wiley.
- Davis, D. E., Rice, K., Hook, J. N., Van Tongeren, D. R., DeBlare, C., Choe, E., & Worthington, E. L., Jr. (2015). Development of the sources of spirituality scale. *Journal of Counseling Psychology*, 62, 503–513. <http://dx.doi.org/10.1037/cou0000082>
- Demoulin, S., Leyens, J., & Yzerbyt, V. (2006). Lay theories of essentialism. *Group Processes & Intergroup Relations*, 9, 25–42. <http://dx.doi.org/10.1177/1368430206059856>
- Duggan, L. (1994). Queering the state. *Social Text*, 39, 1–14. <http://dx.doi.org/10.2307/466361>
- Fouad, N. A. (2007). Work and vocational psychology: Theory, research, and applications. *Annual Review of Psychology*, 58, 543–564. <http://dx.doi.org/10.1146/annurev.psych.58.110405.085713>
- Foucault, M. (1978). *The history of sexuality: An introduction* (Vol. I). New York, NY: Vintage Books.
- Gaga, L. (2011). *Born this way*. On *Born this way* [CD]. Santa Monica, CA: Interscope Records.
- Geiser, C., Lehmann, W., & Eid, M. (2006). Separating “rotators” from “nonrotators” in the mental rotations test: A multigroup latent class analysis. *Multivariate Behavioral Research*, 41, 261–293. http://dx.doi.org/10.1207/s15327906mbr4103_2
- Hacking, I. (2002). How “natural” are “kinds” of sexual orientation? *Law and Philosophy*, 21, 335–347.
- Haslam, N., Bastian, B., Bain, P., & Kashima, Y. (2006). Psychological essentialism, implicit theories, and intergroup relations. *Group Processes & Intergroup Relations*, 9, 63–76. <http://dx.doi.org/10.1177/1368430206059861>
- Haslam, N., & Levy, S. R. (2006). Essentialist beliefs about homosexuality: Structure and implications for prejudice. *Personality and Social Psychology Bulletin*, 32, 471–485. <http://dx.doi.org/10.1177/0146167205276516>
- Haslam, N., Rothschild, L., & Ernst, D. (2000). Essentialist beliefs about social categories. *British Journal of Social Psychology*, 39, 113–127. <http://dx.doi.org/10.1348/014466600164363>
- Hegarty, P. (2010). A stone in the soup? Changes in sexual prejudice and essentialist beliefs among British students in a class on LGBT psychology. *Psychology and Sexuality*, 1, 3–20. <http://dx.doi.org/10.1080/19419891003634356>
- Hegarty, P., & Pratto, F. (2001). Sexual orientation beliefs: Their relationship to anti-gay attitudes and biological determinist arguments. *Journal of Homosexuality*, 41, 121–135. http://dx.doi.org/10.1300/J082v41n01_04
- Hegarty, P., & Pratto, F. (2004). The differences that norms make: Empiricism, social constructionism, and the interpretation of group differences. *Sex Roles*, 50, 445–453. <http://dx.doi.org/10.1023/B:SERS.0000023065.56633.cb>
- Herek, G. (2004). Beyond “homophobia”: Thinking about sexual prejudice and stigma in the 21st century. *Sexuality Research & Social Policy*, 2, 6–24. <http://dx.doi.org/10.1525/srsp.2004.1.2.6>
- Herek, G. M. (1994). Assessing heterosexuals' attitudes toward lesbians and gay men: A review of empirical research with the ATLG scale. In G. M. Herek & B. Greene (Eds.), *Lesbian and gay psychology: Theory, research and clinical applications* (pp. 206–228). Thousand Oaks, CA: Sage.
- Herman, K. C., Trotter, R., Reinke, W. M., & Ialongo, N. (2011). Developmental origins of perfectionism among African American youth. *Journal of Counseling Psychology*, 58, 321–334. <http://dx.doi.org/10.1037/a0023108>
- Heyman, G. D., & Giles, J. W. (2006). Gender and psychological essentialism. *Enfance*, 58, 293–310. <http://dx.doi.org/10.3917/enf.583.0293>
- Hinch, J. (2014, July 7). Evangelicals are changing their minds on gay marriage—And the Bible isn't getting in their way. *Politico*. Retrieved from <http://www.politico.com/magazine/story/2014/07/evangelicals-gay-marriage-108608.html>
- Hubbard, K., & de Visser, R. O. (2014). Not just bi the bi: The relationship between essentialist beliefs and attitudes about bisexuality. *Psychology and Sexuality*. Advance online publication.
- Hubbard, K., & Hegarty, P. (2014). Why is the history of heterosexuality essential? Beliefs about the history of sexuality and their relationship to sexual prejudice. *Journal of Homosexuality*, 61, 471–490. <http://dx.doi.org/10.1080/00918369.2014.865448>
- Human Rights Campaign. (n.d.). Our victories. *Human Rights Campaign*. Retrieved from <http://www.hrc.org/the-hrc-story/our-victories>
- IBM Corp. (2013). *IBM SPSS statistics, Version 22.0*. Armonk, NY: IBM Corp.
- Jang, S. M., & Lee, H. (2014). When pop music meets a political issue: Examining how “Born This Way” influences attitudes toward gays and gay rights policies. *Journal of Broadcasting & Electronic Media*, 58, 114–130. <http://dx.doi.org/10.1080/08838151.2013.875023>
- Jayarathne, T. E., Ybarra, O., Sheldon, J. P., Brown, T. N., Feldbaum, M., Pfeffer, C., & Petty, E. M. (2006). White Americans' genetic lay theories of race differences and sexual orientation: Their relationship with prejudice toward Blacks, and gay men and lesbians. *Group Processes & Intergroup Relations*, 9, 77–94. <http://dx.doi.org/10.1177/1368430206059863>
- Johnson, S. D. (2012). Gay affirmative psychotherapy with lesbian, gay, and bisexual individuals: Implications for contemporary psychotherapy research. *American Journal of Orthopsychiatry*, 82, 516–522. <http://dx.doi.org/10.1111/j.1939-0025.2012.01180.x>
- Jones, J. M. (2015, May 20). Majority in U.S. now say gays and lesbians born, not made. *Gallup*. Retrieved from http://www.gallup.com/poll/183332/majority-say-gays-lesbians-born-not-made.aspx?utm_source=Social%20Issues&utm_medium=newsfeed&utm_campaign=titles
- Mallinckrodt, B., Miles, J. R., & Levy, J. J. (2014). The scientist-practitioner-advocate model: Addressing contemporary training needs for social justice advocacy. *Training and Education in Professional Psychology*, 8, 303–311. <http://dx.doi.org/10.1037/tep0000045>
- Martin, J., & Sugarman, J. (1997). The social-cognitive construction of psychotherapeutic change: Bridging social constructionism and cognitive constructivism. *Review of General Psychology*, 1, 375–388. <http://dx.doi.org/10.1037/1089-2680.1.4.375-388>
- McAlevey, A. A., Nordberg, S. S., Hayes, J. A., Castonguay, L. G., Locke, B. D., & Lockard, A. J. (2012). Clinical validity of the counseling center assessment of psychological symptoms-62 (CCAPS-62): Fur-

- ther evaluation and clinical applications. *Journal of Counseling Psychology*, 59, 575–590. <http://dx.doi.org/10.1037/a0029855>
- Moradi, B., Mohr, J. J., Worthington, R. L., & Fassinger, R. E. (2009). Counseling psychology research on sexual (orientation) minority issues: Conceptual and methodological challenges and opportunities. *Journal of Counseling Psychology*, 56, 5–22. <http://dx.doi.org/10.1037/a0014572>
- Morandini, J. S., Blaszczyński, A., Ross, M. W., Costa, D. S. J., & Dar-Nimrod, I. (2015). Essentialist beliefs, sexual identity uncertainty, internalized homonegativity and psychological wellbeing in gay men. *Journal of Counseling Psychology*, 62, 413–424. <http://dx.doi.org/10.1037/cou0000072>
- Morrison, M. A., & Morrison, T. G. (2002). Development and validation of a scale measuring modern prejudice toward gay men and lesbian women. *Journal of Homosexuality*, 43, 15–37. http://dx.doi.org/10.1300/J082v43n02_02
- Muthén, L. K., & Muthén, B. O. (1998–2014). *Mplus user's guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.
- Neville, H. A., Awad, G. H., Brooks, J. E., Flores, M. P., & Bluemel, J. (2013). Color-blind racial ideology: Theory, training, and measurement implications in psychology. *American Psychologist*, 68, 455–466. <http://dx.doi.org/10.1037/a0033282>
- Obergefell v. Hodges, No. 14–556. Supreme Court of the United States (2015).
- Osmundson, J. (2011). “I was born this way:” Is sexuality innate, and should it matter. *LGBTQ Policy Journal at the Harvard Kennedy School*. Retrieved from <http://isites.harvard.edu/icb/icb.do?keyword=k78405&pageid=icb.page414413>
- Peralta, E. (2013, June 26). Court overturns DOMA, sidesteps broad gay marriage ruling. *NPR*. Retrieved from <http://www.npr.org/blogs/thetwo-way/2013/06/26/195857796/supreme-court-strikes-down-defense-of-marriage-act>
- Rice, K. G., Ray, M. E., Davis, D. E., DeBlaere, C., & Ashby, J. S. (2015). Perfectionism and longitudinal patterns of stress for STEM majors: Implications for academic performance. *Journal of Counseling Psychology*. Advance online publication. <http://dx.doi.org/10.1037/cou0000097>
- Rice, W. R., Friberg, U., & Gavrilits, S. (2012). Homosexuality as a consequence of epigenetically canalized sexual development. *The Quarterly Review of Biology*, 87, 343–368. <http://dx.doi.org/10.1086/668167>
- Richardson, C. M. E., Rice, K. G., & Devine, D. P. (2014). Perfectionism, emotion regulation, and the cortisol stress response. *Journal of Counseling Psychology*, 61, 110–118. <http://dx.doi.org/10.1037/a0034446>
- Schlomer, G. L., Bauman, S., & Card, N. A. (2010). Best practices for missing data management in counseling psychology. *Journal of Counseling Psychology*, 57, 1–10. <http://dx.doi.org/10.1037/a0018082>
- Sears, B., & Badgett, L. (2012, June). Beyond stereotypes: Poverty in the LGBT community. *The Williams Institute, UCLA School of Law*. Retrieved from <http://williamsinstitute.law.ucla.edu/headlines/beyond-stereotypes-poverty-in-the-lgbt-community/>
- Shelton, K., & Delgado-Romero, E. A. (2011). Sexual orientation micro-aggressions: The experience of lesbian, gay, bisexual, and queer clients in psychotherapy. *Journal of Counseling Psychology*, 58, 210–221. <http://dx.doi.org/10.1037/a0022251>
- Somerville, S. (1994). Scientific racism and the emergence of the homosexual body. *Journal of the History of Sexuality*, 5, 243–266.
- Stein, A., & Plummer, K. (1994). “I can’t even think straight:” “Queer theory” and the missing sexual revolution in sociology. *Sociological Theory*, 12, 178–187. <http://dx.doi.org/10.2307/201863>
- Sullivan, N. (2003). *A critical introduction to queer theory*. New York, NY: Routledge.
- Tein, J. Y., Cox, S., & Cham, H. (2013). Statistical power to detect the correct number of classes in latent profile analysis. *Structural Equation Modeling*, 20, 640–657. <http://dx.doi.org/10.1080/10705511.2013.824781>
- Terry, J. (1999). *An American obsession: Science, medicine, and homosexuality in modern society*. Chicago, IL: University of Chicago Press. <http://dx.doi.org/10.7208/chicago/9780226793689.001.0001>
- Tofighi, D., & Enders, C. K. (2006). Identifying the correct number of classes in a growth mixture model. In G. R. Hancock (Ed.), *Mixture models in latent variable research* (pp. 317–341). Greenwich, CT: Information Age.
- Waidunas, T. (2015). *The straight line: How the fringe science of ex-gay therapy reoriented sexuality*. Minneapolis, MN: University of Minnesota Press.
- Waidunas, T., & Epstein, S. (2015). “For men arousal is orientation:” Bodily truthing, technosexual scripts, and the materialization of sexualities through the phallometric test. *Social Studies of Science*, 45, 187–213. <http://dx.doi.org/10.1177/0306312714562103>
- Williams, M. J., & Eberhardt, J. L. (2008). Biological conceptions of race and the motivation to cross racial boundaries. *Journal of Personality and Social Psychology*, 94, 1033–1047. <http://dx.doi.org/10.1037/0022-3514.94.6.1033>
- Witchel, A. (2012, January 19). Life after “sex.” *The New York Times*. Retrieved from http://www.nytimes.com/2012/01/22/magazine/cynthia-nixon-wit.html?_r=3&ref=alexwitchel&pagewanted=all
- Zeiders, K. H., Roosa, M. W., Knight, G. P., & Gonzales, N. A. (2013). Mexican American adolescents’ profiles of risk and mental health: A person-centered longitudinal approach. *Journal of Adolescence*, 36, 603–612. <http://dx.doi.org/10.1016/j.adolescence.2013.03.014>

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