



Work values of 17/18-year-olds in Growing Up in Ireland

Bharvi Dhall
Catherine Hurley
Katarina Domijan
Maynooth University

HOST INSTITUTIONS



FUNDED BY



13th Annual
Research
Conference
2021



**An Roinn Leanaí, Comhionannais,
Míchumais, Lánpháirtíochta agus Óige**
Department of Children, Equality,
Disability, Integration and Youth

Outline



Introduction to
Research Questions



Exploratory Visuals



Analysis of data:
Logistic Regression
and its Visualization



Conclusions

Research Questions

- What drives the Work Values or Career considerations of 17/18 year olds?
- Does Career Guidance play a role in influencing the work values?
- Do the work values differ in males and females?

Motivation

In the literature, the work values in the early years have been found to be predictive of career and life satisfaction in later years¹.

Data Set

Growing Up in Ireland Anonymised dataset from Wave 3.

Methods

Visual analytics of data and models

Attitudes to Work Questionnaire

Growing Up in Ireland Child Questionnaire Wave 3 (17/18-year-olds)

Section : Attitudes to Work

G2. [CARD G2] Here are some factors a person might consider when choosing a job. Please choose the three most important things for you personally. [TICK THREE ONLY]

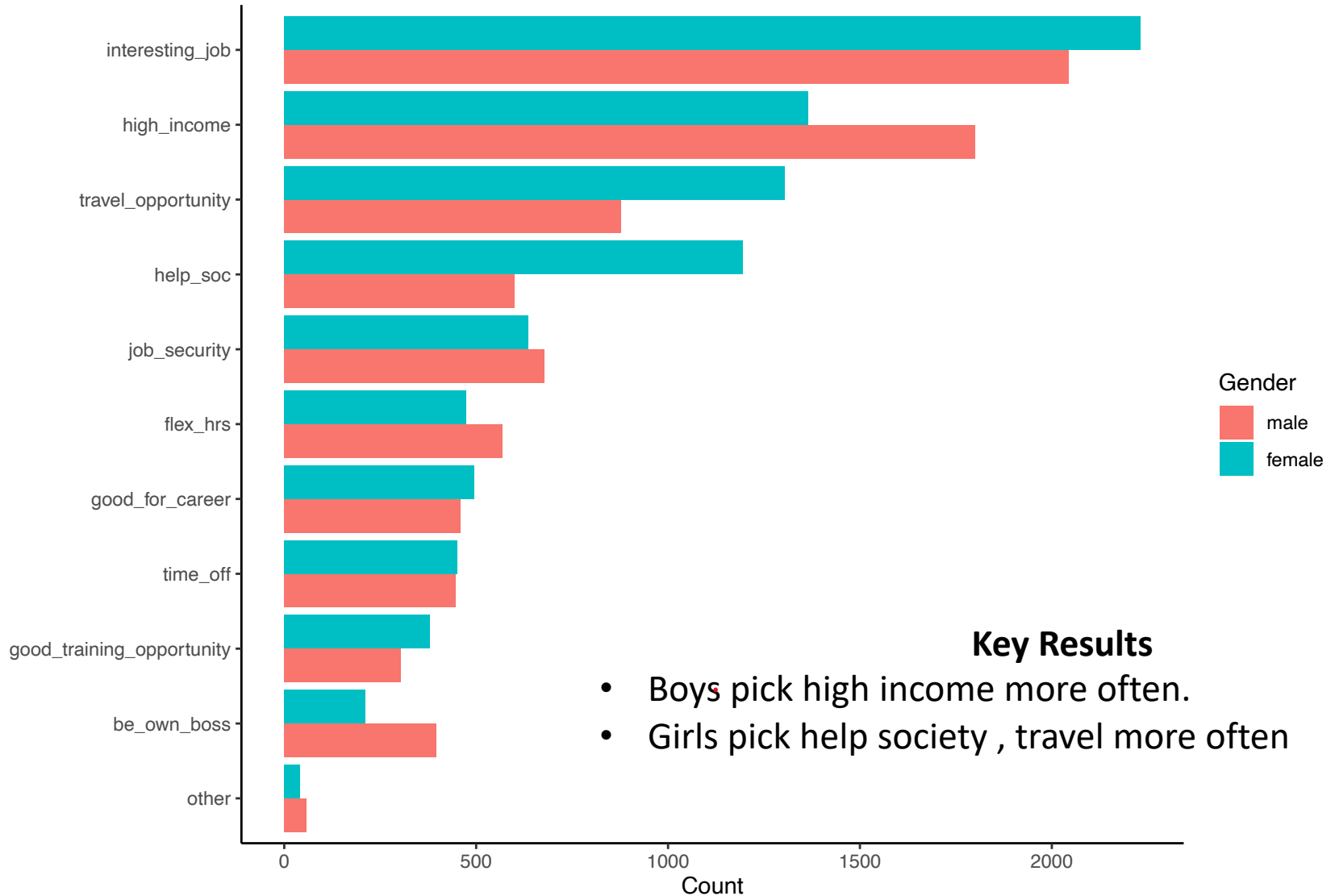
- a. High income..... ☒ 1
- b. A job that offered good training opportunities ☐ 2
- c. An interesting job..... ☐ 3
- d. Flexible working hours..... ☒ 4
- e. Generous holidays/time off..... ☒ 5
- f. A good step on the career ladder ☐ 6
- g. Be your own boss ☐ 7
- h. A job that is useful to society or helps other people..... ☐ 8
- i. Job security ☒ 9
- j. Opportunity to travel/work abroad ☒ 10
- k. Other (please specify)_____ ☐ 11

Extrinsic Values

Total Respondents: 6216

Respondents with exactly 3 choices: 5672

Questionnaire Results

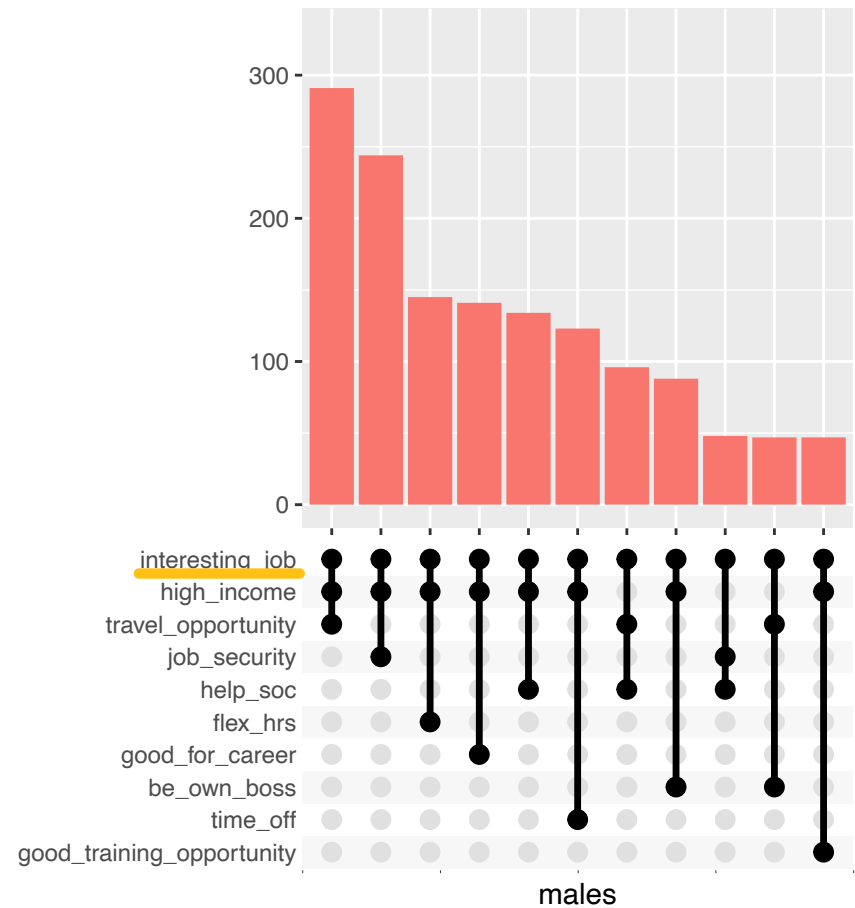
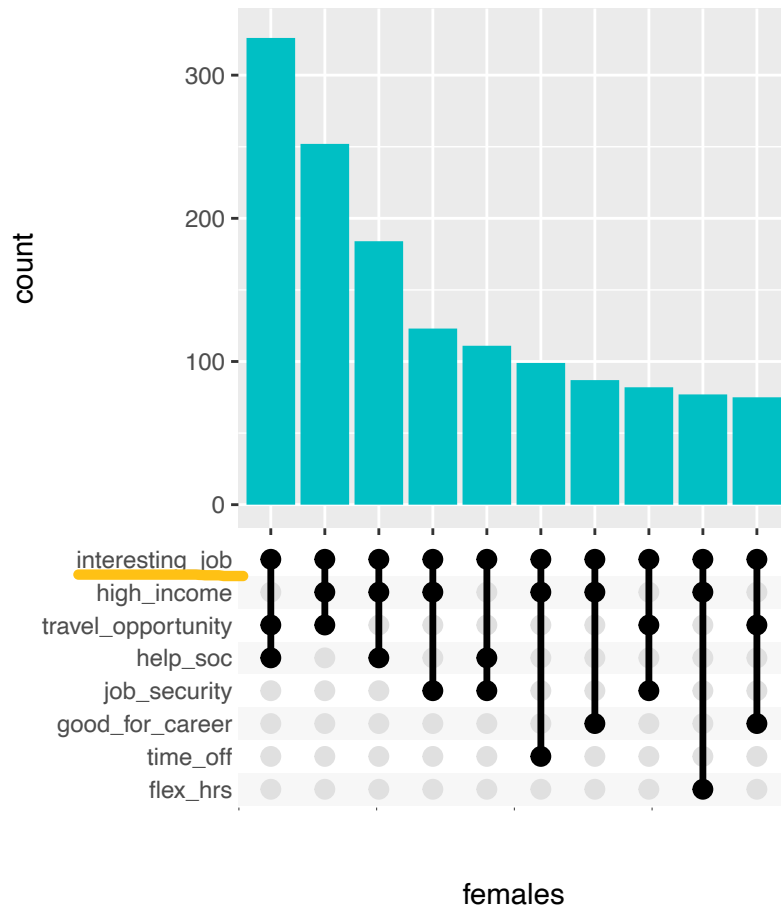


Key Results

- Boys pick high income more often.
- Girls pick help society , travel more often

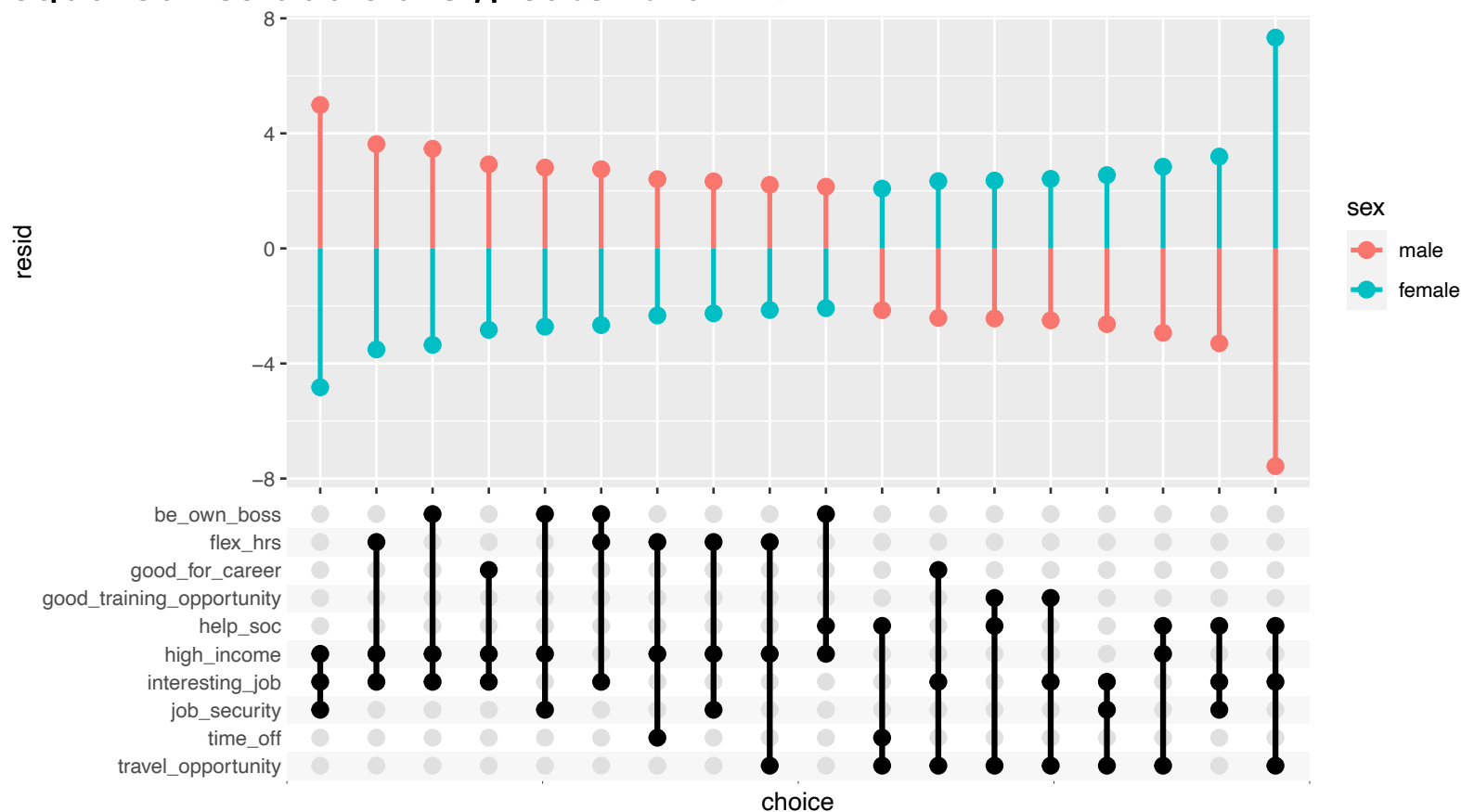
Popular Combinations by Gender

Visualization Method : Upset plots ²



Difference in Choices

The difference in selection for boys and girls for $\binom{11}{3}$ choices where the chi squared residuals are greater than 2.



Males are over-represented among those picking high income, interesting job and job security. Females are over-represented among those picking helping society, interesting job and travel.

Findings

Gendered Selection of Choices

BOYS

- High Income
- Interesting Job
- Job Security

GIRLS

- Interesting Job
- Help Society
- Travel Abroad

- Do these differences persist when we consider other work value drivers?

Potential Work Value Drivers

Family

- Primary Caregiver's Education and employment
- Parental Expectations
- Household Income

Education

- Cognitive Math's, Naming and Vocabulary Score
- Transition year
- Career guidance, self research, counselling sessions or career talks

Young Person

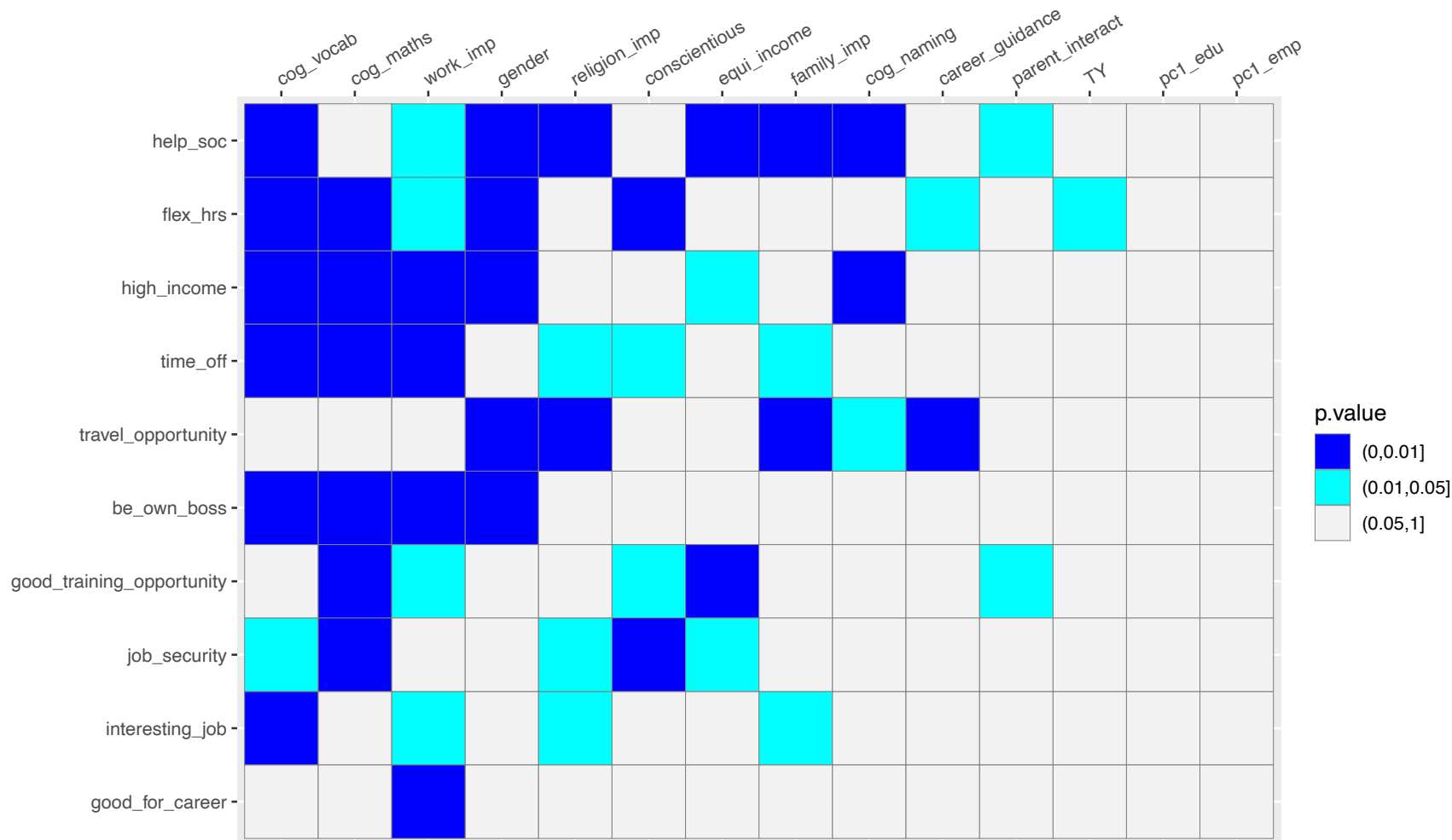
- Young person's Gender
- Conscientious score
- Importance of family/work/religion for the Young Person

Methodology

- Logistic Regression : To explore relationships between choices and work value drivers.
- We used 10 Logistic Regression models, one for each work value.
10 work values ~ work value drivers
- Visual analytics to explore results instead of coefficient table.
Heatmaps have been seriated to get optimal patterns

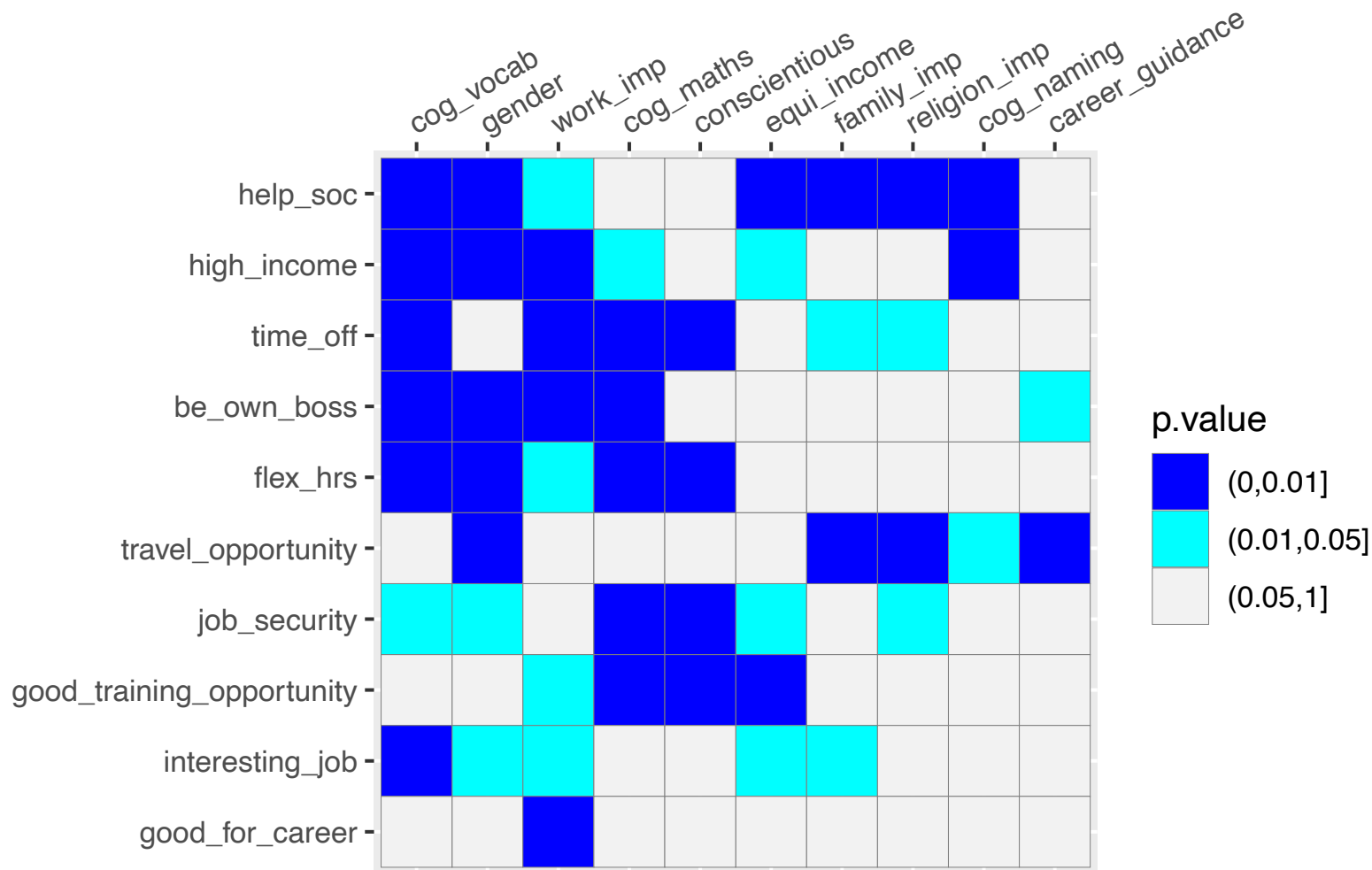
Visual Analytics of Logistic Regression Models

Visualization Method: Seriated Heatmaps ³



Parental interaction, transition year, primary care-givers education and employment not coming out significant

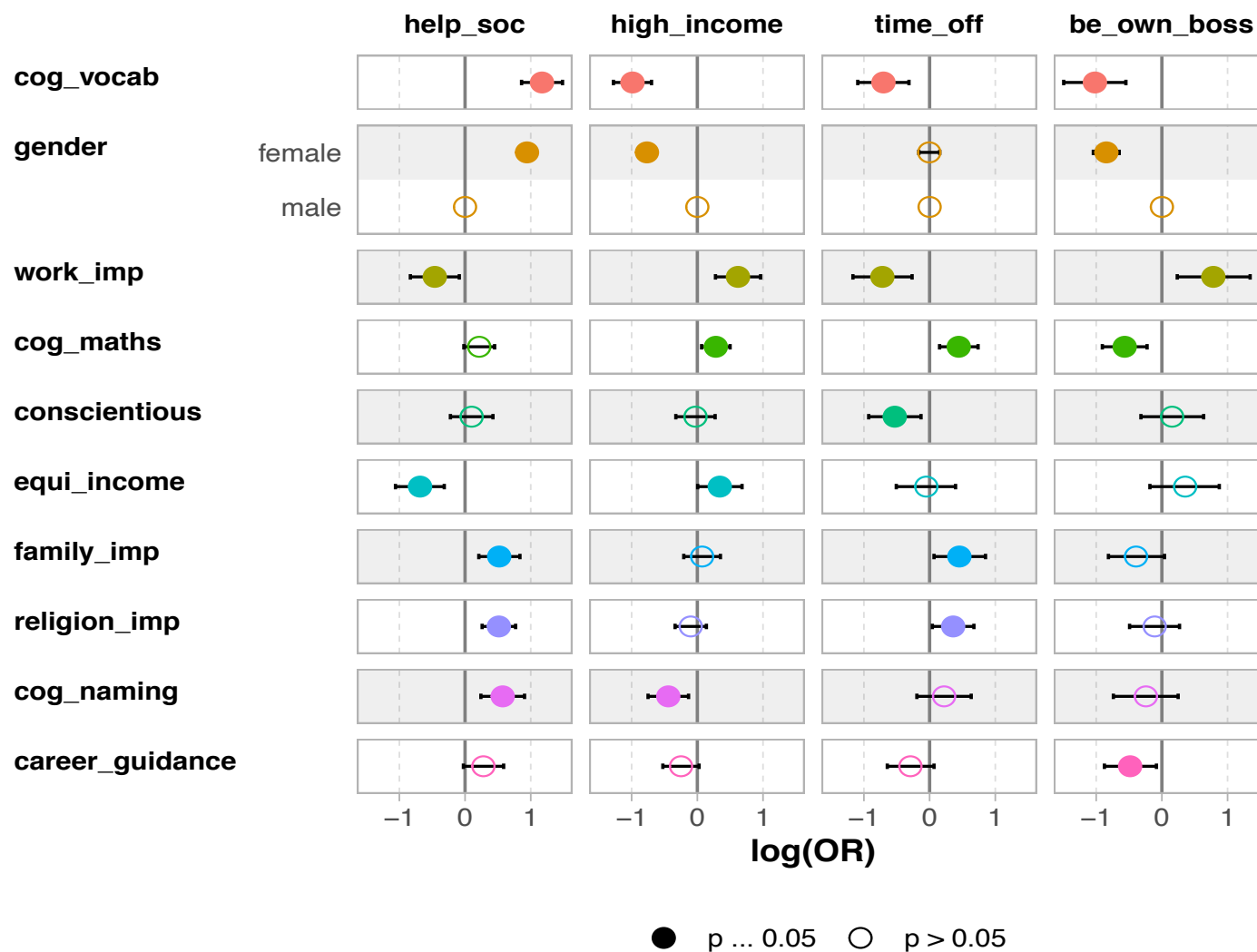
Association between Work Values and Variables of Interest



Import work value drivers: cognitive vocab and gender and importance of work ethics

Coefficients Plot

Visualization method: Coefficients plot (GGally) ⁴



Conclusion

- The analysis revealed gendered selection of choices and they persist when we allow for other variables.
- Apart from gender, cognitive scores and belief in work/profession are the most important drivers for work values.
- Surprisingly, Parental interactions, Primary Caregiver's education and transition year are not important if we control for other variables.
- Career Guidance seems to have a limited importance once we control for other variables.

Policy Relevance

- Activities and guidance sessions at early years to bridge the gap between gendered selection of choices.
- Re-evaluate career guidance and transition year to create more impact on selection of choices?

Future Work

- Look at interactions, perhaps with gender
- Use Multivariate Logistic Regression
- Explore Random Forest Fits to this data
- Include more variables which could be associated with work values
- Develop useful visualizations for similar datasets
- Improve visualizations and develop R package for it

References

1. Chow, A., Galambos, N. L., & Krahn, H. J. (2017). Work values during the transition to adulthood and mid-life satisfaction: Cascading effects across 25 years. *International Journal of Behavioral Development*, 41(1), 105-114.
2. Nils Gehlenborg (2019). UpSetR: A More Scalable Alternative to Venn and Euler Diagrams for Visualizing Intersecting Sets. R package version 1.4.0. <https://CRAN.R-project.org/package=UpSetR>
3. Catherine Hurley, Bharvi Dhall and Katarina Domijan (2021). manyModelViz: Multiple response, multiple model visualisations. R package version 0.0.0.9000.
4. Schloerke, B., Crowley, J., Cook, D., Briatte, F., Marbach, M., Thoen, E., ... & Larmarange, J. (2018). GGally: extension to 'ggplot2'. R package version 1.4. 0. *R Foundation for Statistical Computing*.