

Hidden (and Not so Hidden) Messaging in Top-Utilized U.S. Social Surveys: The Persistence of Heteronormative Ideology and the Gender Binary



Jennifer Tabler , Carlos M. Gonzales, Jamie A. Snyder, Rachel M. Schmitz , and Claudia Geist 

1 Introduction

Population research is often dependent on nationally representative and longitudinal social science surveys administered by government and academic institutions. Survey measurement is critical to advancing our understanding of population-level social change and the unique experiences of diverse individuals and groups. Social surveys often serve as a tool to reflect key information about our social world, such as attitudes, behaviors, characteristics, and experiences. However, social science research is undoubtedly shaped by the socio-historical context and dominant stereotypes and ideologies prevalent at the time of the study's design and implementation, as well as individual researcher biases (Chenail, 2011). The highly prevalent sex binary question, "Are you male or female?" serves as one example of how question operationalization within surveys perpetuates certain ideologies, such as the erroneous assumption that sexed embodiment is exclusively "female" or "male" (Davis, 2015; Fausto-Sterling, 1993; Spade, 2011). Although gender, sexuality, as

J. Tabler (✉) · J. A. Snyder
University of Wyoming, Laramie, WY, USA
e-mail: jtabler@uwyo.edu

J. A. Snyder
e-mail: jsnyde29@uwyo.edu

C. M. Gonzales
Pennsylvania State University, Philadelphia, PA, USA
e-mail: cmg6774@psu.edu

R. M. Schmitz
Oklahoma State University, Stillwater, OK, USA
e-mail: rachel.schmitz@okstate.edu

C. Geist
University of Utah, Salt Lake City, UT, USA
e-mail: claudia.geist@soc.utah.edu

well as biological sex, are all socially constructed, surveys reinforce and perpetuate established ideas about the concepts when framing measures and response options.

Based on these assumptive practices, survey research has been justifiably critiqued in perpetuating narrow, constrained measurements of sex, gender, and sexuality (frequently conflating sex and gender, or sexual behavior and sexual identity), and utilizing discrete categories that obscure diversity (Fenton et al., 2001; Magliozzi et al., 2016). Humanities and gender studies scholars have long argued that gender and sexuality are fluid, operate on spectrums, and are multi-dimensional in their individual, interactional, and structural dynamics (Butler, 1999; Epstein et al., 2012; Lorber, 1993). This body of knowledge has not been fully translated and incorporated into empirical social science research. Extensive dialogue exists surrounding best practices in survey research more broadly (Krosnick, 1999; Rea & Parker, 2014; Rossi et al., 2013), underscoring the need to broaden this conversation towards implementing more inclusive sex, gender, and sexuality measures to accurately capture social diversity, such as growing numbers of lesbian, gay, bisexual, transgender, and/or queer (LGBTQ+)-identified people (Compton et al., 2018; Conron & Goldberg, 2020; GenIUSS, 2014).

A fuller representation of gender and sexual diversity and expansiveness in social science research is necessary to not only promote rigor and validity of studies in accurately capturing social processes, but it is also critical in making research inclusive of underrepresented populations, such as gender and sexual minority people who endure elevated inequalities (Crissman et al., 2017). Both federal “official” surveys and social science surveys need to reckon with the extent that they include or exclude gender and sexual minorities. At the federal level, the Federal Committee on Statistical Methodology research group convenes a Federal Interagency Working Group for Improving Measurement of Sexual Orientation (FIWG), which issued several reports pointing out that lack of data results in a lack of knowledge about the characteristics and needs of gender and sexual minorities (FIWG, 2016a, 2016b, 2016c).

In addition to not providing the necessary knowledge, social surveys can perpetuate binary gender as well as heteronormative ideology through survey question framing, structure, and design, depending on their approach to capturing explicit sex, gender, and sexual identity population demographics. For example, as explored by Westbrook and Saperstein (2015), surveys use assumptive language that is framed around the traditional “male/female,” “brother/sister,” and “husband/wife” gender dichotomy that constrains the collection of expansive data that captures the full breadth of social relationships and gender-based experiences. The present study chronicles changes in patterns of explicit measurement approaches surrounding sex, gender, and sexuality across time in 18 top-utilized surveys, thus illustrating how surveys may perpetuate marginalizing and exclusionary binary gender and heteronormative ideologies.

1.1 Demographic Change: Gender and Sexual Minority Populations

The prevalence of people who identify as LGBTQ+ is on the rise, with approximately 4.5% of the United States adult population identifying as sexual and/or gender minorities (Conron & Goldberg, 2020). Across federal surveys (covering 2006–2013), between 2.3% (National Health Interview Survey, adults 18 or older) and 5.3% (National Survey on Drug Use and Health, adults 18–44) identify as gay, lesbian, or bisexual (FIWG, 2016b). A 2017 GLAAD Harris Poll found that 12% of adult respondents identified as LGBTQ+, and 20% of individuals between ages 18–34 years identified as LGBTQ+, indicating that younger cohorts are more likely to identify as LGBTQ+ (GLAAD, 2017). Additionally, younger generations are more likely to know someone who identifies as gender-expansive, are more likely to support the rights of transgender people (GLAAD, 2017; Pew Research Center, 2016), and may be more comfortable openly identifying with non-heterosexual and non-cisgender identities in surveys as a result. For example, children raised by same-gender parents, such as lesbian mothers, may be significantly more likely to report sexual expansiveness across attraction, identity, and experiences compared to their peers raised by heterosexual parents (Gartrell et al., 2019). Coinciding with the increasing numbers of LGBTQ+-identifying populations, there has been growing scholarly and mainstream attention given to the experiences of LGBTQ+ people, such as their general wellbeing and life outcomes (Coulter et al., 2014), which further underscores the need for measurement accuracy in social science research.

Despite increasing evidence for the growing prevalence of LGBTQ+ -identifying people, a barrier to capturing demographic patterns among gender and sexual minorities is the lack of expansive, inclusive measures of gender and sexuality in critical data sources. Federal surveys and the census have been slow and uneven in adapting their instruments, with a few notable exceptions. For example, the Census provides critical demographic information on the US population every decade, however, the US Census Bureau ultimately decided to exclude gender and sexual identity measures in the 2020 census, only capturing cohabiting same-sex couples (US Census Bureau, 2020). Globally, national census endeavors, such as in the UK, have adopted more expansive, subjective gender identity measures to allow for more inclusive, encompassing categories based on participants' individual understandings (Sullivan, 2020). The United States lags behind gender and sexuality movements in social science survey research, and the lack of high-quality data serves as a barrier to tracking demographic change and conducting generalizable research that is representative of diverse individuals across various US contexts. One area where federal data collection efforts have become more inclusive are in health and criminal justice-oriented surveys, such as the Behavioral Risk Factor Surveillance System (BRFSS), the National Inmate Survey (NIS), and the Population Assessment of Tobacco and Health (PATH) where one-step gender questions include participants' self-identification as Transgender (see FIWG, 2016a). The National Crime Victimization Survey (NCVS), the Survey of Prison Inmates (SPI), and the National Adult Tobacco Survey (NATS) also include

a two-step design that asks for sex assigned at birth and current gender identity (see FIWG, 2016a).

1.2 Binary Sex and Gender, Cisnormativity

The gender binary model reinforces the existence of only two biological sexes/genders, male/men and female/women, and assumes one's assigned gender (conflated with biological sex) at birth will neatly align with traditional, dominant social constructs of masculinity (men) and femininity (women) (Butler, 1999; Lorber, 1993). Ideals of cisnormativity extend from the gender binary in that cisgender identities, or people who identify with their gender assigned at birth, go unquestioned and are upheld as the dominant standard, with gender expansiveness socially challenged and subordinated (Worthen, 2016). The dominant biological sex/gender binary is an inadequate framework for capturing the full diversity of not only biological sex assignment at birth, as evidenced by intersex traits that complicate dominant binary sex understandings (Davis, 2015; Fausto-Sterling, 1993), but also expansive and complex gender dynamics across identity, expression, and interactions that challenge and resist stereotypical expectations, including transgender identities and broader nonconformity (Butler, 1999; Halberstam, 2017). Cisnormativity, or the ideology that cisgender experience is assumed and idealized, is often embedded in major social science surveys, with responses framed around assumptions of cisgender identities and experiences (Westbrook & Saperstein, 2015; Worthen, 2016). The dominant model of the sex/gender binary and the resulting cisnormative ideologies are infused into and concertedly reproduced among modern Western societal contexts, such as the reinforcement of the binary gender structure in educational environments that privilege cisgender conformity (Martin, 1998) while subordinating and marginalizing gender expansive identities (Travers, 2019). Since researchers and developers of social science surveys are also embedded in the social dynamics of cisnormativity, it stands to reason that they too are susceptible to internalizing and reifying dominant, exclusionary gender ideologies within survey design (Hartung & Lefler, 2019).

Although long theorized in the humanities and gender studies, awareness of the socially constructed notion of gender categories has only recently become more mainstream in the discipline of sociology (Brickell, 2006). Efforts to place gender in distinct categories have given rise to the development of the umbrella terms of non-binary and gender nonconforming to include those who do not fit in the traditional binary sex/gender constructs of man/male and woman/female (Webb et al., 2016). We expect surveys to create more inclusive and expansive responses to meaningfully include people whose gendered realities resist the gender binary and exemplify gender as existing on a spectrum.

1.3 Heteronormativity, Heterosexism, and Mononormativity

Heteronormativity refers to the ideology that heterosexuality, predicated on gender binary norms and cisnormativity, is the most naturally occurring, and therefore idealized, expression of sexuality, thereby relegating non-heterosexual relationships and identities as abnormal or inferior (Jackson, 2006). The theory of heteronormativity and its union with binary gender creates a social understanding that the world around us is dictated by two genders, that gender is tied to sex, and that different-sex attraction is normative (Kitzinger, 2005; Schilt & Westbrook, 2009). Heterosexuality is normalized through deliberate social dynamics, often in mundane, everyday ways, including parenting strategies and media sources that repeatedly present heterosexuality as the norm and only viable, satisfactory outcome (Martin, 2009; Martin & Kazyak, 2009). Extending from heteronormative beliefs privileging heterosexuality, heterosexism (a more nuanced, complex construct related to homophobia, or fear of homosexuality) involves the systematic enactment of prejudice and discrimination against non-heterosexual identities, behaviors, and processes through both cultural and individual interactions at multiple social levels that assume heterosexuality and subordinate diversity (Herek, 1984).

Through heteronormative and heterosexist social practices, expansive, diverse gender and sexual possibilities are rendered invisible, and even when non-heterosexual identities are considered, they fall into the binary, homonormative realm of only validating gay men or lesbian women who otherwise meet heteronormative ideals (i.e., having children, being middle class, white, etc.) (Brown, 2012; Duggan, 2002). Similarly, the linkage of dominant gender and sexuality ideologies highlights the marginalization of sexual identities that challenge the gender binary, such as bisexuality and pansexuality defined by attraction to multiple genders and through binegativity and bi-erasure practices where bisexuality is framed as illegitimate (Rodríguez Rust, 2000; Scherrer et al., 2015). Mononormativity also undergirds cis-heteronormative ideologies and systems by positioning monogamous intimate relationships as superior to non-monogamous ones and inherently natural (Ferrer, 2018), which is reflected in widespread societal practices that instill privilege like the legal institution of marriage.

These overarching socially constructed and marginalizing understandings of sex, gender, and sexuality are consistently reflected and perpetuated in historical and contemporary social surveys. It is critical that social survey researchers avoid designing surveys that frame sex, gender, and sexuality in ways that reinforce only heteronormative and mononormative perspectives and experiences to avoid further marginalization of diverse experiences and enhance the rigor of researcher endeavors overall by utilizing accurate, inclusive measures.

1.4 *The Current Study*

This research expands upon previous research by detailing the evolution of gender, sex, and sexuality measures across time within surveys most commonly used in social science and policy research. In addition, this research explores hidden messaging embedded in historical and contemporary survey design that may continue to promote and produce heterosexist and cisnormative constructions of knowledge. Reducing bias and improving survey design is critical to furthering the accurate representation of underserved populations in research. However, survey quality not only shapes downstream research; government survey resources, such as the decennial Census, are integral to the development of social policy. Results of this study are critical to developing surveys that avoid re-enforcing binary gender and heteronormative ideologies and instead employ more inclusive gender and sexuality measures. Such surveys may potentially produce more accurate knowledge about these populations, and thus, provide more precise, evidence-based data to inform policy.

2 Method

To identify surveys for study inclusion, we employed a two-tier relevance sampling strategy (Krippendorff, 2019). First, we used the Inter-university Consortium for Political and Social Research's (ICPSR) data on the most frequently downloaded U.S.-based data sources, (that is, their top-utilized surveys) to identify commonly used social surveys (primary sampling frame). We then surveyed 300 faculty across the disciplines of Sociology, Psychology, Political Science, Criminal Justice, and Health Sciences regarding their use of secondary data resources to create a secondary sampling frame. Combining the surveys identified in steps 1 and steps 2, we were able to identify 18 U.S.-based social surveys, most of them national in scope, longitudinal, and/or using a panel/series design, that are frequently used in social and policy research. The following surveys were ultimately selected for analysis: the American Housing Survey (AHS), American National Election Studies (ANES), Fragile Families and Wellbeing Survey (FFWS), General Social Survey (GSS), National College Health Assessment (NCHA), National Crime Victimization Survey (NCVS), National Health and Nutrition Examination Survey (NHANES), National Health and Aging Trends Study (NHATS), The National Longitudinal Study of Adolescent to Adult Health (Add Health), National Survey on Drug Use and Health (NSDUH), New Immigrant Survey (NIS), National Youth Survey (NYS), Panel Study of Income Dynamics (PSID) and the Daily Use of Time Supplement (DUST), Monitoring the Future (MTF), The American Community Survey (ACS), The National Health Interview Survey (NHIS), and the Survey of Income and Program Participation (SIPP). Table 1.1 includes descriptive information about each survey that was analyzed, including year of first and last data collection, type of data collection (e.g., interview,

self-report), target population, and the number of questions measuring sex, gender identity, and sexuality.

After sample selection, codebooks or questionnaires were gathered for each survey from either ICPSR or the survey's organization website for every year of administration until 2021, or when the survey was last administered. Survey questionnaires and codebooks served as the primary units of analysis, which were then organized by year/survey wave, and electronically hand-coded in a two-step approach, using a content analytic method modeled after Westbrook and Saperstein (2015). We examined codebooks and questionnaires in their entirety for any direct or indirect reference, or reliance upon, the concepts or measures of sex, gender, or sexuality, which emerged as the theoretically relevant analytic units of analysis. This approach utilizes a combination of both deductive and inductive content analysis approaches, as described below.

2.1 Deductive Content Analysis: Explicit Measurement of Sex, Gender, and Sexuality

Coding was completed in two steps. The first step of coding focused on identifying survey questions that explicitly sought to measure the participant's sex, gender, or sexuality. We used pre-existing conceptual operationalizations of sex, gender, and sexuality as a guideline for inclusion following Westbrook and Saperstein's (2015) analytic strategy. We began by employing 21 keywords, including, "sex, gender, sexuality, trans, woman, man, female, male, gay, lesbian, same-sex, straight, heterosexual, homosexual, intersex, sister, brother, wife, husband, spouse, partner." Most sex, gender, and sexual identity measures were identified through keyword searches, however, some older survey files were not searchable. Therefore, we also examined each codebook and questionnaire in its entirety. For each measure, exact wording and responses were recorded in an Excel spreadsheet along with any changes over time in question wording, the number of questions, or response options. The year that any changes occurred was also documented.

2.2 Inductive Content Analysis: Hidden Messaging Through Assuming, Omitting, and Phrasing

Additionally, survey content that indirectly or directly relied on conceptualizations of sex, gender, or sexuality, either through the structure of the survey (e.g., women were only asked a subset of questions) or questions themselves (e.g., "should an admitted homosexual be able to teach at a university?" (GSS, 2021) was identified along with the year or wave of survey, and other information (e.g., questionnaire or

codebook section, page number). This information was compiled in an Excel spreadsheet, with notes regarding patterns or impressions of survey structure and items. In this step, surveys were examined in their entirety, rather than using keywords, to allow codes and themes to emerge inductively. Codes were added to our research memo notes; example codes included, “binary gender options only,” “homophobic question,” “biased language,” and “only asked to women.” After examining all surveys, we then grouped codes into the three major categories “assumption,” “omission,” and “biased,” which formed the basis for our final themes. We identified these distinct themes, which illustrated that surveys reinforce binary, cisgender stereotypes, and heteronormativity in three distinct ways: (1) through assumptive language, (2) question or item omission that relied on binary gender, and (3) overtly biased priming and phrasing. We then revisited the most recent questionnaire year (typically between 2018–2021) of all surveys to confirm our three themes.

3 Results

3.1 *Content Analysis: Change in Sex, Gender, and Sexuality Measurement Over Time*

Sample characteristics including survey name, population under study, the data collection period, and survey type are presented in Table 1. This table also includes the number of measures for sex, gender, and sexuality in the most recent version of the survey and whether it is possible to identify whether the respondent is in a same-sex or same-gender relationship or household.

In general, the trend across social surveys, especially in earlier surveys, is to employ a single measure that conflates sex and gender, then, the later inclusion of a measure of sexual orientation/preference/or identity, followed by a separate gender identity question decoupled from sex assigned at birth. Figure 1 depicts changes in sex, gender, and sexuality measurement over time by the number of questions asked in each survey (ranging from one to three separate questions). As evidenced in Fig. 1, many surveys began adopting a sexual orientation or preference question in the 1980s or 1990s (possibly in response to the HIV/AIDS epidemic).

Some surveys (as recent as 2015 for the ANES and NCHA, with the NCVS following in 2016) have decoupled biological sex and gender measures, but many continue to conflate or rely on a single sex/gender measure that only provides male/female response options. For example, FFCWS (2018) and AHS (2019) still rely on a single sex measure, while the NCHA (2019) and Add Health (2018) include three separate questions on sex, gender, and sexuality in their most recent survey iterations. In particular, the NCHA originally contained two questions from 2000 (its first year of administration) until 2015, then moved to three questions that measure sex, gender, and sexuality separately (see Fig. 2).

Table 1 National survey characteristics

Survey Name	Population	First year of data collection	Last year of data collection	Survey type	Current number of questions on sex, gender identity, and sexual identity	Can identify if same-sex household or have a same-gender partner?
ACS	National	2000	2020	Self-administered	1	Yes
Add Health	National	1994	2018	Interview	3	Yes
AHS	National	1973	2019	Interview	1	Yes
ANES	National	1948	2020	Interview	2	Yes
FFCWS	National	1998	2020	Interview	1	Yes
GSS	National	1972	2021	Interview	3	Yes
MTF	National	1975	2021	Self-administered	1	No
NCHA	National	2000	2020	Self-administered	3	Yes
NCVS	National	1973	2020	Interview	3	Yes
NHANES	National	1959	2020	Interview	2	Yes
NHATS	National	2011	2020	In-person survey	1	No
NHIS	National	1962	2020	Interview	2	Yes
NIS	National	1996	2009	Interview	2	Yes
NSDUH	National	1971	2020	Interview	2	No
NYS	National	1976	1987	Interview	2	Yes
PSID	National	1968	2019	Interview	1	Yes
PSID-DUST	National	2009	2013	Interview	1	Yes
SIPP	National	1984	2018	Interview	1	Yes

ACS The American Community Survey, *Add Health* National Longitudinal Study of Adolescent to Adult Health, *AHS* American Housing Survey, *ANES* American National Election Studies, *DUST* Daily Use of Time Supplement, *FFWS* Fragile Families and Wellbeing Survey, *GSS* General Social Survey, *MTF* Monitoring the Future, *NCHA* National College Health Assessment, *NCVS* National Crime Victimization Survey, *NHANES* National Health and Nutrition Examination Survey, *NHATS* National Health and Aging Trends Study, *NHIS* The National Health Interview Survey, *NSDUH* National Survey on Drug Use and Health, *NYS* National Youth Survey, *PSID* Panel Study of Income Dynamics, *SIPP* Survey of Income and Program Participation

While many surveys decoupled sex and gender measures, they still do not explicitly ask about non-binary sex, such as having intersex traits, or expansive gender identities, such as gender nonconforming or transgender identities. For example, in the Wave I of the 1994 Add Health survey, there was no option for the respondent to report their gender identity, only an option to confirm their sex (excluding intersex) by the interviewer based on pre-loaded school data. In Wave 5 (2018), an

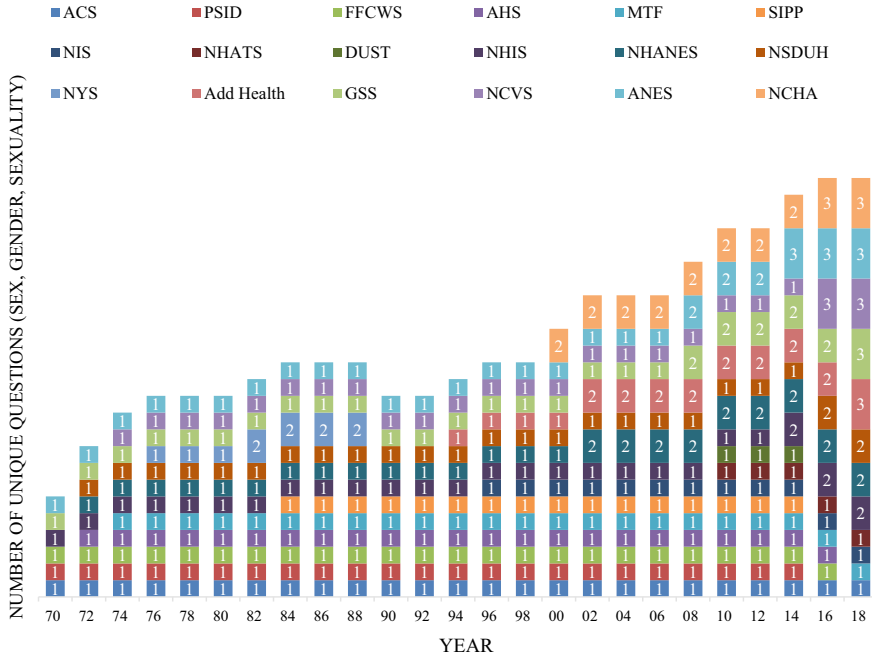


Fig. 1 Change in measurement of sex, gender identity, and sexual identity over time by survey

32. Which of the following best describes you?		
<input type="radio"/> Heterosexual	<input type="radio"/> Bisexual	<input type="radio"/> Unsure
<input type="radio"/> Gay/Lesbian	<input type="radio"/> Transgendered	
46. What is your sex?		
<input type="radio"/> Female		
<input type="radio"/> Male		
47. What sex were you assigned at birth, such as on an original birth certificate? <input type="radio"/> Female <input type="radio"/> Male		
47b. Do you identify as transgender? <input type="radio"/> No <input type="radio"/> Yes		
47c. Which term do you use to describe your gender identity?		
<input type="radio"/> Woman	<input type="radio"/> Trans man	
<input type="radio"/> Man	<input type="radio"/> Genderqueer	
<input type="radio"/> Trans woman	<input type="radio"/> Another Identity (please specify: _____)	
48. Which term best describes your sexual orientation?		
<input type="radio"/> Asexual	<input type="radio"/> Queer	
<input type="radio"/> Bisexual	<input type="radio"/> Questioning	
<input type="radio"/> Gay	<input type="radio"/> Same Gender Loving	
<input type="radio"/> Lesbian	<input type="radio"/> Straight/Heterosexual	
<input type="radio"/> Pansexual	<input type="radio"/> Another Identity (please specify: _____)	

Fig. 2 Sex, gender, and sexuality. Sources Above (32 and 46), National College Health assessment 2000–2008 p. 6, 8. Below (47–48), National College Health Assessment (2019, p. 11)

H5OD2A - S1Q2A SEX ASSIGNED AT BIRTH-W5 H5OD2A Q2A. What sex were you assigned at birth, on your original birth certificate? Male Female
H5OD2B - S1Q2B GENDER-W5 H5OD2B Q2B. What is your gender? Male Female
H5OD3 - S1Q3 FEMININE/MASCULINE APPEARANCE-W5 H5OD3 Q3. On average, how do you think people would describe your appearance, style, or dress? very feminine mostly feminine somewhat feminine equally feminine and masculine somewhat masculine mostly masculine very masculine

Fig. 3 Sex, gender, and gender presentation. *Source* Add Health (2018, Wave V, Section 1, Background, p. 11)

explicit question about sex assigned at birth was added separate from gender identity. However, only two options were provided for biological sex, “male” or “female,” and gender identity included “male,” “female” or “unspecified,” thereby preventing the identification of intersex traits or people with expansive gender identities. They did, however, include an ordinal gender expression measure that asks respondents to rate how feminine or masculine others perceive their appearance (see Fig. 3), an important attempt to operationalize gender expression or gendered performance (West & Zimmerman, 1987).

In early surveys that include household rosters, such as the decennial census and ACS, cohabiting same-gender couples were often not easily identifiable, as evidenced in the example below from 1996 (see Fig. 4). The question also demonstrates inconsistency—son or daughter is used instead of child, but grandchild and foster child is an option. Many surveys, such as the ACS (2020), now allow respondents to actively identify that a member of the household is a same-sex spouse or partner. The adoption of explicit “same-sex” options in household rosters, particularly in government-affiliated surveys, began in the mid-2010s, likely in response to the legalization of same-sex marriage by the U.S. Supreme Court in 2015 (Obergefell vs. Hodges, 2015). Previously, data on same-gender partnerships were inferred through an indirect matching procedure that used sex as a proxy for gender (e.g., Black et al., 2007). However, it is important to note that it is still not possible to identify *same-gender* relationships, as the focus on binary *sex* tells us little about how people identify in terms of gender, or their sexual identity. Indeed, these household rosters still largely reproduce a singular gay/straight two-person partnership dichotomy, reinforcing both homonormativity and mononormativity, and ultimately

Question 3	
Relationship of Person 2 to Person 1	
Husband or wife	Other relative
Son or daughter	Roomer or boarder
Brother or sister	Housemate or roommate
Father or mother	Unmarried partner
Grandchild	Foster child
In-law	Other non-relative
2	
How is this person related to Person 1? Mark (X) ONE box.	
Opposite-sex husband/wife/spouse	Father or mother
Opposite-sex unmarried partner	Grandchild
Same-sex husband/wife/spouse	Parent-in-law
Same-sex unmarried partner	Son-in-law or Daughter-in-law
Biological son or daughter	Other relative
Adopted son or daughter	Roommate or housemate
Stepson or stepdaughter	Foster child
Brother or sister	Other non-relative

Fig. 4 Household rosters. *Source* ACS (1996, p. 90)

result in the erasure of expansive sexual identities, such as bisexuality and pansexuality, as well as potentially polyamorous relationships. For example, an individual could personally identify as pansexual or bisexual, but be currently residing with an opposite- “sex” partner, thus potentially erasing the validity of their relationship and identity, as well as constraining accurate measurement of a respondent’s sexuality.

In short, while some surveys have made the transition from single sex/gender measures to separate sex, gender, and sexuality measures (e.g., GSS and NCHA), and identify same-sex partners or spouses based on the household rosters (e.g., ACS and AHS), many surveys still fail to ask explicit questions about sexual identity and/or gender identity (e.g., SIPP).

3.1.1 Recommendations and Best Practices

First and foremost, if we are to accurately represent individuals of diverse gender and sexual identities, surveys should directly ask respondents a minimum of three separate questions about the respondent’s sex assigned at birth, gender identity, and sexual identity. This is especially important for government surveys that currently only allow for the identification of cohabitating same-sex couples (which stated above, is both limiting and problematic). Allowing respondents to self-identify their gender and sexual identities will enrich our understanding of diverse family structures and promote self-determination of identity among respondents to enhance participant autonomy and wellbeing. Further, this information will allow the institutions collecting this data to more accurately fulfill their goals which often include accurately measuring diverse perspectives, assessing needs (including health and

economic), and informing policy guidance. If we are to improve our understanding of diverse groups on a population-level, it is critical that research treats gender and sexual identities as essential demographic characteristics alongside sex, household income, marital status, race, or ethnicity. While we encourage readers to explore the many best practice documents that currently exist, we will highlight a few here.

Sexuality

The Sexual Minority Assessment Research Team (SMART) at the UCLA Williams Institute (2009) developed a best practices document that encourages researchers to consider what they mean by “sexual orientation.” Researchers should be aware of whether they are measuring sexual identity (e.g., “do you identify as heterosexual”), sexual attraction (e.g., “are you attracted to male and females equally”), or behavior (e.g., “have your sexual partners been exclusively male”). We recommend that all surveys include a sexual identity measure, rather than rely solely on attraction or behavior to describe individuals. This is because while identity, behavior, and attraction are related, they are not synonymous. For example, a respondent might report same-gender attraction, but that they have had exclusively opposite-gender partners. Similarly, someone who has had diverse sexual partners might identify as heterosexual. Moreover, researchers should not assume that people necessarily have a primary interest in sexual activities or interactions, and provide space for identification along the asexuality continuum (Brotto et al., 2010). Scholars should be aware that people who identify as asexual may not categorize themselves within the LGBTQ+ community (Worthen & Laljer, 2021). Understanding the distinct dimensions of sexual orientation, identity, behavior, and attraction, is critical to the accurate representation of diverse sexualities in survey research (Suen et al., 2020). Finally, individuals may identify as multiple categories within each dimension, so allowing multiple selections for each question or a “check all that apply” direction can provide the most comprehensive data for capturing these populations.

Sex

We recommend a two-step approach to capturing sex and gender identity. First, by asking about “sex assigned at birth,” followed by a “gender identity” measure. Examples of phrasing can be found in reports produced by the GenIUSS group at the UCLA Williams Institute (2014) and the Federal Interagency Working Group (FIWG, 2016a). However, we argue that it is important to acknowledge non-binary sex categories in sex measures. Because intersex erasure is common in population-level research (see Davis, 2015; Davis et al., 2016), it is important for future survey research to validate intersex bodies and identities. Inclusive sex categories may help promote intersex people’s bodily autonomy and counteract the history of systemic oppressions endured by intersex-identifying people or people who identify as having intersex traits (Davis, 2015; Davis et al., 2016). Thus, we recommend that sex

assigned at birth measures include an intersex option, in addition to male and female. Given that many persons with intersex traits or who identify as intersex were assigned either male or female at birth due to predominant historical medical and legal practices (Kennedy, 2016), population researchers could also consider implementing a two-step sex assigned at birth question; first they could ask about sex assigned at birth/as listed on original birth certificate (including male, female, intersex option), followed by a question about current identification as intersex or having intersex traits (with yes/no or intersex/non-intersex options).

Gender

Similarly, we recommend including transgender, and gender non-binary/genderqueer options in categorical gender identity measures to avoid reinforcing the gender dichotomy. Suen et al. (2020) provide important insights grounded in the perspectives of gender and sexual minorities on the value of including a range of binary and non-binary gender identities in gender identity measurement. Some examples of option phrasing include “woman, man, transwoman, transman, gender queer, gender non-binary.” We also recommend always including an open-ended “something else” option for the respondent to accurately self-identity, and consider allowing individuals to select all identity categories that apply to them, capturing those that identify with multiple gender identities. Relatedly, these measurement options should be reviewed and updated regularly to account for societal changes, and reflect new terms that are coined and when other terminology falls out of use.

From a population science perspective, categorical measures that capture explicit gender identity are potentially more useful than gradient measures asking respondents how “masculine” to “feminine” they identify. Gender expression, which includes gender presentation, self-perception, and behaviors, often occurs on a continuum, and more continuous measures of gender expression could be used to effectively collect additional information about gender diversity. Similar to sexual orientation, we urge research teams to think more deeply about what aspects of gender expression they want to measure—that is, how they are operationalizing gender. Different aspects of gender expression may vary across settings and may not necessarily correspond with a person’s stated gender identity (West & Zimmerman, 1987). However, we recommend that surveys *always* include a two-step approach to categorical sex and gender identities, in addition to other measures of gender expression. It is also understood that the collapsing or combining of categories may be necessary for statistical power and subsequent analysis, however, the inclusion of these categories to increase representation and visibility of these populations is vital to our understanding of future research on individuals that are often erased with non-inclusive measures of sex or gender.

Scant large-scale, longitudinal data currently exist on individuals who identify outside of cisgender or heteronormative categories, particularly those who identify with multiple genders or sexual identities. From a data accuracy perspective, it is inappropriate to assume cis-heteronormativity due to lack of measurement on expansive

identities. Even if future collapsing of categories is necessary in analyses, demographers should strive for accurate population measurement by providing exhaustive response options that allow individuals to more precisely self-identify. Not only is this practice inclusive, affording individuals whose identities have been rendered invisible previously opportunities to make themselves visible, is better scientific practice and promotes methodological rigor. The best way to move toward accurate understanding of population diversity is to make expansive measurement standard practice in surveys. While multiple selection (e.g., “all that apply”) measures in particular may be more methodologically complex, there are many emerging studies testing and exploring “all that apply” multi-identity measures (Brenner & Bulgar-Medina, 2018). Methodologically, there are many options for handling multi-gender or sexual identities, ranging from collapsing categories based on data structure to the creation of “typologies” through latent class analyses. Demographers and population scientists seeking to describe rates of gender or sexual identities in the population could explore whether strategies implemented to handle multiracial identification could apply to multi-gender or multi-sexual identities (Allen & Turner, 2001).

3.2 Content Analysis: Hidden Messaging

Beyond issues of direct measurement of expansive gender and sexuality identities, social surveys have continued to utilize questions that perpetuate heteronormative and binary gender ideologies. As discussed earlier, our content analysis revealed three major themes: (1) assumptive language, (2) question or item omission that relies on binary gender, and (3) overtly biased priming and phrasing. Both historical and contemporary examples will be presented to highlight these themes. However, we focus on assumptive language, omission, and priming that exist in the most recent year of data collection for a selection of surveys to better illustrate how these themes persist in contemporary contexts.

3.2.1 Assumptive Language

Assumptive language was defined as any question or question wording that presumes something about a person without directly asking the participant. External imposition of identities or selves detract from participant autonomy and privilege outside perceptions rather than self-determination or identification. Examples include assuming a person’s sex, gender, identity, behaviors, or other family members’ identities. Entire surveys may be framed from a gender binary including questions around family and household rosters using only a “father/mother” and “brother/sister” binary to ask about relationships and experiences. While some surveys have adopted gender-neutral terms such as “sibling,” or “partner,” or “parent” when discussing familial relationships, heteronormative and binary gender assumptions persist in the language of surveys.

SIBS: Long [0 .. 49, 50 .. 99]
 How many brothers and sisters did you have (Count those born alive, but no longer living, and those alive now. Also include stepbrothers and stepsisters, and children adopted by your parents)
BROTHERS AND SISTERS:

Fig. 5 Sibling question. *Source* GSS (2018, Ballot 1, p. 76)

Examples of Assumptive Language

Several surveys exhibited patterns of binary gender and heteronormative assumptions through the structure of survey questions or the surveys as a whole. For example, FFCWS surveys were framed entirely around a heteronormative framework, with separate surveys for “biological mothers” and “biological fathers,” with particular focus on mothers (Princeton University, 2020). In this way, “fragile” families were framed in the survey baseline as single biological mothers and biological fathers, limiting our ability to consider families outside of a heteronormative, standard North American family model (Smith, 1993). This is largely because FFCWS never explicitly asks the biological mothers or fathers about their gender or sexual identities, even at the most recent wave (15 year follow-up) (FFCWS, 2018). In recent FFCWS surveys, primary care givers were able to identify whether they were in a romantic relationship and the sex of that individual (male or female) (FFCWS, 2018, p. 31). However, similar to almost every other survey we reviewed, the only options available when answering questions related to household rosters, (e.g., list “People who currently live in your household”), or romantic partners, the responses were framed from a sex or gender binary. That is, they only include “male” and “female” response options for the identification of the person’s sex or gender identity (see NHIS, 2020, p. 27). While the inclusion of household rosters that allow for the identification of same-sex cohabitating couples is increasingly common, binary sex or gender constructs persist.

The General Social Survey (GSS) (2021) also features assumptive language within their survey. Questions such as, “Were you living with your own mother or father when you were 16?” highlight the survey’s assumptions of heteronormative family structures and cisnormative identities (p. 58). There are no options for participants to denote living with same-gender parents, transgender parents, or other types of family structures when aged 16 (GSS, 2021). Figure 5 highlights the persistence of binary gender language in the GSS (2018). The question, “How many brothers and sisters did you have?” again frames siblings as only occupying either side of the gender binary: brothers or sisters.

The PSID (2019) also displayed this trend in sections of the survey that asked participants information about their own or their partner’s parents (see Fig. 6). Questions like, “Where did (your/her/his) father grow up?” and “Where did (your/her/his) mother grow up?” (p. 231) demonstrate that the survey is built around the heteronormative, cisnormative experience of having a father and a mother, and partners being

ER70853	"KL13 STATE MOTHER GREW UP-RP"
KL13STATE. Where did (your/his/her) mother grow up? [MOST OF THE YEARS FROM AGES 6 TO 16] (FIPS code)	
ER70853	"KL13 STATE FATHER GREW UP-RP"
KL13STATE. Where did (your/his/her) father grow up? [MOST OF THE YEARS FROM AGES 6 TO 16] (FIPS code)	

Fig. 6 Father and mother question framing. Source PSID (2019, Questionnaire. p. 231)

(IF MARRIED)
I 9. Did your wife do any work for money last year?
<input type="radio"/> Yes↓ <input type="radio"/> No
I 10. What kind of work did she do? _____
I 11. About how many weeks did she work last year? _____
I 12. About how many hours a week did she work? _____
I 13. INTERVIEWER: CHECK BOX
<input type="radio"/> CHILDREN UNDER 12↓ <input type="radio"/> NO CHILDREN UNDER 12
I 14. How were your children taken care of while your wife was working?
I 15. About how much did that cost you last year? \$ _____

Fig. 7 Wife income. Source PSID (1968, Questionnaire, p. 57)

a “him” or “her.” No options are included for other types of family structures for either the participant or their partner.

Surveys such as the PSID and FFCWS that are completed by a single member of the household (often on behalf of the whole household) perpetuate assumptive cisgender and heteronormative language through the structure and execution of the survey itself. For example, while not included in the 2019 version of PSID, the 1968 version included a series of “head of household” questions about “wives” (PSID, 1968, p. 57). Figure 7 depicts this question series. The head of household, an assumed “husband,” is expected to answer on behalf of their “wife.” If the family has children, the respondent is expected to detail how the children were taken care of and answer how much childcare cost them in terms of “you,” the husband. If the wife is working and has children, the cost of childcare is presented as a “cost” that the “head of household” has to pay, while the wife works rather than viewing both the assumed wife and husband as contributing partners. While this is a striking historical example, it is important to consider how assumed heteronormativity, and assumed compliance with cis and binary gender and mononormative structures, are still perpetuated in contemporary surveys. The most recent FFCWS, for example, assumes the biological mother as primary caregiver, only stipulating biological fathers as primary caregivers if they meet certain criteria (e.g., primary caregiver is only father if the child lives with them >50% of the time AND with their mother <50%). In cases where the child lives with their mother and father equally, the mother is considered primary caregiver (FFCS, 2021, p. 14).

Recommendations and Best Practices

Surveys should consider overall structure when framing questions and the survey. It may be best to no longer frame surveys from “head of household” perspectives or only survey one household member. These structures may reinforce patriarchal, breadwinner-homemaker models that are largely inaccurate and not encompassing of the breadth of family diversity. We recommend considering rephrasing to “any adult in household contributing substantially to finances or household decision-making,” or surveying *all adults* involved substantially in household decisions. When surveying individuals about their household, along with directly asking participants about their sex and gender identity, inclusive language such as, “partner,” “sibling,” or “parent” could be used instead of terms that reinforce the gender binary for families and utilize heteronormatively-coded categories. For example, many household roster questions have the respondent select if a household member is a “mother or father” or “sister or brother.” Since the question itself does not allow the researcher to distinguish whether the respondent is referring specifically to a “mother” or “father,” detail in the question would not be lost by adopting the more gender-neutral language of “parent,” “sibling,” or “caregiver.”

While there are contexts in which researchers are interested in the influence of mothers on children, or having a sister on sibling outcomes, surveys should allow respondents to identify the gender of their parents or siblings in ways that do not limit the respondent to the gender binary. For example, the GSS (2021) asks participants, “Were you living with both your own mother and father around the time you were 16?” (p. 58). Instead, this question could be written as, “Were you living with both of your own *parents* around the time you were 16?” Or better, “*Which parent or parents* were you living with around the time you were 16?” and allow respondents to select from a variety of parent and gender options (such as, “adoptive mother”, “biological father”), including expansive gender options (such as, “baba” or “non-binary parent”) and open-ended options for individuals to accurately describe parents or other guardians (see Frank et al., 2019). Additionally, household roster questions should be structured in a way that allows for the inclusion of multiple types of family structures such as poly/non-monogamous relationships/families (Manley et al., 2015). This could be done in a multi-step approach, where the respondent is provided a set of questions about each household member they identify. Single-question household rosters are arguably simpler than a multi-step approach (e.g., asking a respondent to select from a list of who currently resides in their home), so it is likely that researchers will need to consider multiple strategies to foster inclusivity, whether it is through more inclusive language choices or question structure.

3.2.2 Question or Item Omission

Several surveys exhibited question or item omission through; (1) the inclusion of certain questions framed around a single binary sex or gender identity (female or male; woman or man) or, (2) only asking certain questions to a specific respondent

F1D3C
Is it better if husband earns the main living and woman cares for family?
-9 Not in Wave
-3 Missing
-2 Don't Know
1 Strongly Disagree
2 Disagree
3 Agree
4 Strongly Agree

Fig. 8 Husband as main earner, woman as caretaker. *Source* FFCWS (1998a, Codebook item f1d3c)

based on their binary sex or gender identity. For example, surveys may only ask questions to a specific sex on the topics of work, family, income, behaviors, or other information such as specific health information related to menstruation or other sex-specific experiences. Question omission reinforces the gender binary by reaffirming assumptions of “impossibility” or “unlikelihood” of all genders experiencing or participating in similar types of activities and experiences.

Examples of Question Omission

For example, in the baseline (Wave 1) Fragile Families and Child Wellbeing Study (FFCWS) (1998a), questions such as “Is it better if (a) husband earns the main living and (a) woman cares for (a) family” (item f1d3c) are not asked in the other direction to measure if a woman earns the main living and a man cares for the family (see Fig. 8). The survey omits responses from an alternative gendered perspective. Relying on cisgender and heteronormative assumptions that husbands serve as the main income earner for the family and the woman as the family caretaker, the survey fails to acknowledge alternative possibilities (such as the possibility of other types of family structures, such as same-gender partnerships, or polyamorous relationships) and perpetuates stereotypes that women should only be caretakers, and not the primary income providers for the family. Similarly, the American National Election Studies (ANES) (1996), includes questions such as “What is your occupation,” with responses such as “housewife,” without a “househusband” response for men who may work in the home as well (p. 15).

This pattern is continued with questions such as “Fathers play a more important role in raising boys than in raising girls, agree/disagree?” (item f1d3g) and “Can (a) mother receive welfare if she is married and living with (a) husband?” (item f1f8) (see Fig. 9). These questions are presented with a focus on a single gender and are not asked with the gender roles reversed, or with the possibility of same-gender or polyamorous family dynamics and roles.

The New Immigrant Survey (NIS) (2003) demonstrates omission with questions such as “Does (the) child ever see (a) father, stepfather, father figure?” (NIS, 2003,

F1D3G
Fathers play more important role in raising boys than in raising girls, Agree or Disagree?
-9 Not in Wave
-3 Missing
-2 Don't Know
1 Strongly Disagree
2 Disagree
3 Agree
4 Strongly Agree

Fig. 9 Fathers raising boys. *Source* FFCWS (1998b, Codebook item f1d3g)

RO7159 [MC18.02] HOW OFTEN CHILD SPENDS TIME OUTDOORS WITH FATHER/STEPFATHER/FATHER FIGURE?
About how often does [child name] spend time with (his/her) father, stepfather, or father-figure in outdoor activities?
1 Once a day or more often
2 At least 4 times a week
3 About once a week
4 About once a month
5 A few times a year or less
6 Never
7 NO FATHER, STEPFATHER, OR FATHER-FIGURE

Fig. 10 Fathers and outdoor time. *Source* NIS (2003, version 1, Codebook Section M, p. 24)

question MA11, p. 3). In both Versions 1 (implemented in 2003) and Version 2 (implemented from 2007–2009) (Hall, 2020), this question is not supplemented with an additional question asking the child’s relationship with a maternal figure, illustrating an assumption that children are less likely to see fathers than mothers, perpetuating the stereotype of fathers as “absent.” Additionally, the survey includes questions that ask, “About how often does [child] spend time with (their) father, stepfather, or father-figure in outdoor activities?” (p. 24) (see Fig. 10). This same question is not asked of the mother figure revealing attitudes that limit the activities shared between children and mother figures. Furthermore, questions about children regarding caregiving (e.g., affection) and education (e.g., grades) appear to assume the mother figure is the survey respondent. For example, the NIS (2003) asks, “In the past week, how many times have you shown your child physical affection?” (question MC24f, p. 19). Questions regarding the “father” are not, by default, phrased directly to the respondent as if the father figure is responding. Questions regarding the father figure also centered around certain activities such as outdoor time and leisure (e.g., family meals), rather than caretaking and affection.

Examples of Omission through Survey Structure

Most striking is complete question omission in sex or gender-stratified surveys, or the use of binary gender to prompt possible response options. For example, the NCVS (2019) asks, “which of the following best represents yourself?” But displays “Lesbian or gay” if sex is “female” and “gay” if sex is “male.” This means that transwomen are not able to self-identify as lesbian, as they would be given male prompt options, despite their gender identity as a woman, due to the survey display structure.

In some contexts, men and women are given different sex-stratified surveys; for example, in the FFCWS, biological mothers and biological fathers were given different surveys at baseline (1998–2000), year 3 (2001–2003), year 5 (2003–2006), and year 9 (2007–2010) (Princeton University, 2020). The most recent wave, year 15 (2014–2017), only included questionnaires for the child’s primary caregiver (Princeton University, 2020). While there is overlap in the mother and father questionnaires, fathers were asked more extensive questions about sources of income relative to mothers in the baseline survey (1998–2000). For example, fathers were asked specifics about their work and employment, including whether they made additional income, “selling stolen goods, selling or delivering drugs, or other hustles” (FFCWS, 1998, Section J, p. 43). Mothers were not asked about their occupation and were only asked about their general sources of income such as welfare, social security, earnings, and/or friends/family (see FFCWS, 1998, Section J). While the fathers and mothers surveys became more similar across waves—for example, the income section (Section J) at year 9 was nearly identical for mothers and fathers (FFCWS, 2011)—complete item omission often reflected and reinforced assumptions about gender-stratified activities.

Recommendations and Best Practices

Question Omission

At bare minimum, surveys should refrain from asking questions to participants framed solely from a single sex or gender identity whenever possible. As noted above, the measurement of demographic characteristics like gender identity and sexual identity are already problematic and inadequate, and this issue is further compounded in questions based around sex or gender identity. Consistent, parallel, questions should be asked for people of all sexes, genders, family roles, and activities, allowing for more complete understanding of roles and couple dynamics. For example, if a survey includes questions on activities such as work, time with children, or other caregiving actions, these could be asked of every participant using gender-neutral language. Instead of, “A working mother can establish just as warm and secure a relationship with her children as a mother who does not work,” (from the GSS, 2018, p. 57), use “A working *parent* can establish just as warm and secure a relationship with *their* children as a *parent* who does not work.” While it is important to acknowledge that the ultimate goal of some of these measures may be their use as proxy measures for

“traditional” or gender-based discriminatory attitudes (for example, “do you think a woman’s place is in the home?”), survey researchers should consider how these gendered-conventions of measurement omission may ultimately reinforce the very attitudes they are trying to measure, and act as a missed opportunity to capture changing attitudes or roles. For example, it is well established that stay-at-home fathers are more commonplace (see Chesley, 2011), and it may be worth “flipping the script” to reflect some of these important changes in gender roles and couple dynamics.

Omission through Survey Structure

The notion of “separate surveys” or separate response options for participants by a single demographic characteristic such as sex or gender is deeply flawed, reinforces sex or gender essentialism, family composition, and role stereotypes, and should be discontinued in practice. Researchers should consider the possibility of polyamorous, and same-gender family dynamics when considering “separate surveys”; the FFCW study for example, administered separate surveys for “biological mothers” and “biological fathers,” which reinforces heteronormative and mononormative assumptions around childbearing and rearing. Participants should be given the same surveys that prioritize gender-neutral terminology where appropriate. Relatedly, Analysts and scholars can stratify results later by certain characteristics such as sex or gender, or family roles, for comparison, still achieving the same goal of measurement while removing problematic survey structures that perpetuate assumptions about individuals or exclude certain types of populations.

3.2.3 Priming

The third pattern examined was priming or explicitly biased phrasing. Priming refers to the conscious or unconscious effect that wording or placement of questions may have on the attitudes, beliefs, or other responses reflected in survey selections by participants. Examples of overt bias priming and phrasing were most commonly found in survey questions seeking “opinions” about individuals with particular gender or sexual identities. Many surveys included language that could shape participants’ perspectives and experiences when completing a survey. Priming was more commonly identified in historic surveys; however, several contemporary surveys continue to display these patterns of biased priming and phrasing.

Examples of Priming

The General Social Survey (GSS) starting in 1973 until present (2021) asks the question, “And what about a man who admits that he is a homosexual... Suppose this admitted homosexual wanted to make a speech in your community. Should he be allowed to speak, or not?” (GSS, 1973, p. 13; 2018, p. 89; 2021, p. 102) (see Fig. 11).

SPKHOMO
And what about a man who admits that he is homosexual...
Suppose this admitted homosexual wanted to make a speech in your community, should he be allowed to speak, or not?
Categories:
Yes, allowed to speak
Not allowed
DON'T KNOW
NO ANSWER
NOT APPLICABLE
SKIPPED ON WEB

Fig. 11 Homosexual community speech. Source GSS (2021, Release 1a, p. 102)

This line of questioning potentially reinforces the same social prejudices that the survey is intending to capture: negative attitudes toward individuals who identify as homosexual. The survey itself primes the respondent that “admitted” homosexuals are potentially “bad” or “dangerous.” The question about public speaking is located in a question block that explicitly employs the heading “There are always some people whose ideas are considered bad or dangerous by other people” (GSS, 1973, p. 12; 2018, p. 87; 2021, p. 91). While the GSS clearly seeks to gather public attitudes towards individuals socially defined as “bad” or “dangerous,” the survey is priming participants to think about these populations in a negative and deviant way. Such priming can introduce possible bias in survey responses. Or worse, enact harm on participants within those groups who must confront questions that frame people like them as potentially “bad” or “dangerous.”

The version of the ANES administered in 1994 included direct questions that exemplified overt biased priming and phrasing. Questions such as, “Some people find the very idea of homosexuality disgusting, while others don’t have that particular reaction. What about you?” (ANES, 1994, p. 851) prime participants to see “homosexuality” from a negative perspective before even answering the question. Even the term “homosexual” (versus “gay” or “lesbian”) can carry negative, pathologizing connotations (Rios, 2013), and contribute to the negative priming toward those in same-gender relationships.¹ This may then influence their attitudes, which are then reflected in their responses. Instead of offering an open-ended question to understand how participants may feel about a certain population, the survey includes language that frames sexual minorities as negative (see Fig. 12).

The ANES (2012) survey included several questions that may prime participants concerning gender. When asked the question, “Do you think it is easier, harder, or neither easier nor harder, for mothers who work outside the home to establish a warm and secure relationship with their children than it is for mothers who stay at home?” (p. 1452) respondents are presented with a question that reinforces gender stereotypes about working mothers, stay-at-home mothers, and their relationships with their

¹ This may be why the GSS introduced the experimental question replacing the term “homosexual” with “gay” in 2021 asking, “Suppose this **gay** person wanted to make a speech in your community. Should this person be allowed to speak, or not?” (p. 102).

Q.F6. Some people find the very idea of homosexuality disgusting, while others don't have that particular emotional reaction. What about you?
1. YES, FEEL DISGUSTING
5. NO, DON'T HAVE THAT REACTION
8. DK
9. NA
0. INAP, not a Pilot Study respondent, 1994 cross section

Fig. 12 Idea of homosexuality as disgusting. *Source* ANES (1994, p. 851)

wpres_gdbd
Would it be good, bad, or neither good nor bad if the United States has a woman President in the next 20 years?
1. Good if the united states has a woman President
2. Bad in the united states has a woman President
3. Neither good nor bad if the united states has a woman President
-8. Don't know
-9. Refused

Fig. 13 Woman president. *Source* ANES (2012, p. 1159)

children. While this question also illustrates omission (there was not an equivalent question regarding fathers who work outside the home), it also primes participants to compare working mothers to stay-at-home mothers, rather than compare working mothers to working fathers. This type of priming is reinforced by the very next survey question, “Do you think it is better, worse, or makes no difference for the family as a whole if the man works outside the home and the woman takes care of the home and family” (ANES, 2012, p. 1456). Asking all questions regarding women’s employment in a way that directly challenges the appropriateness of women’s employment, and assumes a heteronormative family structure, likely reinforces gender stereotypes, mononormativity, and introduces response bias. The extent to which the ANES (2012) survey relies on gender stereotypes about employment, is further illustrated by the question, “Would it be good, bad, or neither good nor bad if the United States has a woman President in the next 20 years?” The survey introduces the idea of a woman president as an option for the respondent, but phrases it in such a way that it appears controversial, thus potentially eliciting negative responses. No questions are asked about opinions on men as presidents (see Fig. 13).

Many surveys utilize questions surrounding controversial social issues that include biased phrasing or priming, because researchers are seeking to understand individual perceptions, attitudes, and experiences regarding topics that are controversial at the time. For example, the ANES (2020) asks respondents whether “transgender people” should “have to use the gender of the bathroom they were born as” (see Fig. 14). While it is logical for the ANES (2020) to consider the topic of transgender bathroom bans, which garnered enormous attention in the public and political arenas in 2016 after the passage (and later repeal) of the Public Facilities Privacy & Security Act

TRANSPOLICY.RESTRM
Should transgender people - that is, people who identify themselves as the sex or gender different from the one they were born as - have to use the gender of the bathroom they were born as, or should they be allowed to use the bathrooms of their identified gender?
1. Have to use the bathrooms of the gender they were born with
2. Be allowed to use the bathrooms of their identified gender
8. Don't know
9. Refused

Fig. 14 Transgender question. *Source* ANES (2020, p. 88)

Y-152. Do you support or oppose the following measures to deal with AIDS?			
	Support	Oppose	No Opinion
A. Conduct mandatory testing for the AIDS virus before marriage	1	2	8
B. Require the teaching of safe sex practices, such as the use of condoms, in sex education courses in public schools	1	2	8
C. Require people with AIDS virus to wear identification tags that look like those carried by people with allergies or diabetes	1	2	8
D. Make victims of AIDS eligible for disability benefits	1	2	8

Fig. 15 Measures to deal with AIDS. *Source* GSS (1988, pp. 70–71)

in North Carolina (House Bill-2, 2016), the ANES (2020) primes their participants with an essentialist perspective of gender by stating in the question itself that gender is something one is “born as,” which conflates sex assignment and gender identity. It is important to consider how the marginalized group—in this case transgender-identifying respondents—are interpreting questions that frame people like them as problematic.

Further evidence of priming is found in survey language that reinforces social prejudices about certain populations without specifically naming the group that may be framed as at-risk or problematic. For example, a historic version of the GSS (1988) included the following question: “Do you support or oppose the following measures to deal with AIDS?” which was accompanied with possible answers such as “Prohibit students with the AIDS virus from attending public school,” “Conduct mandatory testing for the AIDS virus before marriage,” and “Require people with the AIDS virus to wear identification tags that look like those carried by people with allergies or diabetes” (pp. 70–71) (see Fig. 15). This question frames those with AIDS as a possible danger to those around them, including spouses, classmates, and the general public, priming a negative response from survey participants. Considering the timing of the question (1988), when both people of color and sexual minorities remained the focus of the AIDS crisis, phrasing persons with AIDS as worthy of separation, identification, and “othering” could lead the respondent to develop biases against those with the disease. This type of framing may prompt respondents to consider perspectives they had not previously (e.g., “these populations are dangerous”), and adopt exclusionary, stigmatizing opinions towards already marginalized groups of people.

Finally, survey structure should also be considered in its priming effects. Add Health, for example, has traditionally included sexual identity questions in its section on sexual health titled “Sexual Experiences and Sexually Transmitted Diseases,” not its demographics section (Add Health, 2003, Section 16). This practice potentially primes respondents to view sexual identity as a “health behavior,” or “health risk factor,” rather than a valid identity, thus reinforcing mainstream pathologizing of the LGBTQ+ community (Schmitz et al., 2020) and sexualities as an inherently problematic topic in general (Jones, 2019).

Recommendations and Best Practices

Results of this study suggest that bias is often introduced in questions that seek to examine public opinions of LGBTQ+ people. While it is important to examine changing public opinions on LGBTQ+ rights (Flores, 2014), we need to take an inventory of the unintentional adverse impacts of biased priming inherent to the measurement of (marginalizing) public opinions. For example, prior research illustrates that gender norms intersect with sexual identity when measuring public opinion of LGBTQ+ people; public attitudes toward lesbian women differ from public attitudes toward gay men (Kuyper et al., 2018). Survey researchers are potentially misrepresenting public attitudes by introducing bias in question phrasing.

Researchers should critically examine question stems and section headings and consider whether they are priming participants to report negative attitudes toward LGBTQ+ people or groups. Surveys should never use biased terms like “dangerous,” “negative,” or “problematic,” either in the survey headings or questions, to prime participants when seeking public opinion. We recommend that scholars and policy researchers employ pilot surveys, collaborate with LGBTQ+ -identifying scholars, engage in focus groups with gender and sexual minorities to receive feedback on potential limitations of survey and question design, and implement LGBTQ+ community advisory boards (see Matthews et al., 2018; Suen et al., 2020). Too often, surveys are created without external input from potential participants of diverse backgrounds. These types of inputs can be critical to identifying and addressing potential bias within surveys. Finally, questions about sexual identity should be placed in the demographics section of a survey, not in sections on public opinion or “sexual health,” as this relegates sexual identity to a behavior and erases identity.

4 Discussion

The present study’s findings revealed that highly value-laden language is included throughout many national surveys when it comes to asking questions regarding sex, gender, and sexual identity. Findings from this study suggest there are widespread patterns in survey design practices, including hidden and coded language, that reflect exclusionary and marginalizing sex, gender, and/or sexuality-biased attitudes and

beliefs resulting in the inadequate documentation of broader social diversity. Our findings demonstrate how social surveys may not simply collect objective social information, but they may also actively perpetuate inequalities by reproducing dominant cis-heteronormative ideals grounded in hierarchies of sex, gender, and sexuality. Social scientists are bound by professional and ethical imperatives to conduct research that is rigorous, valid, and reliable, therefore improvements in survey design surrounding the measurement of sex, gender, and sexuality are integral to the goal of achieving high-quality research standards and data that is at once accurate and representative of social populations (Ziniel et al., 2019).

National surveys are an essential tool for gathering representative data on diverse populations. The use of assumptive language, item or question omission, and priming risks altering participant responses with exclusionary language and methods. Reviewing surveys for their practices in questions regarding sex, gender, and sexual identity is an example of how their practices may not reflect including marginalized identities. Outlining best practices on gathering data and counting sexual and gender minorities can be difficult. While some research has proposed more fluid gender models that involve dynamic models that break down constructs of assigned sex, gender identity, gender expression, and sexual orientation (Jourian, 2015), surveys do not often include expansive and representative options to capture a respondent's gender and sexual identity. The continued use of limiting options and exclusionary language can be seen from several different perspectives. Those developing surveys may follow historical practices of excluding inclusive sex, gender, and sexuality measures, and relying on assumptive, heteronormative language, simply out of tradition, convention, and a lack of recognition of the potential negative impact of these practices. Those developing surveys may choose to exclude inclusive gender and sexual identity measures out of fear that expansive measurement will add complexity, and thus confuse participants. Research on this area of "confusion" for cisgender participants has been shown to not occur as more complex models of sex/gender have been used (Bauer et al., 2017), questioning why surveys maintain certain uses of measurement and language in their surveys. Additionally, researchers may not want to deal with the challenges presented at data analysis with small numbers of individuals in certain categories, or when individuals select multiple categories, suggesting more guidance is needed on how to appropriately analyze and report this data. However, while it is possible to establish best practices around collapsing data into larger categories and/or make decisions about how to handle multiple categorical selection, it is impossible to expand data at a level that is not measured.

Furthermore, with changing structures in families and the rise of same-gender-parented and LGBTQ+ families broadly (Goldberg & Conron, 2018) along with developing understandings of gender and sexual identities, surveys should keep pace with changing social structures and realities. While previous research has called into question survey practices surrounding inclusion of gender and sexual minorities as well as the use of assumptive language practices (Magliozzi et al., 2016; Westbrook & Saperstein, 2015), research has not fully examined the impact of exclusionary language even as demographic models of sex, gender, and sexuality have expanded and progressed. By continuing to utilize survey language and practices that

constrains respondents' self-determination, surveys risk collecting and compiling data that is biased and unrepresentative.

From not being able to identify outside of a heteronormative/mononormative family structure, to being presented with homosexuality as "bad" and "dangerous," respondents are not only passively participating in, but forced to reflect, social constructs that maintain gender and sexual inequality. Surveys exist not as a neutral tool for representation in this way, but risk gathering data and producing information that maintain systems of inequality. From a pragmatic perspective, collecting accurate, inclusive data on sex, gender, and sexuality through enhanced, more encompassing measures on surveys will also result in higher-quality data and subsequent analytic results (Guyan, 2022), which can demonstrate a more effective use of economic resources invested in the survey process as well as promote future funding opportunities and increase overall research impact (Jacob & Lefgren, 2011; Karr & Last, 2006). As terminology is ever-shifting, surveys targeting a younger demographic should consider extensive pre-testing and allowing open-text entries. Evidence suggests that current sexual orientation and gender identity measures for whose inclusion we argue, may not fully capture their identities and experiences or be applicable to younger generations in the future (Morgan, 2013; Suen et al., 2020; Watson et al., 2020).

5 Conclusion

The present study revealed how national surveys deploy dominant social constructs in measurements tied to sex, gender, and sexuality, thereby reifying structures of cis-heteronormativity, which serves to maintain gender and sexual inequalities. Language found within surveys is not value-free or neutral, but rather is imbued with socially constructed, marginalizing, and hierarchical understandings of sex, gender, and sexuality. As a result, surveys often incorporate language that limits identification with experiences that fall outside of the traditional, dominant male/female, cisgender, mononormative, and heterosexual model.

Indeed, the persistent practices documented in the present study of problematic, exclusionary strategies of national social science surveys related to the measurement of sex, gender, and sexuality has the potential to further health and wellbeing inequalities among LGBTQ+ people by constraining and restricting their perspectives in major population study endeavors, particularly government-funded surveys that are key to shaping public health programming and resources (Naylor, 2020). Prejudicial ideals reflected in major surveys show not only how survey design is not objective and value-free, but also how prejudiced beliefs seemingly held by the survey design stakeholders (i.e., researchers, gatekeepers, funders) can directly translate into tangible discrimination among LGBTQ+ people, for example, by a lack of survey data reflecting their very existence and lived experiences or data that pathologizes queer identities. Furthermore, resistance to survey endeavors emulating more inclusion and equity can actually constrain progress towards social justice by failing

to reflect broader social and legal realities. Our findings underscore the potential of survey research's impacts in both perpetuating social inequalities and shaping (or inhibiting) future social change through the complex, layered messaging they communicate in survey design.

Understanding the utilization of language and measurement practices throughout survey design can serve as a critique of surveys as a whole, as language dynamics can inadvertently shape respondents' answers and experiences, as well as directly exclude their perspectives through inaccurate identity measures. Specifically, using assumptive language reinforces a mononormative and heteronormative standard and prevents the full documentation of families and people with expansive gender and sexuality identities, experiences, and relationships, thus forcing them to settle for inaccurate responses and resulting in invalid data. Surveys can also directly omit responses by privileging the binary sex/gender ideal grounded in mononormative heterosexism when respondents are asked questions based on their binary sex/gender designation, or precluded from response options allowing for polyamorous or non-heteronormative relationships and family dynamics. Lastly, surveys may also prime respondents to think about particular populations from a stereotypical and pathologizing perspective, which runs the risk of skewing responses on entire survey sections. Overall, these practices create and maintain inequalities through survey language and practices, revealing that the seemingly simple act of, "checking a box" (or not) may have more far-reaching influence and potential harm than a singular respondent and survey team could fathom.

References

- Allen, J. P., & Turner, E. (2001). Bridging 1990 and 2000 census race data: Fractional assignment of multiracial populations. *Population Research and Policy Review*, 20(6), 513–533.
- American Community Survey (ACS). (1996). *Public use microdata sample, 1996*, p. 90. <https://www.icpsr.umich.edu/web/ICPSR/studies/3885/datadocumentation>
- American Community Survey (ACS). (2020). *The American community survey 2020 questionnaire*, p. 3. <https://www2.census.gov/programs-surveys/acs/methodology/questionnaires/2020/quest20.pdf>
- American Housing Survey (AHS). (2019). *AHS codebook*. <https://www.census.gov/data-tools/demo/codebook/ahs/ahsdict.html>
- American National Election Studies (ANES). (1994). *Version 01 codebook*, p. 851. https://electionstudies.org/wp-content/uploads/2018/03/anes_timeseries_1994_var doc_codebook.pdf
- American National Election Studies (ANES). (1996). *96NES pre-election questionnaire production version (working draft)*, p. 15. https://electionstudies.org/wp-content/uploads/2018/03/anes_time series_1996_qnaire_pre.pdf
- American National Election Studies. (2012). *User's guide and codebook for the ANES 2012 time series study*, p. 1159, 1452, 1456. https://electionstudies.org/wp-content/uploads/2012/02/anes_t imeseries_2012_userguidecodebook.pdf
- American National Election Studies. (2020). *2020 Time series pre-election questionnaire*, p. 88. https://electionstudies.org/wp-content/uploads/2020/11/anes_timeseries_2020_qnaire_pre.pdf

- Bauer, G. R., Braimoh, J., Scheim, A. I., & Dharma, C. (2017). Transgender-inclusive measures of sex/gender for population surveys: Mixed-methods evaluation and recommendations. *PLoS ONE*, *12*(5), 171–193.
- Black, D., Gates, G., Sanders, S., & Taylor, L. (2007). *The measurement of same-sex unmarried partner couples in the 2000 US census* (UCLA CCPR Population Working Papers). https://haris.uchicago.edu/files/sscouples2000census10-02-06_1.pdf
- Brenner, P. S., & Bulgar-Medina, J. (2018). Testing mark-all-that-apply measures of sexual orientation and gender identity. *Field Methods*, *30*(4), 357–370.
- Brickell, C. (2006). The sociological construction of gender and sexuality. *The Sociological Review*, *54*(1), 87–113.
- Brotto, L. A., Knudson, G., Inskip, J., Rhodes, K., & Erskine, Y. (2010). Asexuality: A mixed-methods approach. *Archives of Sexual Behavior*, *39*(3), 599–618.
- Brown, G. (2012). Homonormativity: A metropolitan concept that denigrates “ordinary” gay lives. *Journal of Homosexuality*, *59*(7), 1065–1072.
- Butler, J. (1999). *Gender trouble: Feminism and the subversion of identity* (2nd ed.). Routledge.
- Chenail, R. J. (2011). Interviewing the investigator: Strategies for addressing instrumentation and researcher bias concerns in qualitative research. *Qualitative Report*, *16*(1), 255–262.
- Chesley, N. (2011). Stay-at-home fathers and breadwinning mothers: Gender, couple dynamics, and social change. *Gender & Society*, *25*, 642–664.
- Compton, D. L., Meadow, T., & Schilt, K. (Eds.). (2018). *Other, please specify: Queer methods in sociology*. University of California Press.
- Conron, K. J., & Goldberg, S. K. (2020). *Adult LGBT population in the United States*. Williams Institute, UCLA. <https://williamsinstitute.law.ucla.edu/publications/adult-lgbt-pop-us/>
- Coulter, R. W., Kenst, K. S., & Bowen, D. J. (2014). Research funded by the National Institutes of health on the health of lesbian, gay, bisexual, and transgender populations. *American Journal of Public Health*, *104*(2), e105–e112.
- Crissman, H. P., Berger, M. B., Graham, L. F., & Dalton, V. K. (2017). Transgender demographics: A household probability sample of US adults, 2014. *American Journal of Public Health*, *107*(2), 213–215.
- Davis, G. (2015). *Contesting intersex: The dubious diagnosis* (Vol. 10). NYU Press.
- Davis, G., Dewey, J. M., & Murphy, E. L. (2016). Giving sex: Deconstructing intersex and trans medicalization practices. *Gender & Society*, *30*(3), 490–514.
- Duggan, L. (2002). The new homonormativity: The sexual politics of neoliberalism. In R. Castanova & D. D. Nelson (Eds.), *Materializing democracy: Toward a revitalized cultural politics*. Duke University Press.
- Epstein, R., McKinney, P., Fox, S., & Garcia, C. (2012). Support for a fluid-continuum model of sexual orientation: A large-scale internet study. *Journal of Homosexuality*, *59*(10), 1356–1381.
- Fausto-Sterling, A. (1993). The five sexes: Why male and female are not enough. *Sciences-New York*, *33*, 20–25.
- Federal Interagency Working Group on Improving Measurement of Sexual Orientation and Gender Identity in Federal Surveys (FIWG). (2016a). *Current measures of sexual orientation and gender identity in federal surveys*. <https://nces.ed.gov/FCSM/pdf/buda5.pdf>
- Federal Interagency Working Group on Improving Measurement of Sexual Orientation and Gender Identity in Federal Surveys (FIWG). (2016b). *Evaluations of sexual orientation and gender identity survey measures: What have we learned?* https://nces.ed.gov/FCSM/pdf/Evaluations_of_SOGI_Questions_2016b0923.pdf
- Federal Interagency Working Group on Improving Measurement of Sexual Orientation and Gender Identity in Federal Surveys (FIWG). (2016c). *Toward a research agenda for measuring sexual orientation and gender identity in federal surveys: Findings, recommendations, and next steps*. https://nces.ed.gov/FCSM/pdf/SOGI_Research_Agenda_Final_Report_2016c1020.pdf
- Fenton, K. A., Johnson, A. M., McManus, S., & Erens, B. (2001). Measuring sexual behaviour: Methodological challenges in survey research. *Sexually Transmitted Infections*, *77*(2), 84–92.

- Ferrer, J. N. (2018). Mononormativity, polypride, and the “mono–poly wars.” *Sexuality & Culture*, 22(3), 817–836.
- Flores, A. R. (2014). *National trends in public opinion on LGBT rights in the United States*. The Williams Institute. <https://escholarship.org/content/qt72t8q7pg/qt72t8q7pg.pdf>
- Fragile Families and Child Wellbeing Study (FFCWS). (1998a). *Codebook, Item fld3c*. https://fragilefamilies.princeton.edu/sites/fragilefamilies/files/ff_wave1_cb_2018.txt
- Fragile Families and Child Wellbeing Study (FFCWS). (1998b). *Survey of new parents: Father’s baseline survey*, p. 43. https://fragilefamilies.princeton.edu/sites/fragilefamilies/files/ff_dad_q0.pdf
- Fragile Families and Child Wellbeing Study (FFCWS). (2011). *Mothers’ nine-year follow-up survey*. https://fragilefamilies.princeton.edu/sites/fragilefamilies/files/ff_mom_q9.pdf
- Fragile Families and Child Wellbeing Study (FFCWS). (2018). *Fifteen year follow-up primary care giver survey*, p. 31. https://fragilefamilies.princeton.edu/sites/fragilefamilies/files/ff_pcg_q15.pdf
- Fragile Families and Child Wellbeing Study (FFCWS). (2021). *User’s guide for the fragile families and child wellbeing study public data, year 15*. https://fragilefamilies.princeton.edu/sites/fragilefamilies/files/year_15_guide.pdf
- Frank, E. L., Manley, M. H., & Goldberg, A. E. (2019). Parental naming practices in same-sex adoptive families. *Family Relations*, 68(5), 580–595.
- Gartrell, N., Bos, H., & Koh, A. (2019). Sexual attraction, sexual identity, and same-sex sexual experiences of adult offspring in the US National longitudinal lesbian family study. *Archives of Sexual Behavior*, 48(5), 1495–1503.
- General Social Survey (GSS). (1973). *National opinion research center: Survey 4164*, 13. <https://gss.norc.org/documents/quex/1973%20GSS%20Quex.pdf>
- General Social Survey (GSS). (1988). *GSS: America’s social survey. Ballot A*, 70–71. <https://gss.norc.org/documents/quex/1988%20GSS%20A.pdf>
- General Social Survey (GSS). (2018). *MDDtoDOC—GSS2018 Ballot I—English*, 61, 76, 89. <https://gss.norc.org/Documents/quex/GSS2018%20Ballot%20I%20-%20English.pdf>
- General Social Survey (GSS). (2021). *The General Social Survey (GSS): Documentation and public use codebook release a1*, 48, 91, 102. <https://gss.norc.org/Documents/codebook/GSS%202021%20Codebook%20R1.pdf>
- GenIUSS. (2014). *Best practices for asking questions to identify transgender and other gender minority respondents on population-based surveys*. Williams Institute: UCLA School of Law. <https://williamsinstitute.law.ucla.edu/publications/geniuss-trans-pop-based-survey/>
- GLAAD. (2017). *Accelerating acceptance: A Harris poll survey of Americans’ acceptance of LGBTQ people*. https://www.glaad.org/files/aa/2017_GLAAD_Accelerating_Acceptance.pdf
- Goldberg, S. K., & Conron, K. J. (2018). *How many same-sex couples in the U.S. are raising children?* The Williams Institute: UCLA School of Law.
- Guyan, K. (2022). *Queer data: Using gender, sex and sexuality data for action*. Bloomsbury Publishing.
- Halberstam, J. (2017). *Trans: A quick and quirky account of gender variability* (Vol. 3). University of California Press.
- Hall, W. (2020). *The new immigrant survey project*. <https://nis.princeton.edu/project.html>
- Hartung, C. M., & Lefler, E. K. (2019). Sex and gender in psychopathology: DSM–5 and beyond. *Psychological Bulletin*, 145(4), 390.
- Herek, G. M. (1984). Beyond “homophobia”: A social psychological perspective on attitudes toward lesbians and gay men. *Journal of Homosexuality*, 10(1–2), 1–21.
- House Bill-2. (2016). SL 2016-3, Public Facilities Privacy and Security Act. Second Extra Session. <https://www.ncleg.gov/BillLookup/2015E2/h2>
- Jackson, S. (2006). Interchanges: Gender, sexuality and heterosexuality: The complexity (and limits) of heteronormativity. *Feminist Theory*, 7(1), 105–121.
- Jacob, B. A., & Lefgren, L. (2011). The impact of research grant funding on scientific productivity. *Journal of Public Economics*, 95(9–10), 1168–1177.

- Jones, A. (2019). Sex is not a problem: The erasure of pleasure in sexual science research. *Sexualities*, 22(4), 643–668.
- Jourian, T. J. (2015). Queering constructs: Proposing a dynamic gender and sexuality model. *The Educational Forum*, 79(4), 459–474.
- Karr, A. F., & Last, M. (2006). *Survey costs: Workshop report and white paper*. <https://www.niss.org/sites/default/files/tr161.pdf>
- Kennedy, A. (2016). Fixed at birth: Medical and legal erasures of intersex variations. *UNSW Law Journal*, 39, 813–842.
- Kitzinger, C. (2005). Heteronormativity in action: Reproducing the heterosexual nuclear family in after-hours medical calls. *Social Problems*, 52(4), 477–498.
- Krippendorff, K. (2019). *Content analysis: An introduction to its methodology*. Sage publications.
- Krosnick, J. A. (1999). Survey research. *Annual Review of Psychology*, 50(1), 537–567.
- Kuyper, L., Sommer, E., & Butt, S. (2018). Gender gaps in the measurement of public opinion about homosexuality in cross-national surveys: A question-wording experiment. *International Journal of Public Opinion Research*, 30(4), 692–704.
- Lorber, J. (1993). Believing is seeing: Biology as ideology. *Gender & Society*, 7(4), 568–581.
- Magliozzi, D., Saperstein, A., & Westbrook, L. (2016). Scaling up: Representing gender diversity in survey research. *Socius*, 2, 1–11.
- Manley, M. H., Diamond, L. M., & van Anders, S. M. (2015). Polyamory, monoamory, and sexual fluidity: A longitudinal study of identity and sexual trajectories. *Psychology of Sexual Orientation and Gender Diversity*, 2(2), 168.
- Martin, K. A. (1998). Becoming a gendered body: Practices of preschools. *American Sociological Review*, 63(4), 494–511.
- Martin, K. A. (2009). Normalizing heterosexuality: Mothers' assumptions, talk, and strategies with young children. *American Sociological Review*, 74(2), 190–207.
- Martin, K. A., & Kazzyak, E. (2009). Hetero-romantic love and heterosexiness in children's G-rated films. *Gender & Society*, 23(3), 315–336.
- Matthews, A. K., Newman, S., Anderson, E. E., Castillo, A., Willis, M., & Choure, W. (2018). Development, implementation, and evaluation of a Community Engagement Advisory Board: Strategies for maximizing success. *Journal of Clinical and Translational Science*, 2(1), 8–13.
- Morgan, E. M. (2013). Contemporary issues in sexual orientation and identity development in emerging adulthood. *Emerging Adulthood*, 1(1), 52–66.
- National College Health Assessment (NCHA). (2008). *ACHA-NCHA II paper survey*, p. 6, 8. https://www.acha.org/documents/ncha/SampleSurvey_ACHA-NCHA_Sp00-Sp08.pdf
- National College Health Assessment (NCHA). (2019). *ACHA-NCHA III web survey*, p. 11. https://www.acha.org/documents/ncha/ACHA-NCHA_IIc_Paper_Survey.pdf
- National Crime Victimization Survey (NCVS). (2019). *NCVS-1 basic screen questionnaire*, pp. 7–8. https://www.bjs.gov/content/pub/pdf/ncvs19_bsq_q3q4.pdf
- National Health Interview Survey (NHIS). (2020). *2020 National Health Interview Survey (NHIS) questionnaire*, p. 27. ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Survey_Questionnaires/NHIS/2020/EnglishQuest.pdf
- Naylor, L. A. (2020). Counting an invisible class of citizens: The LGBT population and the US census. *Public Integrity*, 22(1), 54–72.
- New Immigrant Survey (NIS). (2003). *New immigrant survey. Section M—Home*, p. 3, 19. https://nis.princeton.edu/downloads/nis_2003/NIS-2003-1.M.pdf
- Obergefell v. Hodges, 135 S. Ct. 1732 (U.S. 2015).
- Panel Study of Income Dynamics (PSID). (1968). *Study of family economics: Project 768*, p. 57. <https://psidonline.isr.umich.edu/Guide/documents.aspx>
- Panel Study of Income Dynamics (PSID). (2019). *Panel study of income dynamics. Wave 41*, p. 231. <ftp://ftp.isr.umich.edu/pub/src/psid/questionnaires/q2019.pdf>
- Pew Research Center. (2016). *Where the public stands on religious liberty vs. nondiscrimination*. <https://www.pewforum.org/wp-content/uploads/sites/7/2016/09/Religious-Liberty-full-for-web.pdf>

- Princeton University. (2020). *Fragile families and child wellbeing study: Public data documentation*. <https://fragilefamilies.princeton.edu/data-and-documentation/public-data-documentation>
- Rea, L. M., & Parker, R. A. (2014). *Designing and conducting survey research: A comprehensive guide*. Wiley.
- Rios, K. (2013). Right-wing authoritarianism predicts prejudice against “homosexuals” but not “gay men and lesbians.” *Journal of Experimental Social Psychology*, 49(6), 1177–1183.
- Rodríguez Rust, P. C. (2000). Bisexuality: A contemporary paradox for women. *Journal of Social Issues*, 56(2), 205–221.
- Rossi, P. H., Wright, J. D., & Anderson, A. B. (Eds.). (2013). *Handbook of survey research*. Academic Press.
- Scherrer, K. S., Kazyak, E., & Schmitz, R. (2015). Getting “bi” in the family: Bisexual people’s disclosure experiences. *Journal of Marriage and Family*, 77(3), 680–696.
- Schilt, K., & Westbrook, L. (2009). Doing gender, doing heteronormativity. *Gender & Society*, 23, 440–464.
- Schmitz, R. M., Robinson, B. A., & Tabler, J. (2020). Navigating risk discourses: Sexual and reproductive health and care among LBQ+ Latina Young Adults. *Sexuality Research and Social Policy*, 17(1), 61–74.
- Sexual Minority Assessment Research Team (SMART). (2009). *Best practices for asking questions about sexual orientation on surveys*. <https://williamsinstitute.law.ucla.edu/publications/smart-so-survey/>
- Smith, D. E. (1993). The standard North American family: SNAF as an ideological code. *Journal of Family Issues*, 14(1), 50–65.
- Spade, D. (2011). *Normal life: Administrative violence, critical trans politics, and the limits of the law*. South End Press.
- Suen, L. W., Lunn, M. R., Katuzny, K., Finn, S., Duncan, L., Sevelius, J., Flentje, A., Capriotti, M. R., Lubensky, M. E., Hunt, C., & Weber, S. (2020). What sexual and gender minority people want researchers to know about sexual orientation and gender identity questions: A qualitative study. *Archives of Sexual Behavior*, 49(7), 2301–2318.
- Sullivan, A. (2020). Sex and the census: Why surveys should not conflate sex and gender identity. *International Journal of Social Research Methodology*, 23(5), 517–524.
- The National Longitudinal Study of Adolescent to Adult Health (Add Health). (1994). *Wave I in-home interview data*. <https://addhealth.cpc.unc.edu/documentation/codebooks/>
- The National Longitudinal Study of Adolescent to adult Health (Add Health). (2003). *Wave III In-home questionnaire code book III*, S.16, p. 5. <https://addhealth.cpc.unc.edu/documentation/codebooks/>
- The National Longitudinal Study of Adolescent to Adult Health (Add Health). (2018). *Wave V mixed-mode survey data*, pp. 11–12. <https://addhealth.cpc.unc.edu/documentation/codebooks/>
- Travers, A. (2019). *The trans generation: How trans kids (and their parents) are creating a gender revolution*. NYU Press.
- US Census Bureau (2020). *2020 census: LGBTQ+* <https://www.census.gov/newsroom/press-kits/2020/2020-census-lgbtq.html>
- Watson, R. J., Wheldon, C. W., & Puhl, R. M. (2020). Evidence of diverse identities in a large national sample of sexual and gender minority adolescents. *Journal of Research on Adolescence*, 30, 431–442.
- Webb, A., Matsuno, E., Budge, S., Krishnan, M., & Balsam, K. (2016). *Non-binary gender identities fact sheet*. The society for the psychological study of lesbian, gay, bisexual and transgender issues APA Division 44. The American Psychological Association.
- West, C., & Zimmerman, D. H. (1987). Doing gender. *Gender & Society*, 1(2), 125–151.
- Westbrook, L., & Saperstein, A. (2015). New categories are not enough: Rethinking the measurement of sex and gender in social surveys. *Gender & Society*, 29(4), 534–560.
- Worthen, M. G. (2016). Hetero-cis-normativity and the gendering of transphobia. *International Journal of Transgenderism*, 17(1), 31–57.

- Worthen, M. G., & Laljer, J. (2021). LGBTQ+A? Asexuals' attitudes toward lgbtq individuals: A test of norm-centered stigma theory. *Sexuality & Culture*, 25(6), 2052–2074.
- Ziniel, S. I., McDaniel, C. E., & Beck, J. (2019). Bringing scientific rigor to survey design in health care research. *Hospital Pediatrics*, 9(10), 743–748.