



II. Collecting Sexual Orientation Data: Current Practice

Healthy People 2010 states that “systematically collecting, analyzing, interpreting, disseminating, and using health data is essential to understanding the health status of a population, to assessing progress, and to planning effective prevention programs.”⁵ To date, however, essential sexual orientation data has only infrequently been collected in HHS information systems and databases. Reviewed below are HHS information systems and databases that have begun the process of collecting sexual orientation data, as well as a number of notable information systems and databases from outside of HHS.

Rarely are any two surveys in this review using the exact same question(s) to assess sexual orientation. The most important lesson learned from this review is that there is an immediate need to create standardized measures of sexual orientation for use across all HHS information systems and databases.

A. HHS Information Systems and Databases

Eight major HHS information systems and databases have had some experience collecting sexual orientation data. Five of these will be used to monitor objectives as outlined in HP2010 (see Table 1): the National Health and Nutrition Examination Survey (NHANES), the National Survey of Family Growth (NSFG), the Youth Risk Behavior Surveillance System (YRBSS), the HIV/AIDS Surveillance System, and the National Household Survey on Drug Abuse (NHSDA). Three additional information systems and databases have sexual orientation data collection experience worth noting: the Behavioral Risk Factor Surveillance System (BRFSS), the National Survey of Substance Abuse Treatment Services (N-SSATS), and the National Health Interview



Survey (NHIS). These information systems and databases, which have had varied success collecting this data, are reviewed below.

1. National Health and Nutrition Examination Survey

NHANES was designed to collect general health and nutrition information on the United States civilian noninstitutionalized population. A stratified multistage probability design was used with participants being interviewed and given a direct physical examination. NHANES included questions on lifetime and questions on past 12 months opposite-sex and same-sex sexual behavior in NHANES III which was conducted between 1988 and 1994. Unfortunately, the same-sex sexual behavior questions were asked only of males and not of females. Using data from NHANES III, it has been shown that men who reported same-sex partners had greater lifetime prevalence rates of suicide symptoms, but had no greater likelihood of meeting criteria for lifetime diagnosis of other affective disorders, when compared with men reporting only female partners.⁶

Beginning in 1999, NHANES began asking same-sex sexual behavior questions of females as well as males. However, same-sex sexual behavior questions are only a proxy for sexual orientation, or at best, a measure of one dimension of sexual orientation. Recognizing this, the Questionnaire Design Research Lab of the National Center for Health Statistics is currently testing the existing sexual behavior questions, as well as a sexual orientation-identity question (see table 2). These questions, which will be asked of both men and women, will provide a more

⁶ Cochran SD, Mays VM. Lifetime Prevalence of Suicide Symptoms and Affective Disorders Among Men Reporting Same-Sex Sexual Partners: Results From NHANES III. *American Journal of Public Health*. 2000;90 (4):573-578.



complete assessment of sexual orientation once implemented.^{7,8} The sexual orientation-identity question currently being examined asks individuals whether they consider themselves heterosexual, bisexual, or homosexual, but the question also informs respondents that their sexual orientation identity should correspond to the gender of people whom they are sexually attracted to. This question clearly conflates two distinct phenomena that often don't correspond: identity and attraction. Such a question can only serve to confuse respondents, and produce data difficult for researchers to interpret. This question, however, will likely be modified as cognitive testing is completed.

2. National Survey of Family Growth

The NSFG provides current information on childbearing, contraception, and closely related aspects of maternal and child health from a sample of women in the United States. Data are based on interviews with women ages 15-44, and are collected from a probability sample of women in their households. The NSFG has not collected sexual orientation data, but is currently planning to test and include sexual orientation-identity, sexual behavior, and sexual attraction questions in the next version of the survey (see Table 2).⁹ These questions are planned to be pre-tested in 2001 and go into the field in 2002. Like the NHANES questions being tested, the NSFG questions are clear advances in the collection of sexual orientation data from previous efforts. It is unclear whether NHANES and NSFG are coordinating their efforts. At present, their sexual orientation identity questions differ from one another, making cross-survey

⁷ Brody D, National Center for Health Statistics. Personal Communication. November 29, 2000.

⁸ Miller K, Office of Research and Methodology, National Center for Health Statistics. Personal Communication. November 6, 2000.

⁹ Chandra A, National Center for Health Statistics' National Survey of Family Growth. Personal Communication. November 6, 2000.



comparisons difficult on this measure of sexual orientation. However, questions have not been finalized for either survey and the final wording is difficult to predict.

In the last version of the NSFG, women were asked if any of their male sexual partners of the previous twelve months had ever had sexual contact with other males since 1980. This data, while not indicative of a respondent's sexual orientation, does provide some tangential information concerning the sexual orientation of their sexual partners (see Table 2).

3. Youth Risk Behavior Surveillance System

The YRBSS was developed to monitor priority health-risk behaviors that contribute to the leading causes of mortality, morbidity, and social problems among youth and adults in the United States. The YRBSS monitors six categories of behaviors: (1) behaviors that contribute to unintentional and intentional injuries; (2) tobacco use; (3) alcohol and other drug use; (4) sexual behaviors that contribute to unintended pregnancy and sexually transmitted disease, including human immunodeficiency virus (HIV) infection; (5) dietary behaviors; and (6) physical activity. The YRBSS consists of national, state, and local school-based surveys of representative samples of 9th through 12th grade students, a national household-based survey of 12- through 21-year-olds, and a national college survey.

The YRBSS has more extensive and diverse experience collecting sexual orientation data, than probably any other health survey ever created. While the YRBSS does not currently include sexual orientation among its core set of questions, a number of states and cities have addressed this omission by adding an array of sexual orientation-identity, sexual behavior, and sexual



attraction questions in order to assess sexual orientation (see Table 2). Unfortunately, this diversity in sexual orientation measurement has resulted in inadequately specified population parameters, differing criteria for research and analysis, and limited comparison of results.

Despite this, YRBSS data from the localities assessing sexual orientation show that sexual minority youth have higher rates of suicide attempts, victimization by school violence, drug and alcohol abuse, early onset of sexual behavior, eating disorders, and teenage pregnancy, across all dimensions of sexual orientation measured (sexual orientation-identity, sexual behavior, and sexual attraction).^{10,11,12,13,14,15,16,17,18,19,20} As adolescent surveys in Connecticut, Wisconsin, Oregon and Seattle have demonstrated, even a measure of sexual orientation as indirect as

¹⁰ Boston Public Health Commission. Media Release Board of Boston Public Health Commission Approves Recommendations on GLBT health. 2000. Retrieved November 11, 2000 from World Wide Web; <http://www.tiac.net/users/bdph/campaign/062100.htm>

¹¹ Faulkner AH, Cranston K. Correlates of Same-Sex Sexual Behavior in a Random Sample of Massachusetts High School Students. *American Journal of Public Health*. 1998;88(2), 262-266

¹² Garofalo R, Wolf RC, Kessel S, Palfrey J, DuRant R. The Association Between Health Risk Behaviors and Sexual Orientation Among a School-based Sample of Adolescents. *Pediatrics*. 1998;101(5), 895-902

¹³ Garofalo R, Wolf RC, Wissow LS, Woods ER, Goodman E. Sexual Orientation and Risk of Suicide Attempts Among a Representative Sample of Youth. *Archives of Pediatric Adolescent Medicine*. 1999;153, 487-493.

¹⁴ Massachusetts Department of Education. 1999 Massachusetts Youth Risk Behavior Survey. 1999. Retrieved November 11, 2000 from World Wide Web; <http://www.doe.mass.edu/lss/yrbs99/toc.html>

¹⁵ Vermont Department of Health Office of Alcohol and Drug Abuse Programs. 1999 Vermont Youth Risk Behavior Survey Statewide Report. 1999. Retrieved November 11, 2000 from World Wide Web; <http://www.state.vt.us/adap/1999YRBS/YRBSST991.htm#SexualBehavior>

¹⁶ DuRant R, Krowchuk D, Sinal S. Victimization, Use of Violence, and Drug Use at School among Male Adolescents Who Engage in Same-Sex Sexual Behavior. *Journal of Pediatrics*. 1998;133(1) 113-118.

¹⁷ French SA, Story M, Remafedi G, Resnick MD, Blum RW. Sexual Orientation and Prevalence of Body Dissatisfaction and Eating Disordered Behaviors: a Population-Based Study of Adolescents. *International Journal of Eating Disorders*. 1996;19(2) 119-126.

¹⁸ Oregon Health Division Center for Health Statistics and Vital Records. Suicidal Behavior, A Survey of Oregon High School Students, 1997. 1997. Retrieved November 11, 2000 from World Wide Web; <http://www.ohd.hr.state.or.us/chs/teensuic/results.htm>

¹⁹ Reis B, Saewyc E. Eighty Three Thousand Youth: Selected Findings from Eight Population-Based Studies As They Pertain to Anti-Gay Harassment and the Safety and Well-Being of Sexual Minority Students. Safe Schools of Washington Coalition. 1999. (Available from the Safe Schools of Washington Coalition at http://www.safeschools-wa.org/quant_cont.html). Retrieved November 11, 2000 from World Wide Web

²⁰ Remafedi G, French S, Story M, Resnick MD, Blum R. The Relationship between Suicide Risk and Sexual Orientation: Results of a Population-Based Study. *American Journal of Public Health*. 1998;88(1) 57-60



perceived homosexual sexual orientation elicits disturbing correlations with deleterious health outcomes.^{18,19}

When survey instruments and research designs use different sexual orientation criteria, vital comparisons of data between localities become difficult because portions of population parameters overlap or are mutually exclusive. Because of the variation in its sexual orientation measures, and the alarming data obtained from any one of these measures, the YRBSS exemplifies the need for immediate implementation of agreed upon standardized assessments.

4. Behavioral Risk Factor Surveillance System

The BRFSS includes data on behavioral risk factors chosen based on their strong relationship with many of the leading causes of premature death and disability in the United States. States design the instrument that is used to collect these data with technical and financial assistance provided by the Centers for Disease Control and Prevention. State telephone surveys with 1,200-4,000 adult respondents are conducted during the course of the year in each State.

The BRFSS does not include any sexual orientation assessment questions among its core set of questions; however, like the YRBSS, states and cities have recognized the need to collect such data and have elected to add such questions in order to examine important health concerns (see Table 2). Because efforts to include these questions have been largely uncoordinated, there is remarkable variation in the questions that have been added to both the YRBSS and the BRFSS. While many health concerns have been shown to correlate in these surveys with the various measures of sexual orientations used, be it measures based upon sexual attractions, sexual



behaviors, or sexual orientation-identities, the relative advantages of each at identifying relevant populations for the collection and analysis of health data has not been determined. The evolution and variation of sexual orientation questions on the BRFSS and YRBSS needs to be more closely examined for insights into how best to assess sexual orientations in these and other information systems and databases.

5. National Household Survey on Drug Abuse

The NHSDA is conducted to provide reliable estimates of the prevalence of substance use, consequences of that use, and patterns of substance use in the United States. The survey is conducted annually, with continuous data collection throughout the calendar year. The survey interview is performed person-to-person in the respondent's place of residence using both an interviewer-administered and self-administered format.

The NHSDA included a 25 question self-administered “personal behaviors” supplement in 1996 in which respondents were asked the gender of the partner(s) with whom they had “vaginal, oral or anal sex” (see Table 2)^{21,22} These questions were asked in only one year and were discontinued. Data from this survey has been used to show that there is a “small risk among homosexually active populations in 1-year psychiatric morbidity and use of mental health care services.”²³

²¹ Anderson JE, Wilson RW, Barker P, Doll, L, Jones TS, Holtgrave D. Prevalence of Sexual and Drug-Related HIV Risk Behaviors in the U.S. Adult Population: Results of the 1996 National Household Survey on Drug Abuse. *Journal of Acquired Immune Deficiency Syndromes*. 1999;21: 148-156.

²² Hughes A, Substance Abuse Mental Health Services Administration. Personal Communication. November 6, 2000.



6. HIV/AIDS Surveillance System

The HIV/AIDS Surveillance System is conducted in all 50 states and 6 major cities of the United States. It is a multipurpose surveillance system designed to monitor the total number of reported cases from public, private, and government reporting facilities. Data are used to assess trends by reporting areas, race/ethnicity, risk, age, and sex. The database is cumulative, containing all case reports since 1981. Case reports are received from providers who voluntarily complete the CDC form and who report to the local surveillance program by phone with a surveillance representative completing the case report form and from surveillance representatives who abstract medical records in hospitals and private physicians' offices to complete the case report form.

The HIV/AIDS Surveillance System classifies cases into risk categories including “men who have sex with men” and “men who have sex with men and inject drugs.” These categories indicate a history of same-sex sexual behavior and therefore can serve as indicators of sexual orientation, although not very satisfactory ones. This data has been used extensively in CDC reports monitoring the HIV/AIDS epidemic.^{24,25,26}

It should be noted that since 1990, the HIV/AIDS Surveillance System has conducted a survey known as the Supplement to HIV/AIDS Surveillance (SHAS). The purpose of the SHAS is to

²³ Cochran SD, Mays VM. Relationship between Psychiatric Syndromes and Behaviorally Defined Sexual Orientation in a Sample of the US Population. *American Journal of Epidemiology*. 2000;151(5):516-523.

²⁴ Centers for Disease Control and Prevention. HIV/AIDS Among American Indians and Alaskan Natives -- United States, 1981-1997. *MMWR*. 1998;47(08);154-160.

²⁵ Centers for Disease Control and Prevention. HIV/AIDS among men who have sex with men and inject drugs-- United States, 1985-1998. *JAMA*. 2000;284(2):170-1.



obtain increased descriptive information on persons reported with HIV/AIDS infection. SHAS is conducted in 12 states. The target population is reported HIV/AIDS patients and the AIDS or HIV case report is the source for identifying potential interviewees. Though supplemental in nature, the SHAS does include measurements of sexual orientation-identity as well as same-sex behavior (see Table 2).²⁷

7. National Survey of Substance Abuse Treatment Services

The N-SSATS is the only source of data on all known substance abuse treatment programs in the United States and provides policymakers and program managers national information on characteristics of substance abuse treatment programs and the numbers and types of clients served. N-SSATS is used to formulate the Nation's annual drug control strategy.

The N-SSATS provides an interesting contrast to the surveys mentioned above in that the N-SSATS is a survey of programs rather than of individuals. This survey, which was formerly the UFDS, was recently modified and renamed, and went into the field in 2000. Data is not yet available, but the survey now asks treatment facilities if any programs at their site have been specially designed for gays and lesbians. Information gathered from N-SSATS, including the prevalence of facilities serving gay and lesbian populations, can inform the inclusion and wording of such questions on other facilities and programs surveys conducted through HHS.

²⁶ Centers for Disease Control and Prevention. HIV/AIDS among racial/ethnic minority men who have sex with men--United States, 1989-1998. *MMWR Morb. Mortal. Wkly. Rep.* 2000;49(1):4-11.

²⁷ Lansky A, Centers for Disease Control's HIV/AIDS Surveillance System. Personal Communication. November 3, 2000.



8. National Health Interview Survey

The NHIS is a household interview survey conducted continuously throughout the year. Each week's sample is a national probability sample of the civilian, noninstitutionalized population of the United States. Face-to-face interviews are conducted in sampled households. The purpose of the survey is to provide general health statistics on the Nation's population. Units for analysis are the household, person, doctor visits, hospitalizations, and health conditions.

The NHIS is included in this report partially to be thorough in our review, and partially because of the importance of the NHIS in monitoring the health of the United States population. The NHIS has tremendous potential for providing information on the relationship between health and sexual orientations, and in order to fulfill the monitoring responsibilities of HP2010, the NHIS must begin collecting sexual orientation data. The NHIS does not currently ask any questions that can do this satisfactorily; however, since 1988 the survey has asked a question to assess whether an individual is at risk for HIV/AIDS. The respondent is asked to report whether he or she has any one of a number of risk factors, one of which is "you are a man who has had sex with another man at some point since 1980, even one time." Because responses are aggregated, it is impossible to determine which risk factor a respondent has responded affirmatively to, and sexual orientation is therefore impossible to assess.



B. Additional Notable Information Systems and Databases

A number of non-HHS information systems and databases (some of which are/were funded by HHS) have assessed sexual orientations. This is not meant to be a comprehensive review of these information systems and databases, but rather a review of several of the more important surveys that do so. Questions assessing sexual orientations from these information systems and databases are included in Table 3, and a brief description of each survey is provided below.

These surveys include the National Health and Social Life Survey (NHSLs), the General Social Survey (GSS), the Project HOPE International Survey of AIDS-Risk Behaviors (Project HOPE), the National Longitudinal Survey on Adolescent Health (NLSAH), the Women's Health Initiative (WHI), the Nurses Health Study (NHS), the Gay Urban Men's Study (GUMS), the National Crime Victimization Survey (NCVS), the Violence Against Women Survey (VAWS), and the United States Census.

1. National Health and Social Life Survey/General Social Survey

The NHSLs was a one-time survey fielded in 1992. It is one of the earliest and best surveys to have collected sexual orientation data. The survey utilized in-person interviews with self-administered questionnaires in a national representative sample of United States households.

A series of detailed sexual behavior, sexual attraction and sexual orientation-identity questions were asked (see Table 3). The results of this survey demonstrate that identity, behavior, and attraction dimensions of sexual orientation identify different (albeit overlapping) populations. Using the questions in Table 3, Laumann et al. found that 8.6% of women and 10.1% of men



reported any adult same-gender sexuality. Of the women reporting some same-gender sexuality, 88% reported same-gender sexual desire, 41% reported some same-gender sexual behavior, and 16% reported a lesbian or gay identity. Of the men, reporting some same-gender sexuality, 75% reported same-gender sexual desire, 52% reported some same-gender sexual behavior, and 27% reported a gay identity.²⁸

The GSS is included in this review because it, like the NHSLs, was conducted by National Opinion Research Center and it played a role in the development of the NHSLs. The GSS asked only questions concerning the gender of sexual partners. First fielded in 1988, results can be used to assess sexual orientations based upon these sexual behavior questions.

2. Project HOPE International Survey of AIDS-Risk Behaviors

The Project HOPE survey was designed to estimate the prevalence of HIV/AIDS risk behaviors in national probability samples of the United States, the United Kingdom and France. In home face-to-face and self-completed questionnaires were administered to respondents ages 16-50. Survey questions can be used to estimate the prevalence of homosexual behavior and homosexual attraction (see Table 3). The survey, fielded in 1988, was one of the first to include a measure of sexual attraction.

The study found that 8.7, 7.9, and 8.5% of males and 11.1, 8.6, and 11.7% of females in the United States, the United Kingdom, and France, respectively, report some homosexual attraction but no homosexual behavior since age 15. Further, considering homosexual behavior and

²⁸ Laumann EO, Gagnon JH, Michael RT, Michaels S. *The Social Organization of Sexuality: Sexual Practices in the United States*. The University of Chicago Press, Chicago and London, 1994.



homosexual attraction as different but overlapping dimensions of homosexuality, the study found that 20.8, 16.3, and 18.5% of males, and 17.8, 18.6, and 18.5% of females in the United States, the United Kingdom, and France report either homosexual behavior or homosexual attraction since age 15. Examination of homosexual behavior separately found that 6.2, 4.5, and 10.7% of males and 3.6, 2.1, and 3.3% of females in the United States, the United Kingdom, and France, respectively report having had sexual contact with someone of the same sex in the previous five years. These findings highlight the importance of using more than just homosexual behavior to examine the prevalence of homosexuality.²⁹

3. National Longitudinal Survey on Adolescent Health

The NLSAH was a longitudinal study of adolescents in grades 7-12 examining their health in the multiple social contexts in which they live.

Two waves of the NLSAH included questions in which sexual orientations could be assessed. Questions were included about romantic relationships and romantic attractions. Reports of same-sex romantic relationships were less common than reports of same-sex romantic attraction. Same-sex relationships were reported by 1.1% of boys and 2.0% of girls, compared to reports of romantic attractions by 7.3% of boys and 5% of girls (.5% of boys and girls reported both same-sex romantic attraction *and* relationship).³⁰ Confirming the results of the NHSLS and the Project HOPE Survey, same-sex romantic attractions are more prevalent than same-sex behaviors/relationships.

²⁹ Sell RL, Wells JA, Wypij D. The Prevalence of Homosexual Behavior and Attraction in the United States, the United Kingdom and France: Results of National Population-Based Samples. *Archives of Sexual Behavior*. 1995;24(3):235-248.



4. Women's Health Initiative

The WHI is a cluster of health studies in older women investigating disease outcomes. Data from participants include questionnaire and interview data, physical examination findings, and laboratory data. It is included in this review because of its large sample size. Valanis et al. recently reported on the results of 93,311 women who were categorized into sexual orientation groups based upon their reports of adult sexual experiences (see Table 3). They found 1.4% of women reported adult same-gender sexual behavior. These women used cigarettes and alcohol more often, reported more risk factors for cardiovascular disease and reproductive cancers, and reported lower scores on measures of social support and mental health than other women.³¹

5. Nurses Health Study

The NHS is a prospective cohort study assessing the health of 116,671 female registered nurses between 25-43 years of age. The NHS added a single question to assess sexual orientation-identity in 1995. The survey has obtained sexual orientation data from over 90,000 nurses, but has yet to produce any publications examining the health of the nurses by their sexual orientation. This information is currently being analyzed and is expected to be published soon. It will be interesting to compare these results with those of the WHI, which used a sexual behavior measure of sexual orientation. In particular, it will be interesting to see if they each find the same set of health concerns to be correlated with the sexual minority women in their samples.

³⁰ Russell, Stephen T., Brian Franz, and Anne K. Driscoll. (In press). "Same-Sex Romantic Attraction and Violence Experiences in Adolescence." *American Journal of Public Health*.

³¹ Valanis BG, Bowen DJ, Bassford, T, et al. Sexual Orientation and Health: Comparisons in the Women's Health Initiative Sample. *Archives of Family Medicine*. 2000;9:843-853.



6. Gay Urban Men's Study

The GUMS study was conducted in 1997 in order to examine the health of men who have sex with men or who identify as gay or bisexual. It is included here because it used a telephone screener to identify a probability sample of these men in four cities (San Francisco, Los Angeles, Chicago, and New York). The screeners, presented in Table 3, include all of the screeners considered by the GUMS research team. After preliminary tests in San Francisco, only the first screener was used in the remaining cities. The validity and reliability of screeners for identifying sexual minority populations needs to be more thoroughly examined.

7. National Crime Victimization Survey

The NCVS, funded by the United States Department of Justice, was designed to achieve three primary objectives: to develop detailed information about the victims and consequences of crime, to estimate the number and types of crimes not reported to police, and to provide uniform measures of selected types of crime. All persons 12 years of age and older were interviewed in each household sampled. Each respondent was asked a series of screen questions to determine if he or she was victimized during the six-month period.

The NCVS has been asking about victimization based on perceived sexual orientation since 1995. The survey asks whether vandalism committed against the respondent's household "was motivated by dislike for... people because of their sexual orientation?" (see Table 3) This, however, includes dislike of gays, lesbians, bisexuals and heterosexuals, and in no way should



imply the sexual orientation of any members of the household. No studies examining this data could be found in the medical literature.

8. Violence Against Women Survey

The VAWS involved telephone interviews with a national probability sample of 8,000 women, and 8,000 men 18 years of age and older. Respondents were queried about their general fear of violence and the ways in which they managed their fears, emotional abuse they had experienced by marital and cohabitating partners, and incidents of actual or threatened violence. Respondents were also queried about their experiences with emotional abuse, threats and violence by same-sex intimate partners.

The VAWS assessed sexual orientation by determining whether individuals were living in same-gender couples (see Table 3).³² This was done because the study was examining violence in the context of relationships. The study found “that respondents who had lived with a same-sex intimate partner were significantly more likely than respondents who had married or lived with an opposite-sex partner only to have been: (a) raped as minors and adults; (b) physically assaulted as children by adult caretakers; and (c) physically assaulted as adults by all types of perpetrators, including intimate partners. The study also confirms previous reports that intimate partner violence is more prevalent among gay male couples than heterosexual couples. However, it contradicts reports that intimate partner violence is more prevalent among lesbian couples than

³² US Department of Justice Bureau of Justice Statistics. National Crime Victimization Survey NCVS1 - Basic Screen Questionnaire. 1999; Retrieved November 11, 2000 from World Wide Web; <http://www.ojp.usdoj.gov/bjs/pub/pdf/ncvs1.pdf>.



heterosexual couples, Overall study findings suggest that intimate partner violence is perpetrated primarily by men, whether against same-sex or opposite-sex partners.”³³

9. United States Census

The Census is included here because it has been used by researchers to enumerate and describe same-sex cohabitation in the United States.^{34,35} While the validity of this method for assessing sexual orientations has not been formally examined, it is fairly safe to assume it is not the most valid measure of sexual orientation available to researchers. This method of assessing sexual orientations has been used because the census provides a very large dataset from which to do analyses on rare populations, and until recently few surveys included better measures of sexual orientation. Researchers therefore have resorted to the use of proxies for sexual orientation such as this one. Until a better measure of sexual orientation is added to the Census, however, the use of Census data to describe lgb people should be considered cautiously.

³³ Tjaden P, Theonnes N, Allison CJ. Comparing Violence over the Lifespan in Samples of Same-Sex and Opposite-Sex Cohabitants. *Violence and Victims*. 1999;14(4):413-425.

³⁴ Phua VC, Kaufman G. Using the Census to Profile Same-Sex Cohabitation: A Research Note. *Population-Research and Policy Review*. 1999;18(4):373-386.

³⁵ Alm J, Badgett MVL, Whittington LA. Wedding Bell Blues: The Income Tax Consequences of Legalizing Same-Sex Marriage. *National Tax Journal*. 2000;53(2):201-214.



III. Collecting Sexual Orientation Data: Definitions and Measures

“Unless the word homosexual is clearly defined, objective discussion regarding it is futile, and misunderstanding and erroneous conclusions are inevitable.”

George Henry, 1955³⁶

Conceptually defining populations and developing operational measures to identify members of these populations have continually challenged researchers. As scientists begin to treat sexual orientation as a demographic variable like race or ethnicity, it is necessary to examine our conceptualizations of sexual orientation and critically examine methods of operationally identifying the sexual orientation of research subjects.

At present it is clear that researchers differ profoundly in how they define and measure sexual orientations. Literature reviews have found that researchers’ conceptual definitions of these populations are rarely included in reports of their research and, when they are included, they often differ theoretically from one another. Further, the operational methods used to measure sexual orientations in these studies do not always correspond with the most common conceptualizations of sexual orientations.^{3,37}

It is necessary that researchers work to develop uniform definitions of terms used to label sexual orientations and that uniform methods of operationally identifying sexual orientations be agreed upon for use in research studies. It is imperative that researchers studying these populations

³⁶ Henry GW. *All the Sexes: A study of Masculinity and Femininity*. Rinehart, New York, 1955.

³⁷ Shively MG, Jones C, DeCecco JP. Research on Sexual Orientation: Definitions and Methods. In: DeCecco JP, Shively MG (Eds). *Origins of Sexuality and Homosexuality*. Harrington Park Press, New York, 1985.



clarify who it is they are studying and explicitly recognize the effect their research methods have upon their findings.

To this end, we review and critique definitions of the concept of “sexual orientation” as well as measures used to identify and classify subjects’ sexual orientations. The review begins with the work of Ulrichs who founded formal study of this topic in the 1860’s.³⁸ It is hoped that this review will encourage researchers to be more critical of the methods they use to classify subjects based upon their sexual orientation, and inform the process of establishing standard definitions and measures.

A. Definitions of Sexual Orientation

Many different terms and definitions have been proposed over the last 140 years to describe the sexual orientation of subjects. One of the earliest and most important sexual orientation classification schemes was proposed by Ulrichs in a series of pamphlets privately published in the 1860s.^{39,38} Ulrichs’ scheme, which was only intended to describe males, separated them into three basic categories: *dionings*, *urnings*, and *uranodionings* (see Appendix A).⁴⁰ Arguably these categories directly correspond with the categories used today: heterosexual, homosexual and bisexual.⁴¹ Homosexual women, who were largely ignored by early researchers, were referred to as urningins and heterosexual women were referred to as dioningins by Ulrichs.⁴²

³⁸ Ulrichs K. *The Riddle of Man-Manly Love*. Prometheus Books, Buffalo, NY, 1994.

³⁹ Carpenter E. *The Intermediate Sex*. Allen and Unwin, London, 1908.

⁴⁰ These terms were derived from a speech by Pausanias in Plato’s Symposium in which Pausanias refers to Uranus (heaven) (Plato. *The Symposium and The Phaedrus*. State of New York Press, Albany, NY, 1993)

⁴¹ Cory DW. *The Homosexual in America*. Greenberg, New York, 1951.

⁴² Bullough V. The Kinsey Scale in Historical Perspective. In McWhirter DP, Sanders SA, and Reinisch JM (eds). *Homosexuality/Heterosexuality: Concepts of Sexual Orientation*. Oxford University Press, New York, 1990.



Mayne, a follower of Ulrichs, provided a definition of an urning in the first major work on homosexuality to be written by an American. He defined an urning as “a human being that is more or less perfectly, even distinctly, masculine in physique; often virile type of fine intellectual, oral and aesthetic sensibilities: but who, through an inborn or later-developed preference feels sexual passion for the male human species. His sexual preference may quite exclude any desire for the female sex: or may exist concurrently with that instinct.”⁴³ Mayne’s definition also encompasses male uranodionings by stating that desire for the female sex may exist concurrently.

In addition to his effect on Mayne, Ulrichs had a profound influence on the work of many early researchers including Westphal, Symonds, Krafft-Ebing, Moll, Carpenter, Ellis and Symonds, and Hirschfeld.^{44,45,46,47,48,49,39,50,51} Further, through the work of these researchers, Ulrichs is credited with influencing Freud and Jung.⁵² While they may appear to differ significantly, the conceptualizations of sexual orientation most often cited today generally have their root in the work of Ulrichs.

Even the terms “homosexuality” and “heterosexuality,” which Ulrichs did not prefer, have direct links to him. These terms first appeared in a letter to him drafted on May 6, 1868, from Benkert,

⁴³ Mayne X. *The Intersexes: A History of Similsexualism as a Problem in social Life*. Privately Printed, London, 1908.

⁴⁴ Westphal K. Die Kontrare Sexualempfindung: Symptom eines neuropathologischen (psychopathischen) Zustandes. *Arch Psychiat Nervenkrank*. 1869;2:73-108.

⁴⁵ Symonds JA. *A Problem in Greek Ethics*. Privately Printed, London, 1883.

⁴⁶ Symonds JA. *A Problem in Modern Ethics*. Privately Printed, London, 1891.

⁴⁷ Kraft-Ebing RV. *Psychopathia Sexualis: Eine Klinisch-Forensische Studie*. Stuttgart, Germany, 1886.

⁴⁸ Moll A. *Die Kontrare Geschlechtsempfindung*. Fischer’s Medicin, Berlin, Germany, 1886.

⁴⁹ Carpenter E. *Homogenic Love and Its Place in a Free Society*. Labour Press, Manchester, England, 1894.

⁵⁰ Ellis H, Symonds JA. *Sexual Inversion*. Wilson and Macmillan, London, 1896.

⁵¹ Hirschfeld M. *Die Homosexualitat des Mannes und des Weibes*. Louis Marcus, Berlin, Germany, 1914.

⁵² Bullough V. Introduction in: *The Riddle of Man-Manly Love*. Prometheus Books, Buffalo, NY, 1994.



a German-Hungarian physician and writer.^{38,53} Later, Benkert outlined his definition of homosexuality in a pamphlet published in 1869. His definition read:

In addition to the normal sexual urge in man and woman, Nature in her sovereign mood has endowed at birth certain male and female individuals with the homosexual urge, thus placing them in a sexual bondage which renders them physically and psychically incapable-even with the best intention-of normal erection. This urge creates in advance a direct horror of the opposite sexual (sic) and the victim of this passion finds it impossible to suppress the feeling which individuals of his own sex exercise upon him.⁵⁴

Today the terms heterosexual (straight), homosexual (gay and lesbian), and bisexual are the most commonly used terms by researchers to describe sexual orientations.^{3,37} While not many other terms have been proposed to describe heterosexuality or bisexuality, an array of terms have been used by researchers to describe homosexuality, including uranianism, homogenic love, contrasexuality, homo-erotism, simlsexualism, tribadism, sexual inversion, intersexuality, transexuality, third sex, and psychosexual hermaphroditism.^{38,39,43,48,50,55,56,57} Today's preferred terms and the term "sexual orientation" itself have a wide variety of definitions in the literature but these generally comprise one or both of two components: a "psychological" component and a "behavioral" component. Not all definitions include both of these components, and as are

⁵³ The term homosexual is an inappropriate combination of Greek and Latin that disturbed many early researchers who wanted it replaced, but recognized that it was too deeply rooted in literature by the time they arrived on the scene. (see footnotes 54,55) The term homosexual may have been introduced into English by Symonds in his first edition of *A Problem of Modern Ethics* in 1891. (Boswell, J. Christianity, Social Tolerance, and Homosexuality, University of Chicago Press, Chicago, IL, 1980.)

⁵⁴ Robinson, V. (ed.). *Encyclopedia Sexualis*. Dingwall-Rock, New York, 1936.

⁵⁵ Kinsey, A. C., Pomeroy, W. B., and Martin, C. E. *Sexual Behavior in the Human Male*, W. B. Saunders, Philadelphia, PA, 1948.

⁵⁶ Kinsey, A. C., Pomeroy, W. B., Martin, C. E., and Gebhard, P. H. *Sexual Behavior in the Human Female*, W. B. Saunders, Philadelphia, PA, 1953.

⁵⁷ Even today terms take on new meaning and importance for describing sexual orientations. The term queer for example is defined by Legman in 1941 as: "Homosexual; more often used of male homosexuals than of Lesbians. As an adjective it is the most common in use in America." (Legman, O. The language of homosexuality; An American glossary. In Henry, O. W., *Sex Variants: A Study of Homosexual Patterns*, Paul B. Hoeber, New York, 1941). At the time Legman wrote, the term was slang and used pejoratively. In the 1990s the term still meant "homosexual," but was frequently used nonpejoratively in scholarly works (for example, see Signorle, M. *Queer in America*, Random House, New York., 1993; Brett, P., Wood, E., and Thomas, O. C. *Queering the Pitch: The New Gay and Lesbian Musicology*, Routledge, New York, 1993; Goldberg, J. (ed.). *Queering the Renaissance*, Duke



discussed in detail below, definitions that include both components use either the conjunction "and" or "or" to join them.

Mayne's (1908) definition of the termurning and Benkert's of the term homosexual only include a description of the psychological state.⁵⁴ Mayne discussed how an individual's feelings of sexual passion determine their sexual orientation while Benkert talked of an "urge." Ellis, one of the most important writers on sexuality in late 19th and early 20th century England, also only talked of a psychological entity which he described as "sexual instinct." Ellis defined homosexuality as "sexual instinct turned by inborn constitutional abnormality toward persons of the same sex."^{50,58} These definitions and other early ones generally omit any discussion of behavior (and in particular sexual behavior), except to say that the thought of it with the other sex is repulsive or horrifying to the homosexuals. Krafft-Ebing, like his contemporaries, even makes the point to exclude behavior from the diagnosis of homosexuality. Krafft-Ebing stated that "the determining factor here is the demonstration of perverse feelings for the same sex; not the proof of sexual acts with the same sex. These two phenomena must not be confounded with each other."⁴⁷

University Press. Durham, NC, 1994; Feinberg, D. B. *Queer and Loathing: Rants and Raves of a Raging AIDS Clone*. Viking, New York, 1994.)

⁵⁸ Ellis used the term "sexual inversion" at the time this definition was provided, but in later versions of his work substituted the term "homosexuality" (Ellis, H., and Symonds J. A. *Sexual Inversion*, Wilson and Macmillan, London, 1896; Ellis, H. *Studies in the Psychology of Sex* Random House, New York, 1942.) Two of the earliest medical journal articles about homosexuality to appear in the English language provide a definition that, like the other early definitions, does not discuss sexual behavior. Their definition, which in both cases is a translation of Westphal's German definition describes homosexuals as persons that: "as a result of their inborn nature felt themselves drawn by sexual desire to male individuals exclusively." (Blumer, O. A. A case of perverted sexual instinct (contrare sexuellempfindung). *J. Insanity* 1882;39:22-35.; Shaw, I. C., and Ferris, G. N. Perverted sexual instinct. *J. Nerv. Ment. Dis.* 1883;10:185-204.)



More recent definitions often include both components. For example LeVay defined sexual orientation as "the direction of sexual feelings or behavior, toward individuals of the opposite sex (heterosexuality), the same sex (homosexuality), or some combination of the two (bisexuality)," and Weinrich defined homosexuality "either (1) as a genital act or (2) as a long-term sexueroetic status."^{59,60} Here the psychological states referred to are "sexual feelings" and "sexueroetic status," and the behavioral outcome is "sexual behavior" as referred to by LeVay and a "genital act" as referred to by Weinrich. The psychological and behavioral components in both definitions are joined by "or" signifying that either one can be used to assess sexual orientation.

In *A Descriptive Dictionary and Atlas of Sexology*, homosexuality is broadly defined as "the occurrence or existence of sexual attraction, interest and genitally intimate activity between an individual and other members of the same gender."⁶¹ Here the psychological components are "sexual attraction" and "interest" and the behavioral outcome is described as "genitally intimate activity." Unlike the definitions of LeVay and Weinrich this definition joins the two components with the conjunction "and." Using the conjunction "and" makes it unclear as to whether both components are necessary for the assignment of sexual orientation classifications.^{59,60}

At the other extreme from the early definitions provided by Mayne and Benkert are definitions that only include discussions of the behavioral component. For example, *Stedman's Medical Dictionary* defined homosexuality as "sexual behavior, including sexual congress, between

⁵⁹ LeVay, S. *The Sexual Brain*. MIT Press, Cambridge, MA, 1993.

⁶⁰ Weinrich, J. D. Homosexuality. In Bullough, V. L., and Bullough, B. (eds.), *Human Sexuality An Encyclopedia*, Garland, New York, 1994.

⁶¹ Francoeur, R. T., Perper, T., and Scherzer, N. A. (eds). *A Descriptive Dictionary and Atlas of Sexology*, Greenwood Press, New York, 1991.



individuals of the same sex, especially past puberty."⁶² Here the psychological component does not seem to hold much if any importance for the assessment of sexual orientation. Beach is emphatic about only including sexual behavior in the definition of sexual orientation in his critique of the first English language translation of Gide's defense of homosexuality, *Corydon*. Beach states that "the term (homosexuality) means different things to different people . . . it is preferable to set forth the significance of the term as used in this discussion. Homosexuality refers exclusively to overt behavior between two individuals of the same sex. The behavior must be patently sexual, involving erotic arousal and, in most instances at least, resulting in the satisfaction of the sexual urge."⁶³ According to Diamond, it is this type of definition that is favored by researchers determining the size of the "homosexual" population in various countries. In the studies reviewed by Diamond, while all used some assessment of sexual behavior to determine the prevalence of sexual orientations, none used any assessment of a psychological state (such as sexual attraction).⁶⁴

Thus far we have discussed the two definitional components of sexual orientation as if the components themselves were uniform across definitions, but as is evident in the examples already provided, there are important variations. Psychological components of definitions may include the terms "sexual passion," "sexual urge," "sexual feelings," "sexual attraction," "sexual interest," "sexual arousal," "sexual desire," "affectional preference," "sexual instinct," "sexual orientation identity," or "sexual preference."⁶⁵ Each of these terms may have a distinct meaning

⁶² *Stedman's Medical Dictionary*. Williams and Wilkins, Baltimore, MD, 1982.

⁶³ Beach, F. Comments on the second dialogue In *Corydon*. Gide, A., Corydon, Farrar, Straus, New York, 1950.

⁶⁴ Diamond, M. Homosexuality and Bisexuality in Different Populations. *Arch. Sex. Behav.* 1993;22:291-310.

⁶⁵ "Sexual preference" has been used as a substitute for the term "Sexual orientation," but Gonsiorek and Weinrich believe it "is misleading as it assumes conscious or deliberate choice and may trivialize the depth of the psychological processes involved." They therefore "recommend the term sexual orientation because most research



and not necessarily be indicative of the same phenomenon. That is, different terms in definitions may be describing slightly different phenomena despite the similar label for that phenomena.

Similarly, the behavioral component varies between definitions. Behavior can be stated simply as "sexual behavior" or it can be described, for example, as "genital activity," "sexual intercourse," "sexual contact," or "sexual contact that achieves orgasm." Each one of these presents further challenges for researchers. That is, how do we define each of these terms within the definition itself and how would we operationalize them for measurement?

Obviously, definitions and preferred terms vary significantly from researcher to researcher and across time. We must concern ourselves with whether these definitions are describing the same phenomena and whether the measures of sexual orientation based upon these definitions do the same. In the next section the operational measurement of sexual orientation is reviewed.

B. Measures of Sexual Orientation

As was demonstrated above, conceptualizations of sexual orientation vary dramatically. Measures of sexual orientation, as will be shown below, vary widely as well. Some of the earliest reports of assessing sexual orientation are found in the documents of the Western Church, which encouraged individuals to confess their sins. In particular, religious documents show the Church's concern with asking sensitive questions about such topics as sodomy. These documents instructed priests in the 1500s "not to show amazement; exhibit a contorted face;

findings indicate that homosexual feelings are a basic part of an individual's psyche and are established much earlier than conscious choice would indicate."



show revulsion (no matter what enormities are confessed) rebuke the penitent; or exclaim "Oh, what vile sins!" when discussing sensitive subjects.^{66,67}

De Pareja, who went to Florida as a missionary to the Timucua Indians in 1595, outlined specific questions to identify Sodomites in his book, *Confessionario*.⁶⁸ These questions included:

1. Have you had intercourse with another man?
2. Or have you gone around trying out or making fun in order to do that?

Pareja further provided questions to be asked of boys who may have committed sodomy including the following:

3. Has someone been investigating you from behind?
4. Did you consummate the act?⁶⁸

Several centuries later, Ulrichs, in his series of pamphlets in the 1860s, outlined a set of questions that could be asked to determine if a man was an Urning.³⁸ These questions included:

1. Does he feel for males and only for males a passionate yearning of love, be it gushing and gentle, or fiery and sensual?
2. Does he feel horror at sexual contact with women? This horror may not always be found but when it is found, it is decisive.
3. Does he experience a beneficial magnetic current when making contact with a male body in its prime?
4. Does the excitement of attraction find its apex in the male sexual organs?

Mayne also outlined a series of several hundred questions for the personal diagnosis of Urnings and Urningins.⁴³ These questions include:

1. At what age did your sexual desire show itself distinctly?

⁶⁶ Lee, R. M. *Doing Research on Sensitive Topics*, Sage, London, 1993.

⁶⁷ Tentler, T. N. *Sin and Confession on the Eve of the Reformation*, Princeton University Press, Princeton, 1977.

⁶⁸ Katz, N. *Gay American History. Lesbians and Gay Men In the United States*, Meridian, New York, 1992.



2. Did it direct itself at first most to the male or to the female sex? Or did it hesitate awhile between both?
3. Is the instinct unvaryingly toward the male or female sex now? Or do you take pleasure (or would you experience it) with now a man, now a woman?
4. Do you give way to it rather mentally or physically? Or are both in equal measure?
5. Is the simlsexual desire constant, periodic or irregularly felt?
6. In dreams, do you have visions of sexual relations with men or women, the more frequently and ardently?

The respondents to Pareja's, Ulrichs', and Mayne's questions were expected to be able to provide a yes or no answer. That is, the person was either categorized as a "Sodomite," "Urning," or "Urningin," or not. This simple categorical scheme for the classification of sexual orientations remains the dominate one used by researchers today. That is, subjects are classified as homosexual or heterosexual based upon their sexual orientation identity or sexual behavior.³ Despite this, more sophisticated measures of sexual orientation have been proposed during the last 50 years as researchers have encountered or discovered the limitations of simple categorical measures. The most important of these are reviewed below.

1. Kinsey Scale

The most important sexual orientation measurement scale was proposed by Kinsey in his reports on sexual behavior in the human male and female.^{55,56} Kinsey proposed (see Appendix B) a bipolar scale that allows for a continuum between "exclusive heterosexuality" and "exclusive homosexuality." Kinsey provided the following important justification for his decision to depart from the dichotomous and simple categorical measures of his predecessors:

The world is not to be divided into sheep and goats. Not all things are black nor all things white. It is a fundamental of taxonomy that nature rarely deals with discrete categories. Only the human mind invents categories and tries to force facts into separated pigeon-holes. The living world is a continuum in each and every one of its aspects. The sooner we learn this concerning human sexual behavior the sooner we shall reach a sound understanding of the realities of sex.⁵⁵



It is characteristic of the human mind that it tries to dichotomize in its classification of phenomena. Things are either so, or they are not so. Sexual behavior is either normal or abnormal, socially acceptable or unacceptable, heterosexual or homosexual; and many persons do not want to believe that there are gradations in these matters from one to the other extreme.⁵⁶

One of the more striking facts about these statements is that they were made by a person (Kinsey) who was trained as a taxonomist.⁶⁹ It had been much of his life work to develop such classification schemes as he so easily dismissed here. But by dismissing simple categorical classifications and developing a bipolar model, a new way of measuring sexual orientation, providing a new perspective on sexuality, was created. However, as it forces subjects into one of seven categories, the Kinsey Scale is not a true continuum but rather a categorical scale. This is fortunate in some ways because the seven points are difficult to assign and if there were an infinite number of points the task would be that much more difficult.

Masters and Johnson, in a major study of homosexuality, provide the following discussion about the difficulty of assigning Kinsey ratings:⁷⁰

There was also concern in arbitrarily selecting the specific classification of Kinsey grades 2 through 4 for any individual who had had a large number of both homosexual and heterosexual experiences. The ratings were assigned by the research team after detailed history-taking, but it is difficult for any individual to be fully objective in assessing the amount of his or her heterosexual versus homosexual experience when there has been a considerable amount of both types of interaction. Some of these preferences ratings might well be subject to different interpretation by other health-care professionals.

Masters and Johnson further state that:

Kinsey 3 classification was the most difficult to assign of the ratings. Relative equality in any form of diverse physical activity is hard to establish. Particularly was this so when the interviewer, in attempting to separate mature sexual experience into its homosexual

⁶⁹ Weinrich, J. D. The Kinsey Scale in Biology, with a Note on Kinsey as a Biologist. In McWhirter, D. P., Sander-, S. A., and Reinisch, J. M. (eds.), *Homosexuality/Heterosexuality: Concepts of Sexual Orientation*. Oxford University Press, New York., 1990.

⁷⁰ Masters. W. H.. and Johnson, V. E. *Homosexuality in Perspective*. Little, Brown, Boston, MA, 1979.



and heterosexual components, was faced with a history of a multiplicity of partners of either sex. The problem was augmented by the subjects' frequently vague recall of the average number of sexual interactions with each partner.

It is evident from these reports that it is difficult to determine the relative importance of the heterosexual and homosexual in a person's history when using the Kinsey Scale, but this is only one of several concerns often expressed by researchers about this scale.

2. Klein Scale

A second concern with the Kinsey Scale is that it lumps individuals who are significantly different based upon different aspects or dimensions of sexuality into the same categories.^{71,72} In fact, Kinsey himself took two dimensions of sexual orientation, "overt sexual experience" and "psychosexual reactions," into account when applying his scale. Kinsey provides the following discussion of these two dimensions and how they were used in the assessment of sexual orientation:

It will be observed that the rating which an individual receives has a dual basis. It takes into account his overt sexual experience and/or his psychosexual reactions. In the majority of instances the two aspects of the history parallel but sometimes they are not in accord. In the latter case, the rating of an individual must be based upon an evaluation of the relative importance of the overt and the psychic in his history.⁵⁵

It can be argued that collapsing these two independent values into one final score lost valuable information. A common solution that avoids the loss of information is to assess dimensions of sexual orientation separately and report the scores independently. When this approach is taken, the two most commonly assessed aspects of sexual orientation are sexual behavior and sexual fantasies.

⁷¹ Weinrich, J. D., Snyder, P. J., Pillard, R. C., Grant, I., Jacobson, D. L., Robinson, S. R., and McCutchan, I. A. A factor analysis of the Klein Sexual Orientation Grid in two disparate samples. *Arch. Sex Behav.* 1993;22: 157-168.

⁷² Weinberg, M. S., Williams, C. J., and Pryor, D. W. *Dual Attraction*. Oxford University Press, New York, 1994.



These two dimensions are most likely chosen because they correspond with the two dimensions, "overt sexual experience" and "psychosexual reaction" proposed by Kinsey.^{3,55} They may also be chosen because they reflect the behavioral and psychological components of definitions as discussed in the previous section. But sexual behavior and sexual fantasies are not the only dimensions that may be considered. For example, Klein et al. proposed in the Klein Sexual Orientation Grid (KSOG) the assessment of seven dimensions including sexual attraction, sexual behavior, sexual fantasies, emotional preference, social preference, self identification and heterosexual/homosexual life-style (see Appendix C).⁷³ A concern with assessing multiple dimensions is that as each is added the overall scale becomes more burdensome and less practical for many research purposes. Researchers therefore tend to limit the number of assessed dimensions.

Diamond reviewed several research studies in which sexual behavior and sexual fantasies were assessed on the Kinsey Scale. He reported that this is somewhat common in studies of specific gay populations. In the studies reviewed, there appears to be a high but not perfect correlation between reported sexual behavior and fantasy.⁷⁴ The value of measuring these two dimensions for the assessment of sexual orientation or any other dimension has not been determined.

Only one published study has explicitly examined the value of studying more than one dimension of sexual orientation. Weinrich et al. found, using factor analysis, that all of the dimensions of sexual orientation proposed by Klein in the KSOG seem to be measuring the same

⁷³ Klein, F., Sepekoff, B., and Wolf, T. J. Sexual orientation: A multi-variable dynamic process. *J. Homosex.* 1985;11:35-49.



construct.⁷¹ That is, all of the dimensions load on a first factor which accounts for most of the variance. However, they further find in the two samples that were studied that a second factor emerged containing the dimensions of social and emotional preferences, suggesting that the social and emotional preference dimensions may have also been measuring something other than sexual orientation.

3. *Shively Scale*

A third concern with the Kinsey Scale is that it inappropriately measures homosexuality and heterosexuality on the same scale, making one the trade-off of the other. This concern arises out of research in the 1970s on masculinity and femininity which found that the concepts of masculinity and femininity are more appropriately measured as independent concepts on separate scales rather than as a single continuum with each one representing opposite extremes.⁷⁵ Measured on the same scale, masculinity and femininity acted as trade-offs in which to be more feminine one had to be less masculine or to be more masculine one had to be less feminine. Considered as separate dimensions one could be simultaneously very masculine and very feminine (androgynous) or not very much of either (undifferentiated). Similarly, considering homosexuality and heterosexuality on separate scales allows for one to be both very heterosexual and homosexual (bisexual) or not very much of either (asexual).

Bullough echoed this concern with the Kinsey scale saying: "I am, however, at this point in my research, convinced that the Kinsey scale has outlived its political usefulness and we need a more effective scholarly measuring tool. In fact, the Kinsey scale offers the same kind of difficulty

⁷⁴ Diamond, M. Homosexuality and Bisexuality in Different Populations. *Arch. Sex. Behav.* 1993;22:291-310.

⁷⁵ Bem, S. L. *Bem Sex-Role Inventory Professional Manual*, Consulting Psychologists Press, Palo Alto, CA, 1981.



that the traditional masculine-feminine scale did until it was realized that women could have masculine traits and still be feminine and vice versa."⁷⁶

When homosexuality and heterosexuality are measured independently rather than as a continuum, the degree of homosexuality and heterosexuality can be independently determined, rather than simply the balance between homosexuality and heterosexuality as determined using the Kinsey Scale. This idea was first put forth by Shively and DeCecco who proposed a five-point scale on which heterosexuality and homosexuality would be independently measured (see Appendix D).⁷⁷ Using this scale they proposed the assessment of two dimensions of sexual orientation: physical and affectional preference.

Unfortunately, studies using or examining Shively and DeCecco's proposed measure of sexual orientation could not be found in the published literature, however a study that briefly examined this issue was found using a different scale. In this study, Storms measured the extent of sexual fantasies with the other sex on one scale and the extent of sexual fantasies with the same sex on another scale.⁷⁸ He found that bisexuals in his sample were as likely to report homosexual fantasies as homosexuals were to report homosexual fantasies, and his bisexuals were as likely to report heterosexual fantasies, as heterosexuals were to report heterosexual fantasies. He concluded, using the logic that bisexuals should be less likely to report homosexual fantasies than homosexuals, and less likely to report heterosexual fantasies than heterosexuals, that

⁷⁶ Bullough, V. T. The Kinsey Scale in historical perspective. In McWhirter, D. P., Sanders, S. A., and Reinisch, J. M. (eds.), *Homosexuality/Heterosexuality: Concepts of Sexual Orientation*. Oxford University Press, New York, 1990.

⁷⁷ Shively, M. G., and DeCecco, J. P. Components of sexual identity. *J. Homosexuality*. 1977;3:41-48.

⁷⁸ Storms, M. D. Theories of sexual orientation. *A Pers. Soc. Psychol.* 38; 783-792, 1980.



homosexuality and heterosexuality should be measured independently (at least in relationship to fantasies).

4. Sell Assessment

The Sell Assessment of Sexual Orientation was developed in light of the major concerns with existing sexual orientation measures as discussed above (see Appendix E). That is, the Sell Assessment measures sexual orientation on a continuum, considers different dimensions of sexual orientation, and considers homosexuality and heterosexuality separately. The Sell Assessment contains 12 questions, 6 of which assess sexual attractions, 4 of which assess sexual behavior, and 2 of which assess sexual identity. Of these, Sell considers the questions assessing sexual attractions to be the most important as he defines sexual orientation as the "extent of sexual attractions toward members of the other, same, both sexes, or neither." Therefore, sexual attractions more closely reflect this conceptualization of sexual orientation than other attributes, such as sexual behavior or sexual identity.

Sexual behaviors and sexual identity are measured in addition to sexual attractions in the Sell Assessment to provide supplemental information. Sexual behaviors are measured because they are often the result of sexual attractions and, therefore, provide a reflection of them. However, as a result of social and cultural influences, sexual attractions and behaviors will not always correspond. Sexual identity is measured because it should also be closely linked to sexual attractions. That is, a person should/may identify as homosexual if attracted to the same sex, as heterosexual if attracted to the other sex, and bisexual if attracted to both sexes. Once again, however, as a result of social and cultural influences, sexual attractions and sexual identity will not always correspond.



Questions concerning sexual attraction, sexual behavior, and sexual identity will not be equally important in all studies and must be considered in the context of a study. For example, a study examining the spread of HIV among homosexual men would want to measure sexual attractions to identify the total population of homosexuals and measure sexual behaviors to identify individuals most at risk for the spread of HIV. The same study may want to measure sexual orientation identity if the results will be used for prevention efforts. That is, individuals who identify as homosexual may be different from and easier to target with prevention efforts than homosexual men (identified as homosexual based upon reported sexual attractions and/or behaviors) who do not identify as homosexual.

Questions to assess sexual attraction, sexual behavior, and sexual identity are designed in the Sell Assessment to be complementary. Of the six questions assessing sexual attraction, three basic questions are asked. Two questions measure the frequency of sexual attractions, and one measures the intensity of sexual attractions. The frequency and intensity of sexual attractions are measured to determine the "extent" of sexual attractions. Frequency and intensity are measured because it was felt that these are the best methods to determine the extent of homosexuality and heterosexuality. On the Kinsey scale an individual determines how heterosexual they are in relationship to how homosexual they are. It is not clear how subjects make this determination, and subjects must certainly make the determination differently. The Sell Assessment assumes that the degree or extent of heterosexuality and homosexuality can best be determined by how common (frequent), or strong (intense) each is. By measuring frequency and intensity, we can



standardize the relationship between heterosexuality and homosexuality, and therefore better determine the tradeoffs between them.

The two questions assessing the frequency of sexual attractions ask the number of different persons that the subject was sexually attracted to during the past year and how often this occurred. The question that assesses the intensity of sexual attractions asks how intense sexual attractions have been on a continuum from "not at all sexually attracted" to "extremely sexually attracted." There are a total of six questions because the set of three basic questions are asked in reference to men and women separately. That is, the scale measures the extent of sexual attractions to both sexes and therefore measures heterosexuality and homosexuality independently. Of course, to measure sexual orientation using the questions in the Sell Assessment, researchers must also know the biological sex of the subject. The scale is, therefore, designed to be appropriate for both males and females, with the questions assessing homosexuality in males used to assess heterosexuality in females, and vice versa.

Response patterns were chosen to present the subjects with a continuum of responses upon which to express their answer. Of the six or seven responses provided for each question, there is always the possibility to report a negative response (none, never, or not at all sexually attracted). Subjects are therefore expected to consider all questions. The number of responses was chosen to maximize scale reliability (which increases as the number of possible responses increases) without adversely affecting results from other causes (which begins to occur by 10 responses).⁷⁹

⁷⁹ Streiner, D. L., Norman, G. R. *Health measurement scales: A practical guide to their development and use*. New York: Oxford University Press, 1989.



Unmodified, the six pairs of questions and responses to the Sell Assessment provide a profile of a subject's sexual orientation. This is, however, more information than many researchers will find necessary for the assessment of a subject's sexual orientation. There are, therefore, four sets of "summaries" of the Sell Assessment that can be used to simplify data analysis. The biggest concern with the Sell Assessment is that its reliability and validity, like previous measures, remains largely unexamined.⁸⁰

5. Friedman Measure of Adolescent Sexual Orientation

The Sell Assessment of Sexual Orientation is intended to provoke debate about the measurement of sexual orientations, and not necessarily provide a final solution to the question. Researchers have been encouraged to use it as a foundation or beginning for better measures. One researcher who has attempted to do this is Mark Friedman at the University of Pittsburgh. Friedman is currently developing an adolescent measure of sexual orientation. The most recent version (12/8/00) is included in Appendix F.⁸¹

C. Choosing a Measure of Sexual Orientation

This section of this report began with a discussion of researchers' growing need to include sexual orientation as a demographic variable in their studies. Although problems assessing other demographic variables such as race and ethnicity have been examined and debated in the literature, this process is only beginning for sexual orientation. With the review provided here, this paper informs and hopefully advances this important process. However, definitive recommendations of one measure over another cannot legitimately be offered at this time.

⁸⁰ Sell R. L. The Sell Assessment of Sexual Orientation: Background and Scoring. *Archives of Sexual Behavior*. 1997;26(6):643-658.



Researchers wanting to measure sexual orientation today have a number of choices of measurement tools. These include categorical measures like those currently being considered for inclusion in NHANES and NSFG (see Table 2), the Kinsey Scale, the Klein Scale, the Shively and DecCecco Scale, The Sell Assessment and the Friedman Measure of Adolescent Sexual Orientation.⁸² None of these is completely satisfactory. First, dichotomous and simple categorical scales are unsatisfactory for the reasons outlined by Kinsey. In particular, as Kinsey stated: "Not all things are black nor all things white. It is a fundamental of taxonomy that nature rarely deals with discrete categories."⁸¹ Dichotomous and simple categorical measures likewise are relatively untested leaving their validity and reliability unexamined. Second, the Kinsey Scale is unsatisfactory because it forces the artificial combination of psychological and behavioral components and perhaps incorrectly requires individuals to make tradeoffs between homosexuality and heterosexuality. Third, the Klein scale is unsatisfactory because the relative importance of each dimension in measuring sexual orientation has not been thoroughly investigated or grounded in theory, and like Kinsey, Klein required subjects to make trade-offs between heterosexuality and homosexuality on his scale. Fourth, the Shively and DeCecco scale is unsatisfactory because its properties have not been thoroughly investigated and its consideration of physical and affectional preference may be oversimplified or even inappropriate. Finally, the Sell Assessment and Friedman Measure of Adolescent Sexual

⁸¹ For additional information and the most recent version of this measure, contact Mark Friedman at Marksf@stophiv.pitt.edu.

⁸² Other proposed scales that do not advance the field of sexual orientation measurement theoretically, but are of some interest include: Sambrooks, J. E., MacCulloch, M. J. A modification of the sexual orientation method and automated technique for presentation and scoring. *British Journal of Social and Clinical Psychology*. 1973;12:163-174; Berkey B. R., Perelman-Hall T, Kurdek LA. The multidimensional scale of sexuality. *Journal of Homosexuality*. 1990;19(4):67-87.; Coleman E. Toward a synthetic understanding of sexual orientation. In *Homosexuality/Heterosexuality: Concepts of sexual orientation*. New York: Oxford University Press, 1990.



Orientation, while firmly grounded in current theory, remain largely untested and are perhaps too complicated and burdensome for average research requirements.



IV. Future Directions

The information systems and databases described in Section II, because they have collected sexual orientation data, are in a much better position to fulfill the monitoring requirements of HP2010 and help fill the large gaps in knowledge concerning lesbian, gay and bisexual health, than information systems and databases that have not collected such data. These information systems and databases, while working to continually improve their own data collection methods, can also share their experiences and assist other information systems in assessing sexual orientations.

Unfortunately, there is no consensus between information systems and databases, both within and outside of HHS, or among researchers as to how to assess sexual orientations. This is not unexpected given that sexual orientation is only beginning to be considered an important topic of health research, and consequently an important variable for inclusion in health research studies. Sexual orientation is also, like race and ethnicity or socioeconomic status, a fairly complex construct to measure making the selection of concise valid and reliable measures appropriate for monitoring health additionally challenging. In order to advance this field, HHS can take a leadership role by undertaking a number of important activities through the Data Council and the National Committee on Vital and Health Statistics (NCVHS).

The Data Council and the NCVHS should create working groups on sexual orientation data to examine the collection of sexual orientation data in HHS data collection and reporting activities.



These workgroups could undertake a number of very important activities including: 1) creating a continuously updated inventory of HHS databases that collect or have collected sexual orientation data as well as a library of research on lgb health indicating in which additional information systems sexual orientation data should be collected, and 2) providing guidance to ensure that sensitive sexual orientation data could not be misused or abused, especially working to ensure that data collected either by HHS or others would not be used to stigmatize populations.

These workgroups should create a set of guiding principles governing a review process for the development and selection of standard definitions and measures of sexual orientations.

In the process of developing standard definitions and measures for the collection of racial and ethnic data, the Office of Management and Budget (OMB) recognized the need for a set of general principles to govern the review and selection process.⁸³ These principles, with little modification, can be applied to the process of developing and selecting standard measures of sexual orientation. The principles, of course, should be open to public review, just as the process of developing standard measures can and should be open to review.

As taken from the OMB principles governing the selection of standards for the collection of race and ethnicity data, the principles could include the following: 1) sexual orientation categories would not be interpreted as primarily biological or genetic in nature, but must be examined in the context of social and cultural characteristics of the populations, 2) respect for individual dignity

⁸³ Office of Management and Budget, Office of Information and Regulatory Affairs. Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity. *Federal Register*. 1997;62:58781-58790.



and privacy should guide the collection of data on sexual orientation, and 3) concepts and terminology, as is feasible, should reflect clear and generally understood definitions that can achieve broad public acceptance.

Data Council and NCVHS workgroups should recognize that racial and ethnic, immigrant status, age, socioeconomic and geographic differences must be taken into account when selecting standard measures of sexual orientations and assessing the validity and reliability of these measures.

The validity and reliability of measures can be impacted by many factors including race, ethnicity, immigrant status, age, socioeconomic status and geographic location to name a few. For example, a study of American-Indian adolescents, using questions to assess sexual orientation first tested in a general sample of Minnesota adolescents, found a larger non-response rate than was found in the Minnesota sample. The researchers concluded that this “raises questions about the cultural relevance of the survey method, and underscores the need for development of more culturally sensitive research tools and methods.”⁸⁴ Further supporting this conclusion, the researchers found that there was a significantly higher prevalence of homosexual, bisexual, and unsure responses among the American Indian adolescents.

Data Council and NCVHS workgroups should assist in the selection of a minimum set of standard sexual orientation measures including questions and response categories, and

⁸⁴ Saewyc, EM, Skay CL, Bearinger LH, et al. Demographics of Sexual Orientation among American-Indian Adolescents. *American Journal of Orthopsychiatry*. 1998;68(4):590-600.



examine the implications of these categories on data tabulation and analysis. This should be done in conjunction with a review process that is fully open to the public.

Standard sexual orientation categories will allow comparisons of data across information systems. Because sexual orientation data has infrequently been included in HHS information systems and databases, the development of standards is important to avoid future data incompatibilities and problems with interpretation. When it is necessary for HHS to make a coordinated response to major health and social service issues, HHS could benefit from standard and reliable sexual orientation data across various agencies.

Development of the categories and questions should be based upon sound methodological research assessing their validity and reliability. Research, should include: 1) cognitive studies with the groups described in the previous recommendation, to provide guidance on the interpreted meaning, wording and ordering of potential questions and sexual orientation categories, 2) pre-tests of surveys to examine the implication of using different versions of questions, 3) studies to examine the impact of the mode of data collection (in-person, telephone, self-administered etc...) upon the validity and reliability of the questions and categories, 4) studies of the importance and implications to validity and reliability of item non-response to potential questions and sexual orientation categories, 5) studies examining the implications of measures upon data tabulation and analysis, and 6) studies examining the skills and training required for persons responsible for collecting and maintaining sexual orientation data.



The review process should be conducted with participation from the public, which must be afforded the possibility of providing suggestions for the standards. Further, as the needs for sexual orientation data are many and varied, representatives of agencies implementing major HHS information systems, as well as representatives from state, tribal or other local agencies responsible for data collection, should be included at all stages of the process.

Perhaps most importantly, Data Council and NCVHS workgroups should develop a long-range strategic plan for the collection of sexual orientation data that includes periodic oversampling or screening sampling of lesbian, gay and bisexual people. They should also recognize and address the budgeting requirements of integrating sexual orientation data collection into information systems and databases.

The development of a strategic plan, like all other activities carried out in this area by HHS, should be conducted with consultation from the communities being examined. The primary purpose of a long-range strategic plan would be to identify all HHS information systems in which sexual orientation data should be included, and develop a strategy and timeline to address these information systems. The strategic plan should consider all statistical data collections systems (e.g. national health surveys, vital statistics, etc...), disease registries, administrative records, research and evaluation, and applications, grants and contracts.

The strategic plan should recognize the need for data to estimate and characterize the burden of disease, plan and evaluate programs and interventions, inform policy development, and formulate and justify budgets. Further, the committee should recognize the need to develop



special sampling strategies if sample sizes are not large enough that each group is adequately represented. In particular, the committee should consider oversampling in areas already in the sampling frame known to have a higher frequency of the subgroup, or screening sampling units to obtain a target sample. Finally, the plan should recognize the importance of producing national and state/local reports using this data, provide encouragement and support for data analysis and research by outside organizations and researchers, and make the data accessible to the public.

A coordinated and thoughtful approach to adding sexual orientation variables to existing data systems, as recommended above, could take many years to complete. However, if Data Council and NCVHS workgroups are created, and the activities outlined above are undertaken, the 29 objectives addressing health disparities based upon sexual orientation in HP2010 will be appropriately monitored. HHS can then undertake the activities necessary to eliminate health disparities.

Of course, if the above activities are undertaken, the monitoring of HP2010 will only be one valuable outcome. More importantly, the overall health of lesbian, gay and bisexual people will be assessed, and for the first time, providers and researchers concerned with the health of these populations will be able to accurately raise awareness and acquire the necessary resources to address important health concerns.



An excellent example of the power of such data comes from Vermont, which began collecting sexual orientation data in its YRBS in 1995. Fifty-nine out of Vermont's sixty schools participate in the YRBSS in what is virtually a census, and the data is distributed back into local communities. Before same-sex sexual behavior questions were added to Vermont's YRBSS, local school officials were largely unaware of the needs of lesbian, gay and bisexual youth. Local school administrators requested staff training on lgb youth issues when the YRBSS data revealed the presence and immediate concerns of sexual minority youth. Vermont's Commissioner of Education subsequently convened a meeting with sexual minority youth, resulting in the establishment of the Safe Schools for Lesbian, Gay, Bisexual, Transgender, and Questioning Youth program with a part-time coordinator position. YRBS data in subsequent years prompted the state to expand the LGBTQ component and integrate it into a school safety program for all students under the coordination of full-time staff.⁸⁵

⁸⁵ Source: Personal communication with Shaun Donahue, Unit Chief for Community Resources, State of Vermont Social Services, January 25, 2001.