Original inputs retrieval and dataset creation procedure

1. Introduction

The input file is a csv file containing the following information for each agent: (1) original serial number, (2) sex, (3) age, (4) environmental concern about meat consumption, (5) health concern about meat consumption, (6) animal welfare concern about meat consumption, (7) perception of living cost, (8) country, (9) meat consumption habit, (10) employment status, (11) income decile. This order must be respected to be in line with the importing routine of the model.

Original data is obtained from the UK Data Service and cannot be shared without permission as this would be a breach of the End User Licence (EUL) (see UK Data Service FAQ for further details). Accordingly, the following information described the process of retrieval and creation of the dataset to feed into the model.

2. Retrieve original data set

All data required to initialise agents are included in the British Social Attitude Survey 2014[1] downloadable at http://doi.org/10.5255/UKDA-SN-7809-2. The dataset is available through the UK Data Service (https://www.ukdataservice.ac.uk) after registration.

3. Data selection and transformation

3.1. Data selection

A subset of the original dataset is required to initialise agents. Thus, the following syntax (**Table 1**) can be used to extract the data from the SPSS version of the dataset supplied by the UK Data Service.

Table 1. SPSS Syntax to filter original BSA dataset responses.

```
SAVE OUTFILE='bsa14_final-original.sav'
  /KEEP
SSerial
Rsex
Rage
MeatEnv
MeatHlth
MeatWelf
livcost1
Country
MeatHab
REconAct
REarnD.
```

Using the new subset, apply a filter to exclude non-responses (e.g. “Don’t know”; “Information refused”). SPSS syntax is reported in **Table 2** to support.

Table 2. SPSS Syntax to filter original BSA dataset responses.

[1] NatCen Social Research. (2016). *British Social Attitudes Survey, 2014* (2nd Ed.). Colchester, UK: UK Data Archive. Retrieved from http://dx.doi.org/10.5255/UKDA-SN-7809-2.

```
USE ALL.
COMPUTE filter_$= ((Rage < 98 AND Rage > 17)
AND (MeatEnv > 0 AND MeatEnv < 6)
AND (MeatHlth > 0 AND MeatHlth < 6)
AND (MeatWelf > 0 AND MeatWelf < 6)
AND (livcost1 > 0 AND livcost1 < 8)
AND (MeatHab > 0 AND MeatHab < 6) AND (REconACT <= 10)).
VARIABLE LABELS filter_$ '(Rage < 98 AND Rage > 17) AND (MeatEnv > 0 AND MeatEnv
< 6)AND '+
    '(MeatHlth > 0 AND             MeatHlth < 6)AND (MeatWelf > 0 AND MeatWelf <
6)AND (livcost1 > '+   '0 AND livcost1 < 8) AND     (MeatHab     >     0 AND
MeatHab < 6) AND (REconACT <= 1... (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
```

3.2. Data transformations

- Scores for environmental, health, and animal welfare concerns (*MeatEnv*, *MeatHlth*, and *MeatWelf*, respectively) were reversed to ease the interpretation (i.e. highest scores indicate higher concern).
- The score was reversed also for the perception of the cost of living over the past few years (*livcost1*)
- *MeatHab* measured the habit of consuming meat at the time of the survey and it is used to define meat-free agents. The original answers were converted into 0 (not eating meat) for the original answers 1 (“I have stopped eating meat in the last year”) and 5 (“Do not eat meat - stopped eating meat more than 1 year ago”). Otherwise, answers were converted into 1.
- Respondent economic activity (*REconAct*) is dicotomise in worker (1) or non-worker (0)
- The variable associated to income earning decile (*RearnD*) is recoded only if respondent did not answer or question is not applicable.

Table 3. SPSS Syntax to export the final input data in CSV format.

```
IF (MeatEnv > 0 AND MeatEnv < 6) MeatEnv = (6 - MeatEnv).
IF (MeatHlth > 0 AND MeatHlth < 6) MeatHlth = (6 - MeatHlth).
IF (MeatWelf > 0 AND MeatWelf < 6) MeatWelf = (6 - MeatWelf).
IF (livcost1 > 0 AND livcost1 < 6) livcost1 = (6 - livcost1).
RECODE MeatHab (1=0) (2=1) (3=1) (4=1) (5=0).
RECODE REconAct (missing=0) (1,2,4,5,6,7,8,9,10,11=0) (3=1).
IF (MISSING(REarnD)) REarnD = 0.
IF (REarnD > 10) REarnD = 0.
IF (REarnD = -1) REarnD = 0.
EXECUTE.
```

3.3. Export csv data

Finally, after all labels are removed, the data can be exported into a csv format to be readable by NetLogo (**Table 4**).

Table 4. SPSS Syntax to export the final input data in CSV format.

```
VALUE LABELS ALL
    FILTER BY filter_$.
SAVE TRANSLATE OUTFILE='BSA_Extract-ABMDATA-NetLogo.csv'
    /TYPE=CSV
    /MAP
    /REPLACE
    /FIELDNAMES
    /CELLS=LABELS
    /KEEP
    SSerial
    Rsex
    Rage
    MeatEnv
    MeatHlth
    MeatWelf
    livcost1
    Country
    MeatHab
    REconAct
    REarnD
    /UNSELECTED = DELETE.
```