

What is the role of Interactive Visualisations in Understanding Sexual Orientation, and Gender Identity?

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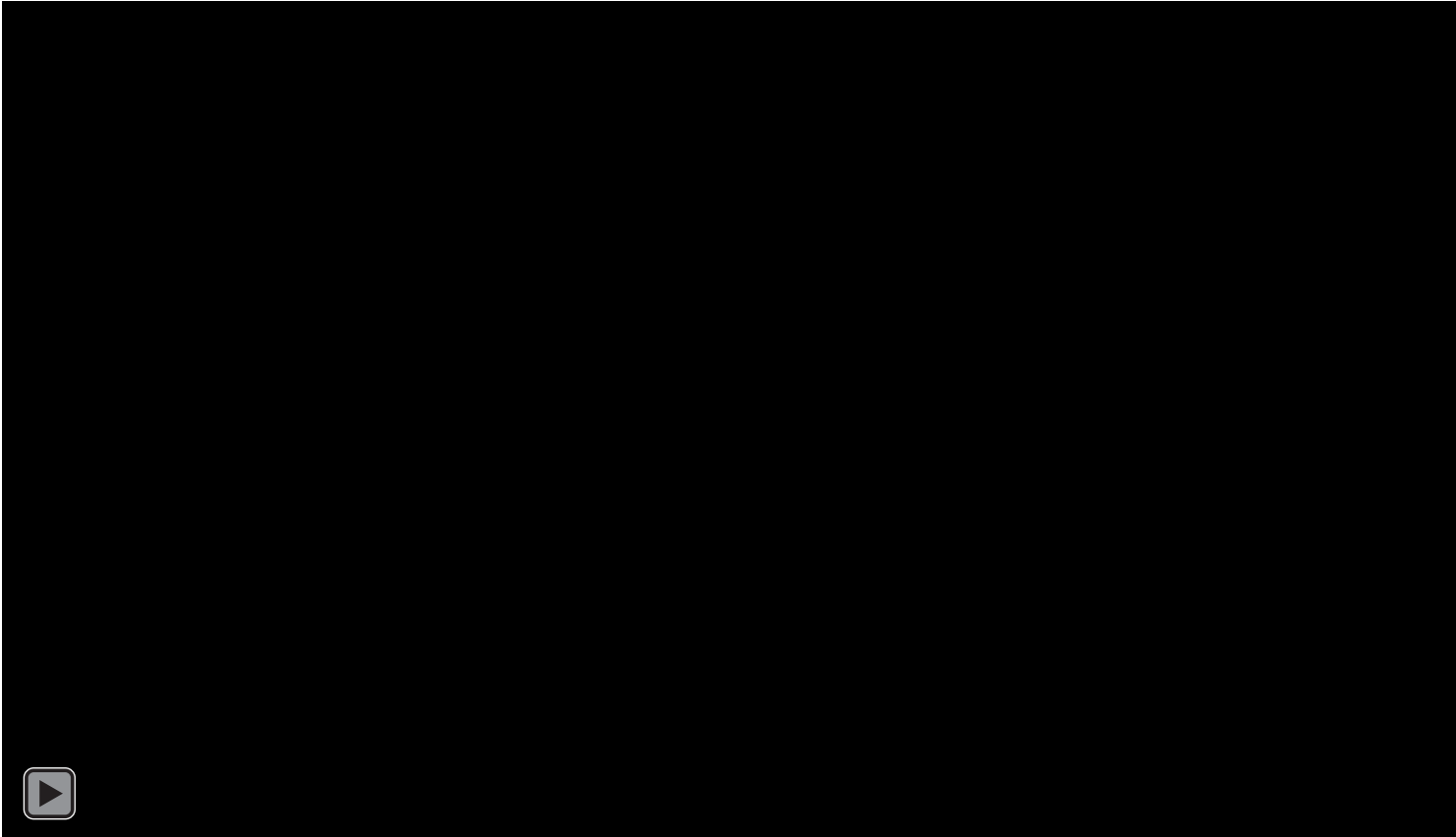
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Presentation outline

- Definition
- Gender identity and sexual orientation
 - Background.
 - Visualisations.
- Why is interactivity useful?
- Q&A session.

r/dataisbeautiful



1 → How brilliant is fall where you are?*

A Meh, no color yet

B Starting to change, but barely

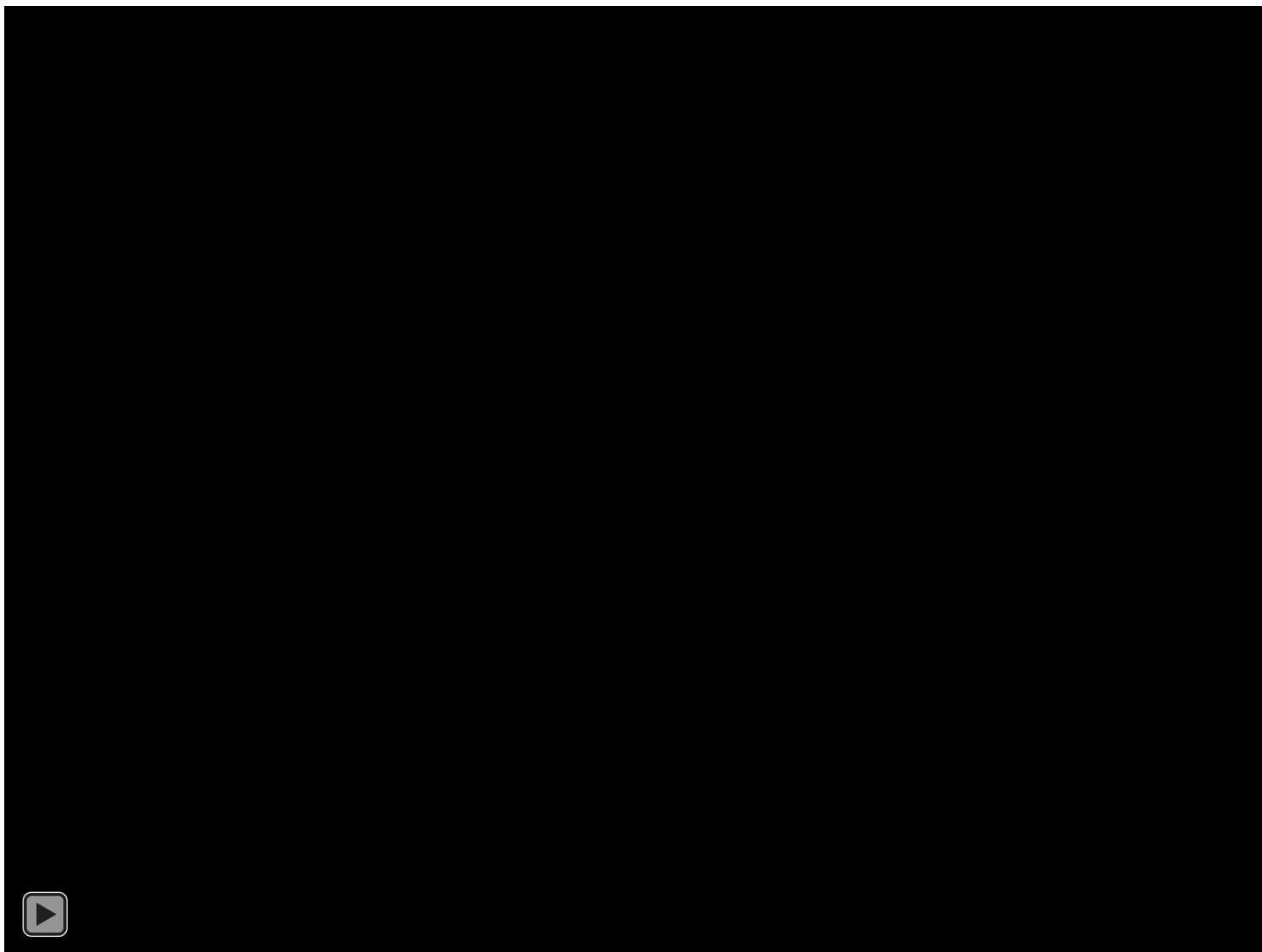
C Color is patchy and starting to fill in

D We are almost to peak fall

E Peak fall is here ✓

F Past peak

OK ✓



<https://informationisbeautiful.net/visualizations/snake-oil-scientific-evidence-for-nutritional-supplements-vizsweet/>



information
isbeautiful.
net

Previous research – Sexual orientation

- Sexual identity data is commonly collected across surveys e.g National Survey of Sexual Attitudes and Lifestyles (Natsal), Understanding Society and Health Survey.
- However, these lack detail at a lower geographical level and often have limited samples.
- Office for National Statistics (ONS) have previously produced experimental statistics on sexual identity in the UK using the Annual Population Survey (2013-2015, 2020).
- However, these statistics are considered ‘unofficial’ and were created to assess methods more than produce results.

Previous research – Gender

- Gender identity data much less widely collected (ONS 2020):
 - Trial of questions in Crime Survey for England and Wales, Active Lives Children and Young People survey, Taking Part Survey.
 - More widely collected in admin data but still not extensive.
- International research includes the Canadian Census 2021 and Census' from Nepal (2011), India (2011) and Pakistan (2017) which all included a 'third gender' option.



Census 2021

- *Which of the following best describes your sexual orientation?*
 - *Straight/heterosexual.*
 - *Gay or Lesbian.*
 - *Bisexual.*
 - *Other sexual orientation, write in.*
- *Is the gender you identify with the same as your sex registered at birth?*
 - *“Yes” and “No, write in gender identity”*
- Questions were voluntary, varied slightly between England and Wales.
- Allowed respondents to request a confidential individual form which overrode the information on a household form.

a) **26** Which of the following best describes your sexual orientation?
This question is **voluntary**

- Straight/Heterosexual
- Gay or Lesbian
- Bisexual
- Other sexual orientation, write in

b) **26** Pa un o'r canlynol sy'n disgrifio orau eich cyfeiriadedd rhywiol?
Mae'r cwestiwn hwn yn **wirfoddol**

- Heterorywiol/Strêt
- Hoyw neu Lesbiaidd
- Deurywiol/Bi
- Cyfeiriadedd rhywiol arall, nodwch

c) **24** Which of the following best describes your sexual orientation?

- Straight/Heterosexual
- Gay or Lesbian
- Bisexual
- Other sexual orientation, write in
- Prefer not to say

d) **8** Which of the following best describes your sexual orientation?
This question is **voluntary**
Answer only if you are aged 16 or over
Tick **one** box only

- Straight / Heterosexual
- Gay or Lesbian
- Bisexual
- Other sexual orientation, please write in:

Why make interactive visualisations?

- The 2021 census data provides the information at a level of geography that allows local authority areas to be visualised. This is a level of detail not available with other surveys.
- The data therefore provides a unique opportunity to display this data at this detail.
- Office for National Statistics (ONS) created maps to display the initial data, but these are single-variate.
- The aim with our visualisations is to display the data in a way that allows users more control over what they can explore, allowing them to examine their own assumptions about their local area.



What features influence non-response rates?

- Hypothesis: GI question, unfamiliarity and wording → higher NR rate than SO
- Scatterplots explored 2 variables:
 1. **Main language**
 2. **Religion**
- Datasets: Gender identity and sexual orientation.
- Area type: Lower tier Local Authorities.
- Programming language: Python.
- Integrated development environment (IDE): Jupyter Notebook.
- Hosted on: GitHub.
- Packages: Bokeh, pandas.
- Platform for user interaction: Bokeh server.
- Hosted on: Heroku.

Scan me!



What value does interactivity have?

- 1 Promotes **user engagement** vs static graphs
- 2 Flexibility allows for **easy** data exploration and...
- 3 **In-depth** data exploration
- 4 **Multi-faceted** analysis
- 5 **Accessibility** features

References

- Oliver Duke-Williams. (2023). *Census Explainer: sexual orientation and gender identity questions*. [Online]. ukdataservice.ac.uk. Available at: <https://ukdataservice.ac.uk/learning-hub/census/census-explainers/census-explainer-sexual-orientation> [Accessed 17 May 2023].
- Sharfman, A, Cobb, P. (2022). *Sexual orientation, UK: 2020*. [Online]. Office National Statistics. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/sexuality/bulletins/sexualidentity> [Accessed 17 May 2023].
- Knipe, E. (2017). *Subnational sexual identity estimates, UK: 2013 to 2015*. [Online]. Office for National Statistics. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/sexuality/articles/subnationals> [Accessed 17 May 2023].
- Office for National Statistics. (2020). *Exploring existing data on gender identity and sexual orientation*. [Online]. <https://www.ons.gov.uk/>. Available at: <https://www.ons.gov.uk/methodology/classificationsandstandards/measuringequality/genderidentity/exploringexistingdataongenderidentityandsexualorientation> [Accessed 26 April 2023].
- Office for National Statistics. (2023). *Exploring existing data on gender identity and sexual orientation*. [Online]. Office for National Statistics. Available at: <https://www.ons.gov.uk/methodology/classificationsandstandards/measuringequality/genderidentity/expl> [Accessed 17 May 2023].

Thank you.

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Want to check out our code?



GitHub:

UKDataServiceOpen/InteractiveGender



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