

STA254

CORRESPONDENCE ANALYSIS AND RELATED METHODS

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Week 6: Homework exercises (to be handed in November 6)

Everyone will be assigned a different data set, a crosstabulation of responses from over 40,000 people across 35 countries on a certain issue in family and gender issues. These data are taken from the International Social Survey Program (ISSP) survey on Family and Changing Gender Roles in 2002.

The data sets are listed on the usual web page

www.secon.upf.edu/~michael/stanford

Using the `ca` package in R, perform a correspondence analysis on your table, doing the following:

1. A symmetric map of the countries and question responses.
2. Give the inertias (eigenvalues) and percentages of inertia on the first two dimensions. Comment on the inertias on the other dimensions.
3. Interpret the map.
4. Do the asymmetric map (option “rowprincipal”) and compare this to the symmetric map.

Michael

Notes:

1. To read a table into R (e.g., using function `read.table`) there must be *no blanks* in the labels, so if you read a label such as

strongly disagree

you should first change it to, for example

strongly_disagree

2. The country codes are explained on page I-17 in the report `issp02.pdf` which is now on the website (see homework week 6). This documents the ISSP survey in 2002 and you can also find the cross-tabulation you have later in this report, referenced by the variable number (the variable numbers, `v4`, `v11`, etc., are in the names of your Excel files).