**Codebook accompanying**

**Inferring choice criteria with mixture IRT models:**

**A demonstration using ad hoc and goal-derived categories**

The data is organized in separate csv-files within a single zip-file for every category described in the paper. Each zip-file contains one csv-file that holds the extension data and separate csv-files for the idealness judgment data (3 to 13, depending on the number of ideals per category). The file names for the extension data are called *categoryname_extension.csv*. The file names for the idealness judgment data are called *categoryname_idealname.csv*.

The first two rows in the extension data contain the English (translated) and the (original) Dutch names for the objects, respectively. They are organized in alphabetical order according to the Dutch names. Every other row represents an individual (254 in total) choosing either to include (coded as 1) or to exclude (coded as 0) the objects in the columns (20 or 25, depending on the category). The order of the individuals is kept constant across categories. That is, entries in corresponding rows in different extension files are from the same individual.

The first two columns in the idealness judgment data contain the English (translated) and the (original) Dutch names for the objects, respectively. They are organized in alphabetical order according to the Dutch names. The remaining columns contain the data from individuals (15 in each file) indicating on a 7-point Likert scale to what extent the objects in the rows display the ideal property that is referenced in the file name. Note that every individual judged a random subset of ideals, so there is no direct correspondence between the columns (individuals) across categories or ideals like there was for the extension data.

The file names for the idealness judgment data contain abbreviations of the full ideals, which can be found in the table below. The order in which the ideals appear in the

table below, corresponds to the order in which the ideals appear in Table 2 in the paper. Ideals 1 to 5 in the first row of Table 2 (car trinkets), for instance, correspond to *<easy to store away>*, *<guarantees safety>*, *<makes travel more agreeable>*, *<small>*, and *<useful>*, respectively.

**Ideals per category.**

| Car trinkets | Burning house | Diet ruiners | Wedding gifts | Pie necessities |
|---|---|---|---|---|
| easy to store away | emotional value | fatty | not too cheap | appropriate shape |
| guarantees safety | important | large quantities | not too expensive | convenient to use |
| makes travel more agreeable | indispensable | many calories | personal | hygienic |
| small | light | rich in sugar | pleasing | oven-proof |
| useful | living | tasty | pretty | |
| | monetary value | | useful | |
| | necessary | | | |
| | precious | | | |
| | valuable | | | |

| Beach trinkets | Means of transport | Election strategies | Hunting weapons | Gardening tools |
|---|---|---|---|---|
| alleviates appetite | cheap | appears honest | accurate | reliable |
| durable | comfortable | delivers charisma | discreet | convenient to use |
| entertaining | fast | looks good | easy to aim | not too heavy |
| light | not too expensive | | easy to handle | sturdy |
| protects against the elements | | | easy to hold | safe |
| relaxing | | | easy to take with you | |
| | | | effective | |
| | | | fast | |
| | | | light | |
| | | | not too big | |
| | | | not too heavy | |
| | | | safe to use | |
| | | | silent | |