The Question of Sexual Orientation: Research Adventures in Measuring a Sensitive Topic in a National Sample

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Overview

• Measuring Sexual Orientation
• The challenge of non- or inappropriate responses
• Prevalence, Demographic differences
• Politics, Personality, Asexuality
• Where to next?
The Diversity and Prevalence of Sexual Orientation Self-Labels in a New Zealand National Sample

Lara M. Greaves, Fiona Kate Barlow, Carol H. J. Lee, Correna M. Matika, Weiyu Wang, Cinnamon-Jo Lindsay, Claudia J. B. Case, Nikhil K. Sengupta, Yanshu Huang, Lucy J. Cowie, Samantha Stronge, Mary Storey, Lucy De Sóuza, Sam Manuela, Matthew D. Hammond, Petar Milojev, Carly S. Townrow, Emerald Muriwai, Nicole Satherley, Gloria Fraser, Tim West-Newman, Carla Houkamau, Joseph Bulbulia, Danny Osborne, and Chris G. Sibley

In Press – The Archives of Sexual Behavior
Measuring Sexual Orientation

• How to measure sexual orientation in the NZAVS?
  • Limited space
  • Potential to cause offence
  • Allowing participants to describe their sexual orientation in their own words

• Why?
  • Maintaining up-to-date population estimates
  • Civil unions legalised 2005, marriage equality 2013
  • Age and gender differences, future research projects
  • Wells, McGee and Beautrais (2011; interviews 2003/04) found that 98.0% were heterosexual, 0.6% bisexual, 0.8% homosexual, 0.4% something else/not sure
Measuring Sexual Orientation

• Attraction
  • Rate how attracted (or not) you are to men, women

• Behaviour
  • Report your involvement in (at least) genital contact with males and/or females

• Identity
  • Pick from these six options:
    • gay or lesbian;
    • bisexual, but mostly gay or lesbian;
    • bisexual, equally gay/lesbian and heterosexual;
    • bisexual, but mostly heterosexual;
    • heterosexual;
    • and uncertain, don’t know for sure
The 2013/14 NZAVS

- Using wave 5 data
- $N=18,261$
- Applied Post-Stratification sample weighting (region, ethnicity, gender, age)
- Included sexual orientation as the last item of the 8 page questionnaire

(From Milfont et al. 2014, PLOS ONE, Fig. 1, p. 4)
Results
## Level 2 - Heterosexual

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Example Language</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Heterosexual</td>
<td>&quot;HETEROSEXUAL,&quot; &quot;hetero,&quot; &quot;het&quot;</td>
<td>40.6% (7,417)</td>
</tr>
<tr>
<td>101</td>
<td>Heterosexual AND straight</td>
<td>&quot;Heterosexual (Straight!),&quot; &quot;straight/heterosexual&quot;</td>
<td>0.7% (119)</td>
</tr>
<tr>
<td>102</td>
<td>Straight</td>
<td>&quot;Straight,&quot; &quot;Sraight,&quot; &quot;Stright&quot;</td>
<td>19.0% (3,462)</td>
</tr>
<tr>
<td>103</td>
<td>Straight/Heterosexual AND states own gender</td>
<td>&quot;A straight female,&quot; &quot;Hetro Male,&quot; &quot;Active heterosexual male!&quot;</td>
<td>0.4% (69)</td>
</tr>
<tr>
<td>104</td>
<td>Straight/Heterosexual AND states preferred gender</td>
<td>&quot;straight towards men,&quot; &quot;Heterosexual (Like men)&quot;</td>
<td>0.1% (10)</td>
</tr>
<tr>
<td>105</td>
<td>Straight/Heterosexual AND specification of preference/strong preference</td>
<td>&quot;strictly straight,&quot; &quot;Straight!,&quot; &quot;100 percent Straight&quot;</td>
<td>0.3% (49)</td>
</tr>
<tr>
<td>106</td>
<td>Straight/Heterosexual AND attempt at humor</td>
<td>&quot;straight (vagitarious...),&quot; &quot;like it lots-hetro,&quot; &quot;straight-like strippers&quot;</td>
<td>0.3% (48)</td>
</tr>
<tr>
<td>107</td>
<td>Straight/Heterosexual but confused (likely at question)</td>
<td>&quot;Straight (?),&quot; &quot;straight?,&quot; &quot;hetrosexual?&quot;</td>
<td>0.1% (17)</td>
</tr>
<tr>
<td>108</td>
<td>Straight/Heterosexual but suggests they are gay friendly</td>
<td>&quot;Straight. LGBT friendly,&quot; &quot;straight, gay accepting&quot;</td>
<td>&lt;0.1% (6)</td>
</tr>
<tr>
<td></td>
<td>&quot;Normal&quot;</td>
<td>&quot;Standard,&quot; &quot;ordinary,&quot; &quot;typical&quot;</td>
<td>7.9% (1,443)</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>109</td>
<td>&quot;Normal&quot; with explanation that this means straight/heterosexual</td>
<td>&quot;Normal (Straight),&quot; &quot;Normal/Heterosexual,&quot; &quot;normal-man/woman&quot;</td>
<td>0.8% (141)</td>
</tr>
<tr>
<td>110</td>
<td>&quot;Normal&quot; with humor/emphasis/outrage/misc.</td>
<td>&quot;normal :-),&quot; &quot;Completely normal,&quot; &quot;not very PC but normal&quot;</td>
<td>0.4% (67)</td>
</tr>
<tr>
<td>111</td>
<td>&quot;Normal&quot; with confusion</td>
<td>&quot;Normal?,&quot; &quot;not sure what you mean by this question-normal&quot;</td>
<td>0.1% (21)</td>
</tr>
<tr>
<td>112</td>
<td>&quot;Normal&quot; with own gender label</td>
<td>&quot;normal as a female,&quot; &quot;Normal healthy male with healthy sex drive&quot;</td>
<td>0.2% (35)</td>
</tr>
<tr>
<td>113</td>
<td>Specifies that they are Homophobic or NOT Homosexual</td>
<td>&quot;Not Gay,&quot; &quot;Homophobic Male,&quot; &quot;normal (ie not homo)&quot;</td>
<td>0.3% (54)</td>
</tr>
<tr>
<td>114</td>
<td>Marriage theme/Religious theme</td>
<td>&quot;man marry woman,&quot; &quot;man/wife,&quot; &quot;God ordained-only with my husband&quot;</td>
<td>0.7% (130)</td>
</tr>
<tr>
<td>115</td>
<td>Describes heterosexuality (misc.)</td>
<td>&quot;opersit sex,&quot; &quot;female who likes blokes!,&quot; &quot;I like vaginas&quot;</td>
<td>0.9% (163)</td>
</tr>
</tbody>
</table>
Heteronormative Responses

• “Normal” were 9.4% of the sample
  • EXAMPLES: "Normal For A Man", "not very PC but normal"

• A small number of participants (0.3%) defined themselves as homophobic or not homosexual
  • EXAMPLES: "normal (ie not homo)“, "Homophobic Male"

• Religious/marriage themes featured in 0.7% of responses
  • EXAMPLES: "read bible each day”, "A man who loves his wife regularly“, "God ordained - only with my husband"
## Level 2

<table>
<thead>
<tr>
<th>Code</th>
<th>Category</th>
<th>Description</th>
<th>Example Phrases</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>Lesbian/Gay</td>
<td>Homosexual</td>
<td>&quot;homosexual&quot;</td>
<td>0.2% (45)</td>
</tr>
<tr>
<td>201</td>
<td>Lesbian/Gay</td>
<td>Queer</td>
<td>&quot;Queer :),&quot; &quot;queer&quot;</td>
<td>0.1% (14)</td>
</tr>
<tr>
<td>202</td>
<td>Lesbian/Gay</td>
<td>Lesbian</td>
<td>&quot;lesbian&quot;</td>
<td>0.3% (61)</td>
</tr>
<tr>
<td>203</td>
<td>Lesbian/Gay</td>
<td>Gay</td>
<td>&quot;gay,&quot; &quot;openly gay and proud,&quot; &quot;Gay/Queer&quot;</td>
<td>1.3% (232)</td>
</tr>
<tr>
<td>299</td>
<td>Lesbian/Gay</td>
<td>Describes Lesbian/Gay (misc.)</td>
<td>&quot;same sex,&quot; &quot;Takaatapui&quot;</td>
<td>0.1% (16)</td>
</tr>
<tr>
<td>300</td>
<td>Bisexual</td>
<td>Bisexual</td>
<td>&quot;bi,&quot; &quot;Queer(bi),&quot; &quot;bisexual&quot;</td>
<td>1.4% (254)</td>
</tr>
<tr>
<td>350</td>
<td>Bicurious</td>
<td>Bicurious</td>
<td>&quot;bi-curious,&quot; &quot;Predominantly heterosexual, bi-curious&quot;</td>
<td>0.1% (16)</td>
</tr>
<tr>
<td>351</td>
<td>Bicurious</td>
<td>Heterosexual/Straight but suggestion this is not exclusive</td>
<td>&quot;hetero with bi leanings,&quot; &quot;Hetro-flexible,&quot; &quot;Straight(-ish)&quot;</td>
<td>0.3% (64)</td>
</tr>
<tr>
<td>400</td>
<td>Pansexual/Open</td>
<td>Pansexual</td>
<td>&quot;Pansexual/lapsed lesbian,&quot; &quot;pansexual,&quot; &quot;OMNI&quot;</td>
<td>0.1% (13)</td>
</tr>
<tr>
<td>401</td>
<td>Pansexual/Open</td>
<td>Open-minded/Fluid/Flexible</td>
<td>&quot;open minded,&quot; &quot;Liberal,&quot; &quot;anything goes&quot;</td>
<td>0.3% (58)</td>
</tr>
<tr>
<td>500</td>
<td>Asexuality</td>
<td>Asexual</td>
<td>&quot;Asexual&quot;</td>
<td>0.2% (38)</td>
</tr>
<tr>
<td>501</td>
<td>Asexuality</td>
<td>Self-Sexual</td>
<td>&quot;self-sexual&quot;</td>
<td>&lt;0.1% (1)</td>
</tr>
</tbody>
</table>
## Level 2 – Missing data

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Example</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>700</td>
<td>Does not understand question (6.8%)</td>
<td>&quot;Deprived,&quot; &quot;Dull,&quot; &quot;Bleak&quot;</td>
<td>0.2%</td>
<td>(39)</td>
</tr>
<tr>
<td>701</td>
<td>Just specifies dissatisfaction</td>
<td>&quot;happy!,&quot; &quot;PERFECT,&quot; &quot;5 stars&quot;</td>
<td>3.7%</td>
<td>(679)</td>
</tr>
<tr>
<td>702</td>
<td>Expresses they are sexually active (no orientation suggestions)</td>
<td>&quot;virile,&quot; &quot;active,&quot; &quot;regular vanilla&quot;</td>
<td>0.6%</td>
<td>(111)</td>
</tr>
<tr>
<td>703</td>
<td>Expresses frustrations/general lack of sexual activity</td>
<td>&quot;Horny,&quot; &quot;oral???: -),&quot; &quot;Haven’t had it for ages (lol)&quot;</td>
<td>0.2%</td>
<td>(45)</td>
</tr>
<tr>
<td>704</td>
<td>Describes masculinity/femininity/gender</td>
<td>&quot;Meterosexual,&quot; &quot;alpha male,&quot; &quot;I’m a lady&quot;</td>
<td>0.1%</td>
<td>(23)</td>
</tr>
<tr>
<td>705</td>
<td>Just specifies a gender</td>
<td>&quot;a Woman,&quot; &quot;male,&quot; &quot;female&quot;</td>
<td>1.3%</td>
<td>(236)</td>
</tr>
<tr>
<td>706</td>
<td>Specifies marital status or relationship type (no suggestion of orientation)</td>
<td>&quot;Single,&quot; &quot;Married,&quot; &quot;Monogamous&quot;</td>
<td>0.5%</td>
<td>(99)</td>
</tr>
<tr>
<td>707</td>
<td>Specifies both genders but not in any order/relationship</td>
<td>&quot;woman/man,&quot; &quot;male and female&quot;</td>
<td>0.2%</td>
<td>(39)</td>
</tr>
</tbody>
</table>
## Level 2 – Missing data

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Example Answers</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>Stated no Sexual Orientation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td>Expresses that they are celibate/virgin</td>
<td>&quot;Celibate,&quot; &quot;virgin,&quot; &quot;involuntary celibate female&quot;</td>
<td>0.2%</td>
<td>(29)</td>
</tr>
<tr>
<td>801</td>
<td>Expresses illness or age (orientation as no longer relevant)</td>
<td>&quot;Waning with age,&quot; &quot;too old,&quot; &quot;concluded&quot;</td>
<td>0.3%</td>
<td>(53)</td>
</tr>
<tr>
<td>802</td>
<td>None/Not applicable</td>
<td>&quot;0,&quot; &quot;none,&quot; &quot;N/A&quot;</td>
<td>0.9%</td>
<td>(169)</td>
</tr>
<tr>
<td>803</td>
<td>Does not know</td>
<td>&quot;don't know,&quot; &quot;disorientated,&quot; &quot;Unsure&quot;</td>
<td>0.3%</td>
<td>(50)</td>
</tr>
<tr>
<td>90</td>
<td>Outside scope/Refusal to answer/ Missing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>900</td>
<td>Outside scope</td>
<td>&quot;wellbeing,&quot; &quot;Haha,&quot; &quot;European&quot;</td>
<td>0.6%</td>
<td>(102)</td>
</tr>
<tr>
<td>901</td>
<td>Transgender</td>
<td>&quot;transgender,&quot; &quot;trans&quot;</td>
<td>&lt;0.1%</td>
<td>(5)</td>
</tr>
<tr>
<td>902</td>
<td>Confusion</td>
<td>&quot;?,&quot; &quot;???,&quot; &quot;ahhhmmmm&quot;</td>
<td>0.3%</td>
<td>(59)</td>
</tr>
<tr>
<td>903</td>
<td>Expresses confusion with question</td>
<td>&quot;what?????,&quot; &quot;What does this mean,&quot; &quot;Don’t know what that is!&quot;</td>
<td>0.1%</td>
<td>(15)</td>
</tr>
<tr>
<td>904</td>
<td>Does not label</td>
<td>&quot;I don’t believe in labelling sexual orientation,&quot; &quot;I don’t define it,&quot; &quot;No label&quot;</td>
<td>0.1%</td>
<td>(15)</td>
</tr>
<tr>
<td>905</td>
<td>Stated refusal to answer</td>
<td>&quot;Refused,&quot; &quot;My Biz,&quot; &quot;No Comment&quot;</td>
<td>0.5%</td>
<td>(90)</td>
</tr>
<tr>
<td>998</td>
<td>Missing Data (just orientation question)</td>
<td></td>
<td>9.9%</td>
<td>(1,810)</td>
</tr>
<tr>
<td>100</td>
<td>Missing Data due to Incomplete Questionnaire Response</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>999</td>
<td>Missing Data due to Incomplete Questionnaire Response</td>
<td></td>
<td>2.9%</td>
<td>(522)</td>
</tr>
</tbody>
</table>
Missing data

• A total of 22.8%
  • This is lower than Wells et al. who had 26.7%
• Reviewers hate this measure
• What might this missing data show?
Level 1

Heterosexual/Straight
94.2% (n=13,256)

Lesbian/Gay
2.6% (n=367)

Bisexual
1.8% (n=254)

Bicurious
0.6% (n=79)

Pansexual/Open
0.5% (n=71)

Asexual
0.3% (n=39)
Age

The chart shows the mean age (years) for different sexual orientations:

- Heterosexual
- Lesbian/Gay
- Bisexual
- Bicurious
- Pansexual/Open
- Asexual

The mean ages are as follows:

- Heterosexual: 47 years
- Lesbian/Gay: 43 years
- Bisexual: 35 years
- Bicurious: 32 years
- Pansexual/Open: 43 years
- Asexual: 51 years
## Gender

<table>
<thead>
<tr>
<th></th>
<th>Gay men: 3.5%</th>
<th>Bisexual men: 1.5%</th>
<th>Bicurious men: 0.4%</th>
<th>Asexual men &lt;.01% (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbians:</td>
<td>1.8%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisexual</td>
<td>2.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>women:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicurious</td>
<td>0.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>women:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Differences for heterosexual and pansexual/open n.s.
What else have we found?


Voting

• Tested intended vote while controlling for a wide range of demographic and psychological variables

• Those identifying as LGB (Lesbian, Gay, or Bisexual) were 1.9 times more likely to vote for Labour (b=.615, se=.146, z=4.221, OR=1.850, p<.001) than National

• 2.7 times more likely to vote for the Greens (b=.980, se=.137, z=7.126, OR=2.664, p<.001) over National

• There were no significant differences in sexual orientation between National and NZ First voters
Demographic Differences

- Māori identified as lesbian or gay at higher rates than all other ethnicities.
- Asian women were less likely to identify as bisexual.
- Lesbians, gay men, and bisexual men were all less likely to be parents.
- Bisexual men and women were less likely to be in a serious romantic relationship.
- Lesbians, Gay men, and Bisexual women were all less likely to identify as religious.
- Lesbian/Gay participants were more educated than heterosexuals.
- Bisexual women were more likely than heterosexual women to live in more economically deprived areas.
- Bisexual people lived in urban areas at higher rates than heterosexuals.
Personality

- Freud (1905; Ellis, 1915)

- Gay men have feminine-typed traits, so similar to straight women

- Lesbian women have masculine-typed traits, making them more like men
Results - Men

- Agreeableness
  - Heterosexual
  - Bisexual
  - Lesbian/Gay

- Emotional Vulnerability
  - Heterosexual
  - Bisexual
  - Lesbian/Gay
Summary

• Lesbian women are more like straight men on extraversion, conscientiousness, supporting the gender shift hypothesis.
• But why are gay men, heterosexual women, lesbians, and bisexual women highest on agreeableness?
• Additionally, why are gay men, heterosexual women, lesbians, bisexual women, and bisexual men higher than heterosexual men on emotional vulnerability?
• Future research: adapting to a prejudiced environment/role expectations?
Asexuality

- Asexuality is characterised by a lack of, or low levels of, sexual attraction to anyone.
- Asexual people still often have sex, romantic relationships, and masturbate, but at lower levels than the sexual population.
- When someone identifies as asexual they may use a number of terms for their identity. This study analyses data from those who identified as asexual.
- Asexual people face prejudice, often have to ‘come out’, and feel misunderstood.
- Studies have shown inconsistent results for mental health, social wellbeing and physical health.
- Although research in this area is fairly new.
- Our study tests this in a national sample.
Asexual Responses

- We compared those coded as Heterosexual \((n=11,822)\) with those who identified as Asexual:

<table>
<thead>
<tr>
<th>Self-generated Sexual Orientation</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Asexual”</td>
<td>34</td>
</tr>
<tr>
<td>“Nonsexual”</td>
<td>1</td>
</tr>
<tr>
<td>“Heterosexual or Nonsexual”</td>
<td>1</td>
</tr>
<tr>
<td>“Platonic”</td>
<td>1</td>
</tr>
<tr>
<td>“Aromantic”</td>
<td>1</td>
</tr>
<tr>
<td>“Demisexual”</td>
<td>2</td>
</tr>
<tr>
<td>“Bisexual leaning towards asexual (bi but not usually interested in dating or sex)”</td>
<td>1</td>
</tr>
<tr>
<td>“Grey Asexual”</td>
<td>1</td>
</tr>
<tr>
<td>“Polyromatic asexual”</td>
<td>1</td>
</tr>
<tr>
<td>“Heteroromantic asexual”</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total** 44
The questions we asked:

• A lot of them!

• DEMOGRAPHICS: Age, Gender (woman/man), Cisgender (cisgender/gender diverse), Ethnicity (Māori, Pacific, Asian vs being Pākehā), Parental Status, Relationship Status, Religious or not, Urban vs. Rural, NZDep Index (for Socio Economic Status), Education.

• HEALTH: Height, Weight, Living with an Illness or Disability, Subjective health e.g. “I expect my health to get worse,” “I seem to get sick a little easier than other people.”
The questions we asked:

• **MENTAL HEALTH:**
  - Kessler-6 e.g. rating how often they: “feel worthless,” “feel nervous,” “feel that everything was an effort.”

• **SOCIAL WELL-BEING:**
  - Felt belongingness e.g. “I know that people in my life accept and value me.”
  - Perceived social support e.g. “There are people I can depend on to help me if I really need it.”
  - Satisfaction with life, e.g. “I am satisfied with my life,” and “In most ways my life is close to ideal.”
  - Self-esteem e.g. “I... On the whole am satisfied with myself.”
Results

- Women were more likely to identify as asexual \( (b=-1.485, \text{se}=.502, z=-2.957, \text{OR}=.226, p=.003) \).
- Cis-gender participants were less likely to identify as asexual \( (b=4.011, \text{se}=1.015, z=3.953, \text{OR}=55.219, p<.001) \).
- For reference, people who were gender diverse were 55 times more likely to identify as asexual relative to those who identified as cisgender.
- Asexuals were less likely to be in a serious romantic relationship \( (b=-2.156, \text{se}=.473, z=-4.561, \text{OR}=.116, p<.001) \). Heterosexuals were ten times more likely to be in a serious romantic relationship than their asexual counterparts.
- Asexuals had a reduced likelihood of being a parent \( (b=-1.289, \text{se}=.419, z=-3.076, \text{OR}=.276, p=.002) \).
Where to next?
Where to next?

• Plans to explore mental health (University of Queensland)
• Body image
• Political identity centrality
• Non-respondents
• Identity change
With Thanks to the NZAVS Research Team...