

German translation of the Artificial-Social-Agent questionnaire instrument for evaluating human-agent interaction

Transformation from raw data to the input files - first half

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1 Introduction

In this document, we transform a raw data file into an input data file. Because of privacy reasons we did not release for public access the non-anonymized raw data file.

Due to time constraints, the data transformed and analyzed in these files is only based on the first data collected between the 19th and 22nd of June. We are still aiming for 120 participants per questionnaire part for future work.

There are two documents to be transformed. They are divided like the questionnaire - split in two. Two groups answered either questionnaire. In the first group, which this document is about, human-ASA interaction evaluation data of the first 44 items (Construct 1-8: the first 12 constructs/dimensions) were collected from 72 bilingual participants with German as their primary language, and English as their fluent language. Bilingual participants rated human-ASA interaction on 44 English items and corresponding German translations. In additions, they answered 14 attention control questions.

We transformed the raw data file into an input data file for further analysis, which we describe in ‘GermanSummative’.

We use the following packages:

```
library(haven)      # Use read_sav function
library(dplyr)      # Use select function
library(knitr)       # Get markdown file
library(tinytex)     # Use TeX environment
library(rtticles)    # Use CTeX documents template
library(pander)      # For pandering tables
panderOptions("table.alignment.default", "left")
```

2 Data file Final__ASA__German__Summative__First__Half__v1__2023__06

We read the raw data file consisting of the first 44 English ASA item scores and corresponding German translation scores. The raw scores are from a 7-point scale, ranging from -3 (disagree), 0 (neither agree nor disagree) to 3 (agree).

```
# Read the file
df <- read_sav("Final_ASA_German_Summative_First_Half_v1_2023_06_22_anonym.sav")
```

Because of various combinations of participants in the 14 human-ASA interaction videos, there are multiple versions of the same questionnaire adjusted for gender, amount of participants (2 English versions, 7 German versions). While all versions of the questionnaire were present in one survey, their columns are currently not merged. Different variants of the same column are suffixed (e.g. ‘Q_DE_HLA1’, ‘Q_DE_HLA1.1’, ‘Q_DE_HLA1.2’, etc). The code below allows to merge two separate versions of a questionnaire.

```
merge_data <- function(data, multiplier=0){
  start <- 1 #this is the column of the first English item (the attention check)
  end <- start + 50 #this is the last column of the English item
  #create a new list (this will be the new columns with combined data)
  new_columns <- list()

  # Go over all columns
  for (i in seq(start, end)) {
    # Get the column name without suffix
    col1 <- colnames(data)[i]
    # Get column index for next suffixed column of same name
    col2_index <- i + 51
    # Get its name
```

```

col2 <- colnames(data)[col2_index]

# Use the name of the unsuffixed column
new_col <- colnames(data)[i]

# Create a new column by merging the values of col1 and col2 by checking if they are NA
# The name of col1, the unsuffixed column, will be the name of the merged column

new_columns[[new_col]] <- ifelse(data[[col1]]=="", data[[col2]], data[[col1]])

}

# Make list of columns into a data frame
merged_data <- data.frame(new_columns)
# Remove the columns that were merged, and replace them with combined columns
# Keep any remaining columns (appended), to repeat this operation
combined_data <- cbind(merged_data, data[-1:-102])

return(combined_data)
}

```

Merge the two versions of the English questionnaire into one.

```

#Select only questions, attention checks
df_E <- data.frame(select(df, AttentionCheck_E_1:"Q_E_AE4.1"))
df_E <- subset(df_E, select = -c(Num_Rewatch, Previous_Interaction, Previous_Passive, Use_Data))

#Select only English questions, attention checks
df_E <- select(df_E, AttentionCheck_E_1:Q_E_AE4, AttentionCheck_E_1.1:Q_E_AE4.1)

#Merge suffixed columns into one
df_E <- merge_data(df_E)

```

Merge the six versions of the German questionnaire into one.

```

#select only questions, attention checks
df_DE <- data.frame(select(df, AttentionCheck_E_1:"Q_DE_AE4.4"))
df_DE <- subset(df_DE, select = -c(Num_Rewatch, Previous_Interaction, Previous_Passive, Use_Data))

#select only German questions, attention checks

```

```

df_DE <- select(df, AttentionCheck_DE_1:Q_DE_AE4,
                AttentionCheck_DE_1.1:Q_DE_AE4.1,
                AttentionCheck_DE_1.2:Q_DE_AE4.2,
                AttentionCheck_DE_1.3:Q_DE_AE4.3,
                AttentionCheck_DE_1.4:Q_DE_AE4.4,
                AttentionCheck_DE_1.5:Q_DE_AE4.5,
                AttentionCheck_DE_1.6:Q_DE_AE4.6)

# Merge all variants of German (suffixed) columns into one
df0 <- merge_data(df_DE)

df1 <- merge_data(df0)

df2 <- merge_data(df1)

df3 <- merge_data(df2)

df4 <- merge_data(df3)

df5 <- merge_data(df4)

# Rename for better legibility
df_DE <- df5

```

Combine the unified English and German items.

```

# Combine English and German questions + attention checks
d_ASA_1 <- cbind(df_E, df_DE)

# Make entries numeric
d_ASA_1 <- d_ASA_1 %>% mutate_if(is.character, as.numeric)

print(d_ASA_1)

```

##	AttentionCheck_E_1	AttentionCheck_E_2	AttentionCheck_E_3	AttentionCheck_E_4
## 1	-3	3	3	-3
## 2	-3	3	3	-3
## 3	-3	3	3	-3
## 4	-3	3	3	-3
## 5	-3	3	3	-3
## 6	-3	3	3	-3

## 7	-3	3	3	-3
## 8	-3	3	3	-3
## 9	-3	3	3	-3
## 10	-3	3	3	-3
## 11	-3	3	3	-3
## 12	-3	3	3	-3
## 13	-3	3	3	-3
## 14	-3	3	3	-3
## 15	-3	3	3	-3
## 16	-3	3	3	-3
## 17	-3	3	3	-3
## 18	-3	3	3	-3
## 19	-3	3	3	-3
## 20	-3	3	3	-3
## 21	-3	3	3	-3
## 22	-3	3	3	-3
## 23	-3	3	3	-3
## 24	-3	3	3	-3
## 25	-3	3	3	-3
## 26	-3	3	3	-3
## 27	-3	3	3	-3
## 28	-3	3	3	-3
## 29	-3	3	3	-3
## 30	-3	3	3	-3
## 31	-3	3	3	-3
## 32	-3	3	3	-3
## 33	-3	3	3	-3
## 34	-3	3	3	-3
## 35	-3	3	3	-3
## 36	-3	3	3	-3
## 37	-3	3	3	-3
## 38	-3	3	3	-3
## 39	-3	3	3	-3
## 40	-3	3	3	-3
## 41	-3	3	3	-3
## 42	-3	3	3	-3
## 43	-3	3	3	-3
## 44	-3	3	3	-3
## 45	-3	3	3	-3

## 46	-3	3	3	-3
## 47	-3	3	3	-3
## 48	-3	3	3	-3
## 49	-3	3	3	-3
## 50	-3	3	3	-3
## 51	-3	3	3	-3
## 52	-3	3	3	-3
## 53	-3	3	3	-3
## 54	-3	3	3	-3
## 55	-3	3	3	-3
## 56	-3	3	3	-3
## 57	-3	3	3	-3
## 58	-3	3	3	-3
## 59	-3	3	3	-3
## 60	-3	3	3	-3
## 61	-3	3	3	-3
## 62	-3	3	3	-3
## 63	-3	3	3	-3
## 64	-3	3	3	-3
## 65	-3	3	3	-3
## 66	-3	3	3	-3
## 67	-3	3	3	-3
## 68	-3	3	3	-3
## 69	-3	3	3	-3
## 70	-3	3	3	-3
## 71	-3	3	3	-3
## 72	-3	3	3	-3

##	AttentionCheck_E_5	AttentionCheck_E_6	AttentionCheck_E_7	Q_E_HLA1	Q_E_HLA2
## 1	0	3	-3	-2	-2
## 2	0	3	-3	-3	-3
## 3	0	3	-3	3	2
## 4	0	3	-3	-3	-3
## 5	0	3	-3	3	3
## 6	0	3	-3	0	0
## 7	0	3	-3	-2	-3
## 8	0	3	-3	-3	-3
## 9	0	3	-3	-1	-3
## 10	0	3	-3	-1	0
## 11	0	3	-3	1	1

## 12	0	3	-3	-3	-3
## 13	0	3	-3	-3	-3
## 14	0	3	-3	-3	-3
## 15	0	3	-3	3	3
## 16	0	3	-3	2	1
## 17	0	3	-3	1	1
## 18	0	3	-3	-2	-3
## 19	0	3	-3	-3	1
## 20	0	3	-3	-1	0
## 21	0	3	-3	-3	-2
## 22	0	3	-3	0	1
## 23	0	3	-3	-3	-3
## 24	0	3	-3	-3	-2
## 25	0	3	-3	-3	-3
## 26	0	3	-3	2	2
## 27	0	3	-3	1	-2
## 28	0	3	-3	-2	-2
## 29	0	3	-3	-3	-3
## 30	0	3	-3	-3	-3
## 31	0	3	-3	2	2
## 32	0	3	-3	1	1
## 33	0	3	-3	2	2
## 34	0	3	-3	2	2
## 35	0	3	-3	-3	-3
## 36	0	3	-3	-3	-3
## 37	0	3	-3	1	2
## 38	0	3	-3	-1	-2
## 39	0	3	-3	1	1
## 40	0	3	-3	-3	-3
## 41	0	3	-3	-2	-3
## 42	0	3	-3	-3	-3
## 43	0	3	-3	0	1
## 44	0	3	-3	1	-1
## 45	0	3	-3	-3	-2
## 46	0	3	-3	-3	-3
## 47	0	3	-3	-3	-3
## 48	0	3	-3	-3	1
## 49	0	3	-3	-3	-3
## 50	0	3	-3	1	-2

## 51	0	3	-3	3	2
## 52	0	3	-3	-1	0
## 53	0	3	-3	-3	-3
## 54	0	3	-3	-3	-3
## 55	0	3	-3	-3	-3
## 56	0	3	-3	-3	-3
## 57	0	3	-3	-2	-3
## 58	0	3	-3	-3	-3
## 59	0	3	-3	-3	-3
## 60	0	3	-3	-3	-3
## 61	0	3	-3	-2	-2
## 62	0	3	-3	-3	-3
## 63	0	3	-3	-3	-3
## 64	0	3	-3	-3	-3
## 65	0	3	-3	3	3
## 66	0	3	-3	-3	-3
## 67	0	3	-3	-3	-2
## 68	0	3	-3	-3	-3
## 69	0	3	-3	-1	-2
## 70	0	3	-3	-1	0
## 71	0	3	-3	-3	-3
## 72	0	3	-3	1	2

##	Q_E_HLA3	Q_E_HLA4	Q_E_HLB1	Q_E_HLB2	Q_E_HLB3	Q_E_HLB4	Q_E_HLB5	Q_E_NA1
## 1	-2	-2	-2	-2	-2	-2	-2	-3
## 2	-3	-3	-3	-1	-3	-3	1	-3
## 3	1	2	1	2	2	2	2	-2
## 4	-3	-3	0	1	1	-3	1	-1
## 5	2	3	0	3	3	3	3	-3
## 6	0	0	1	0	1	0	2	-1
## 7	-3	-3	1	1	-2	-2	-1	-2
## 8	2	-3	-3	-3	-3	-3	-2	-3
## 9	-3	0	0	0	3	1	0	3
## 10	1	0	-1	0	-1	-1	-1	-1
## 11	1	1	-1	2	1	1	1	0
## 12	-3	-3	1	1	1	1	1	-2
## 13	-3	-2	-3	1	-1	-2	-1	-1
## 14	-3	-2	-2	1	-2	-2	-1	-3
## 15	3	3	3	3	3	2	3	3
## 16	3	3	3	2	2	2	2	2

## 17	2	1	1	2	0	0	2	1
## 18	-2	-2	-2	0	-2	0	-1	3
## 19	1	1	-3	1	1	0	1	-3
## 20	3	1	0	2	2	2	3	-2
## 21	-2	-1	-3	-1	-1	-1	-2	-3
## 22	-1	-2	-3	2	-1	1	0	-1
## 23	-3	-3	-3	-3	-3	-3	-3	2
## 24	-2	-2	-1	-1	-2	-2	-2	-3
## 25	-3	-2	-1	-1	-1	-1	0	-3
## 26	1	2	0	-1	2	1	1	-3
## 27	1	-2	-3	-2	-2	-2	-2	-1
## 28	-3	-2	-3	-2	-2	-2	-2	1
## 29	-2	-3	-3	-1	-3	-1	-3	-3
## 30	-3	-3	3	0	-3	-2	-2	1
## 31	1	2	3	1	3	3	3	-2
## 32	1	1	1	2	1	1	2	-1
## 33	2	1	0	1	-1	1	2	-3
## 34	2	2	-1	1	2	1	1	-2
## 35	-3	-3	-2	-1	-3	-3	-3	-3
## 36	-2	-3	1	-2	-3	-2	-3	-3
## 37	1	2	3	3	3	1	2	3
## 38	1	-1	0	1	2	2	2	2
## 39	1	2	1	1	0	1	1	-3
## 40	-3	-3	1	-3	1	-2	-2	-3
## 41	-2	-2	-1	-1	-2	-1	0	3
## 42	-3	-3	-3	-3	-3	-3	-3	2
## 43	1	1	2	2	-1	1	1	1
## 44	1	0	1	2	1	1	2	-2
## 45	-2	-1	0	0	3	0	0	-3
## 46	-3	-3	-3	-3	-3	-3	0	-3
## 47	-3	-3	2	3	2	1	1	-3
## 48	1	-1	-3	-3	-3	-3	-1	-3
## 49	-3	3	2	-2	0	-1	-2	-3
## 50	1	-1	-1	1	1	-1	1	1
## 51	3	2	1	1	3	2	2	2
## 52	-2	0	0	-1	0	-1	-1	0
## 53	-3	-3	2	1	1	-1	0	0
## 54	-3	-3	-3	3	-3	-3	-3	0
## 55	-3	-3	-3	-3	-3	-2	-3	-3

## 56	-3	-3	2	2	2	1	2	-3	
## 57	-3	-3	-3	-2	-3	-3	-2	-3	
## 58	-3	-2	-2	-2	1	0	1	-3	
## 59	-3	-2	-2	-2	-2	-3	-2	1	
## 60	-3	-3	-2	-3	-3	-3	-3	-3	
## 61	-2	-2	-2	-2	-2	-2	-2	-2	
## 62	-3	2	2	1	2	3	3	3	
## 63	-3	-3	-2	-3	-1	-3	-3	1	
## 64	-3	-3	-3	-2	-3	-3	-3	-1	
## 65	2	-2	2	2	1	2	2	2	
## 66	-2	-1	0	1	1	-1	0	0	
## 67	2	-2	1	1	1	1	2	-1	
## 68	-3	-3	-2	1	-3	-2	-2	-3	
## 69	-1	-2	-2	-2	-2	-2	-1	-3	
## 70	-1	1	1	1	2	1	1	1	
## 71	-3	-3	-3	-3	-3	-3	-3	-3	
## 72	1	1	2	1	2	-1	1	3	
##	Q_E_NA2	Q_E_NA3	Q_E_NA4	Q_E_NA5	Q_E_NB1	Q_E_NB2	Q_E_NB3	Q_E_AAS1	Q_E_AAS2
## 1	-2	-2	-2	-2	-3	-2	-2	-1	-1
## 2	-3	-3	-2	3	-3	-2	-3	2	2
## 3	1	1	2	2	1	1	0	1	1
## 4	1	2	-1	1	-3	-2	-1	-1	1
## 5	3	3	2	2	3	2	3	2	3
## 6	0	0	0	0	-1	2	0	2	2
## 7	-2	-2	-2	-1	-3	-1	-3	3	1
## 8	3	-3	3	2	-3	1	3	3	3
## 9	2	3	3	3	1	2	3	3	1
## 10	0	-1	0	0	-2	0	0	0	1
## 11	0	1	0	1	-3	0	-1	1	2
## 12	-3	-2	-2	0	1	0	1	2	1
## 13	-2	-3	-2	-2	-3	1	-1	2	2
## 14	-3	-3	-1	-2	-3	1	-2	0	1
## 15	3	2	3	3	3	3	3	3	3
## 16	3	2	2	2	1	2	2	2	2
## 17	-1	1	-1	2	-2	0	2	1	1
## 18	2	3	2	3	2	2	3	3	2
## 19	-2	-3	-2	-2	-3	-1	0	-2	-3
## 20	-1	0	0	3	2	2	2	2	0
## 21	-2	-3	-2	-1	-3	-2	-2	-2	0

## 22	-1	-1	-2	-2	-1	-1	1	-1	-1
## 23	1	3	1	1	-3	3	3	3	3
## 24	-3	-3	-2	-1	-3	-3	-1	-1	-1
## 25	-1	-3	-2	-1	-3	-1	0	-1	1
## 26	2	1	3	1	-3	-1	2	2	2
## 27	-2	-2	-2	-2	-1	-1	-2	-2	-2
## 28	-2	-2	1	1	-2	-1	-1	2	2
## 29	-3	-2	-3	0	-3	-2	1	2	2
## 30	0	1	1	0	-1	0	-1	2	2
## 31	1	0	1	3	3	3	3	3	3
## 32	-1	1	-1	-2	-3	1	-1	1	1
## 33	1	-1	1	-1	-3	1	1	1	1
## 34	1	1	1	1	-1	1	1	1	2
## 35	-2	-2	-3	2	0	-2	-2	0	2
## 36	-2	-3	-3	2	-3	-2	-2	2	1
## 37	3	3	3	2	3	-1	3	2	3
## 38	1	-1	2	2	1	1	1	2	2
## 39	0	-3	0	1	1	1	1	1	2
## 40	-3	-3	-3	1	0	-3	-3	2	3
## 41	-1	-2	-2	-1	-3	-2	-2	2	2
## 42	2	3	3	2	-3	2	2	3	3
## 43	2	2	2	1	-3	0	0	2	2
## 44	1	1	-1	1	-2	-1	1	1	1
## 45	-2	3	-3	-2	-3	-3	-3	1	1
## 46	-3	-3	-3	3	-3	-1	-3	3	0
## 47	-1	0	-1	0	2	-2	2	-1	-1
## 48	-1	-3	1	-2	-3	-2	-3	1	0
## 49	3	-3	-2	1	-2	3	-3	2	1
## 50	-3	-3	-2	-1	0	-1	1	2	3
## 51	2	0	2	2	3	1	2	2	2
## 52	-2	-2	-1	0	0	0	0	1	1
## 53	3	3	3	2	3	2	3	3	-1
## 54	-3	-3	-3	-2	-3	-2	-3	3	3
## 55	-3	-3	-3	-2	-3	-3	-3	0	0
## 56	-3	-3	-3	3	1	3	2	3	3
## 57	-2	-3	-3	-3	-3	-3	-3	0	0
## 58	-2	-3	-3	3	-3	1	-1	1	0
## 59	-1	-1	-2	-2	-3	-1	0	1	1
## 60	-3	-3	-3	1	-3	0	-3	1	2

## 61	-2	-2	-2	-2	-3	-2	-2	-1	-1
## 62	-3	-2	-1	2	-3	2	2	3	2
## 63	3	3	1	2	3	2	3	2	2
## 64	0	1	-3	-2	-3	-1	-2	-1	2
## 65	3	0	1	-2	1	0	1	0	3
## 66	-1	1	0	0	-3	0	0	0	1
## 67	-2	-2	0	1	-1	1	2	0	0
## 68	2	2	1	1	-2	1	1	2	2
## 69	-1	-2	-3	-2	-2	-2	-2	-2	-2
## 70	-1	0	-1	1	-3	1	1	2	1
## 71	-3	-3	-3	0	-3	-3	-3	0	1
## 72	-1	2	1	2	-2	2	1	2	3
##	Q_E_AAS3	Q_E_AU1	Q_E_AU2	Q_E_AU3	Q_E_PF1	Q_E_PF2	Q_E_PF3	Q_E_AL1	Q_E_AL2
## 1	-1	2	1	2	0	1	-1	-2	-1
## 2	2	1	2	1	2	0	1	1	3
## 3	2	2	1	1	1	1	1	2	2
## 4	1	1	1	2	0	1	0	1	-2
## 5	1	-3	-2	3	-2	0	0	1	0
## 6	2	2	2	2	2	2	2	3	3
## 7	3	2	2	2	1	3	3	2	2
## 8	3	3	3	3	3	3	3	3	3
## 9	3	3	2	2	1	3	1	2	2
## 10	0	2	2	2	2	2	2	0	1
## 11	1	3	2	3	3	2	2	1	1
## 12	1	3	3	3	2	2	2	-1	-2
## 13	2	2	2	2	1	2	2	1	0
## 14	1	2	2	2	2	2	2	0	0
## 15	3	3	-3	2	3	2	3	3	2
## 16	2	2	2	3	2	2	2	2	2
## 17	0	2	1	2	1	0	1	-1	1
## 18	2	2	3	2	1	2	1	3	3
## 19	-3	0	-2	0	-1	1	1	-3	-2
## 20	1	2	2	2	3	2	2	1	1
## 21	1	-1	1	1	-1	2	0	1	1
## 22	-1	2	2	2	1	2	1	-2	-1
## 23	3	3	3	3	3	3	3	3	3
## 24	-1	-2	-1	-1	0	0	-1	-2	-1
## 25	1	2	1	2	1	2	1	-1	1
## 26	2	1	1	2	2	0	2	2	2

## 27	-1	1	2	1	0	2	-1	-2	-2
## 28	2	2	3	2	1	2	0	2	2
## 29	2	-2	3	2	1	2	2	-3	0
## 30	2	2	3	0	1	1	1	2	0
## 31	3	2	2	3	2	2	2	2	3
## 32	1	2	1	1	-1	1	2	-1	-1
## 33	1	1	1	1	0	1	0	-1	0
## 34	1	2	1	2	1	1	1	1	1
## 35	2	2	2	2	3	2	2	0	0
## 36	2	1	1	1	2	1	1	1	1
## 37	2	2	1	2	3	3	3	-1	-3
## 38	2	1	1	2	1	1	1	1	2
## 39	1	1	2	2	2	0	1	2	2
## 40	2	3	3	3	2	0	1	0	0
## 41	-2	1	-2	1	0	2	1	1	2
## 42	3	3	3	3	3	3	3	3	3
## 43	1	0	1	2	1	2	1	1	0
## 44	2	2	0	2	3	3	3	1	0
## 45	1	2	2	2	1	2	1	-2	-3
## 46	0	2	2	2	2	-1	1	0	2
## 47	0	3	3	3	2	3	0	0	2
## 48	1	1	1	1	1	1	1	0	-2
## 49	0	1	-3	-1	2	2	2	3	1
## 50	2	2	2	2	2	1	3	1	1
## 51	2	2	2	2	2	0	3	-1	1
## 52	1	1	1	1	1	1	1	0	1
## 53	3	1	-1	-1	2	2	1	3	3
## 54	3	3	3	3	1	2	3	3	3
## 55	0	3	3	3	2	3	3	0	-2
## 56	3	3	3	3	3	1	1	3	3
## 57	0	-1	-1	-2	-1	0	2	-3	-3
## 58	1	1	-1	2	-1	3	1	-1	2
## 59	1	2	2	2	2	2	1	1	1
## 60	3	1	1	2	2	0	-1	0	3
## 61	0	0	0	0	0	1	1	-2	-2
## 62	3	0	3	1	2	3	2	3	3
## 63	2	0	0	0	2	2	2	1	2
## 64	2	2	-2	2	-2	0	-2	-1	-3
## 65	0	-1	-1	-1	1	0	-1	0	0

## 66	0	0	0	1	0	0	0	0	0
## 67	2	1	1	1	1	1	1	0	2
## 68	2	3	2	2	3	3	2	2	3
## 69	-1	2	3	2	2	2	2	-3	-2
## 70	1	2	3	3	2	0	1	1	1
## 71	0	0	0	0	3	2	3	0	2
## 72	3	1	2	2	2	2	2	3	1
##	Q_E_AL3	Q_E_AL4	Q_E_AL5	Q_E_AS1	Q_E_AS2	Q_E_AS3	Q_E_APP1	Q_E_APP2	Q_E_APP3
## 1	2	1	-3	-2	0	-1	-2	2	-3
## 2	-2	-1	2	-3	2	-3	2	2	-2
## 3	-2	2	1	1	1	1	1	-2	1
## 4	1	2	-2	1	1	2	-1	-1	-3
## 5	1	3	-3	-2	-1	3	1	-3	3
## 6	-3	2	1	3	2	2	0	0	-1
## 7	-3	3	1	-1	2	1	1	-1	0
## 8	-3	3	2	-3	-3	2	2	-3	-3
## 9	-3	2	1	1	2	3	0	0	1
## 10	-2	2	-2	-1	0	-2	1	1	-1
## 11	-1	3	0	1	2	2	0	-1	0
## 12	2	1	-3	-1	0	-1	1	-1	1
## 13	-2	2	-3	0	2	2	1	-2	-1
## 14	-1	2	-2	-2	-1	-2	-3	1	-3
## 15	-3	3	1	2	2	3	2	-2	2
## 16	-2	2	0	1	2	3	3	0	2
## 17	0	1	0	1	2	2	1	-2	0
## 18	-3	3	3	2	2	2	2	-2	0
## 19	2	1	-3	1	-2	2	-2	3	1
## 20	0	2	0	0	3	3	0	2	-1
## 21	-3	1	1	-1	1	1	-2	1	-2
## 22	-1	2	-1	-1	1	1	0	2	-1
## 23	-3	3	3	0	-3	0	3	-3	-3
## 24	-2	0	-1	-1	-1	-2	-1	2	-1
## 25	2	1	-1	0	1	1	-1	1	-1
## 26	-3	2	0	0	1	2	0	0	-3
## 27	1	0	-3	-1	0	-1	-1	2	-1
## 28	-3	2	1	0	2	1	0	-3	0
## 29	-1	2	-1	-2	0	-1	-2	2	-2
## 30	-3	2	0	1	1	1	1	-1	-2
## 31	-3	3	3	0	1	3	3	-3	3

## 32	-1	2	1	2	2	2	-3	3	-3
## 33	-3	0	-3	-2	-2	3	-3	2	-3
## 34	-1	2	-2	-1	2	1	0	1	-2
## 35	0	2	-1	-2	0	1	-1	0	-1
## 36	-2	1	-2	-3	-2	-2	-2	2	-3
## 37	3	3	-3	2	2	3	-2	2	1
## 38	-3	1	2	2	2	1	1	-1	-1
## 39	-3	1	1	1	1	1	2	-2	1
## 40	0	2	0	-3	0	-3	0	-1	-3
## 41	-2	2	2	2	-1	1	-2	1	-3
## 42	-3	3	3	3	3	3	2	-3	-3
## 43	-3	2	-3	0	2	2	0	0	3
## 44	0	2	-2	-1	2	-2	0	2	-2
## 45	2	2	-3	-1	1	0	-3	3	-3
## 46	-2	1	-3	-3	2	1	-3	3	-3
## 47	-3	1	1	1	1	3	-3	1	0
## 48	0	2	-3	-3	-1	-2	0	3	-3
## 49	-2	3	-2	-3	-3	-3	-3	0	-2
## 50	-2	0	0	-1	1	-1	1	-1	-3
## 51	-3	2	0	2	0	2	2	0	1
## 52	-3	1	0	0	1	1	0	0	0
## 53	-3	2	3	1	1	2	3	-3	1
## 54	-3	2	-1	-3	3	3	-3	-3	-3
## 55	-1	3	-3	-3	1	-2	-3	3	-3
## 56	-3	3	3	3	3	2	2	-1	1
## 57	3	0	-3	-2	-2	-2	-2	2	-3
## 58	-2	2	2	-2	-2	2	-2	0	-3
## 59	-2	3	0	0	0	0	-1	2	-2
## 60	-3	-2	0	-3	-3	-3	-3	-1	-3
## 61	2	1	-3	-2	0	-2	-2	2	-2
## 62	-3	3	1	2	3	2	-3	3	-3
## 63	-3	2	2	1	1	2	1	-1	3
## 64	2	1	-3	-3	-2	1	2	0	-3
## 65	-3	0	-1	0	0	2	2	-1	1
## 66	0	1	0	-3	0	1	0	0	-3
## 67	-2	2	3	-1	1	2	2	-2	2
## 68	-3	1	3	1	1	2	-1	-1	-2
## 69	-1	2	-1	2	2	2	-3	2	-3
## 70	-2	2	-3	1	1	1	-1	0	-2

## 71	-3	0	-3	-3	0	-3	-3	3	-3
## 72	-1	2	-2	0	0	1	2	-2	-3
##	Q_E_UAA1	Q_E_UAA2	Q_E_UAA3	Q_E_AE1	Q_E_AE2	Q_E_AE3	Q_E_AE4		
## 1	0	0	0	3	-1	0	-1		
## 2	3	2	-2	-2	2	2	-2		
## 3	1	1	-2	-2	2	2	-2		
## 4	1	-1	-1	1	1	1	-3		
## 5	0	-1	0	-2	1	-2	0		
## 6	2	2	-3	-3	3	3	-3		
## 7	1	2	-2	-3	3	2	-3		
## 8	2	3	-3	-3	1	3	-3		
## 9	1	2	-3	0	2	2	-1		
## 10	2	2	-2	1	2	2	-2		
## 11	1	2	-2	-2	2	2	-3		
## 12	3	3	-2	0	0	0	1		
## 13	-2	0	0	3	-2	2	-3		
## 14	2	2	-1	-2	2	0	-1		
## 15	3	3	3	-3	2	0	-1		
## 16	2	2	0	-1	3	1	-2		
## 17	1	2	0	0	2	2	0		
## 18	2	2	-2	-3	2	3	-3		
## 19	3	3	-3	2	0	3	1		
## 20	0	3	0	-2	3	2	-1		
## 21	2	2	-3	-2	1	2	-2		
## 22	2	-1	0	-2	2	1	-2		
## 23	3	3	-3	-3	3	3	-3		
## 24	0	0	0	1	0	0	1		
## 25	1	1	-1	1	1	1	0		
## 26	1	2	-3	0	2	2	-3		
## 27	-2	-1	0	1	1	-1	1		
## 28	0	0	-2	-2	2	3	-2		
## 29	3	2	-2	3	-1	-1	-3		
## 30	2	2	-1	-1	3	3	-3		
## 31	3	3	-3	-3	3	3	-3		
## 32	2	2	-2	2	1	2	-1		
## 33	0	0	0	0	-1	0	-3		
## 34	1	2	-2	-1	2	2	-1		
## 35	2	2	-3	0	1	1	-2		
## 36	1	1	-2	-1	1	1	-2		

## 37	3	3	3	3	3	3	-1
## 38	2	0	0	-3	1	1	-3
## 39	1	1	1	-3	2	2	-3
## 40	3	1	-3	1	2	1	0
## 41	1	2	0	-3	2	2	-3
## 42	3	3	-3	-3	3	3	-3
## 43	0	0	1	-2	2	-1	-2
## 44	3	3	-3	1	1	2	-1
## 45	1	1	-2	-2	2	1	-2
## 46	3	3	-3	1	2	3	-2
## 47	1	2	-3	-3	3	2	-3
## 48	1	1	-3	2	-2	1	-1
## 49	1	0	-1	3	1	2	3
## 50	0	0	-2	0	1	2	-2
## 51	2	2	0	-1	0	1	-1
## 52	1	1	1	0	1	1	0
## 53	2	1	-3	-3	3	3	-3
## 54	2	2	0	-2	3	3	-3
## 55	2	3	-3	1	1	2	-3
## 56	0	0	0	-3	3	0	-1
## 57	3	3	-3	3	-3	3	3
## 58	3	1	1	-2	2	2	-1
## 59	2	2	-3	-1	1	3	-2
## 60	2	1	-2	-3	3	1	-3
## 61	-2	-2	2	2	-2	-3	-2
## 62	3	2	2	-3	3	3	-3
## 63	2	2	-2	-2	1	2	-3
## 64	1	1	0	2	-3	1	1
## 65	2	-2	-1	-3	2	-2	1
## 66	0	0	-3	0	0	0	-3
## 67	1	1	-3	-2	2	2	-2
## 68	3	3	3	-2	2	3	-3
## 69	2	3	-3	0	0	2	-2
## 70	3	-1	0	-1	2	1	0
## 71	2	3	-3	-3	2	2	-3
## 72	3	2	-3	-2	3	3	-3
##	AttentionCheck_DE_1 AttentionCheck_DE_2 AttentionCheck_DE_3						
## 1		0		-3			3
## 2		0		-3			3

## 3	0	-3	3
## 4	0	-3	3
## 5	0	-3	3
## 6	0	-3	3
## 7	0	-3	3
## 8	0	-3	3
## 9	0	-3	3
## 10	0	-3	3
## 11	0	-3	3
## 12	0	-3	3
## 13	0	-3	3
## 14	0	-3	3
## 15	0	-3	3
## 16	0	-3	3
## 17	0	-3	3
## 18	0	-3	3
## 19	0	-3	3
## 20	0	-3	3
## 21	0	-3	3
## 22	0	-3	3
## 23	0	-3	3
## 24	0	-3	3
## 25	0	-3	3
## 26	0	-3	3
## 27	0	-3	3
## 28	0	-3	3
## 29	0	-3	3
## 30	0	-3	3
## 31	0	-3	3
## 32	0	-3	3
## 33	0	-3	3
## 34	0	-3	3
## 35	0	-3	3
## 36	0	-3	3
## 37	0	-3	3
## 38	0	-3	3
## 39	0	-3	3
## 40	0	-3	3
## 41	0	-3	3

## 42	0	-3	3
## 43	0	-3	3
## 44	0	-3	3
## 45	0	-3	3
## 46	0	-3	3
## 47	0	-3	3
## 48	0	-3	3
## 49	0	-3	3
## 50	0	-3	3
## 51	0	-3	3
## 52	0	-3	3
## 53	0	-3	3
## 54	0	-3	3
## 55	0	-3	3
## 56	0	-3	3
## 57	0	-3	3
## 58	0	-3	3
## 59	0	-3	3
## 60	0	-3	3
## 61	0	-3	3
## 62	0	-3	3
## 63	0	-3	3
## 64	0	-3	3
## 65	0	-3	3
## 66	0	-3	3
## 67	0	-3	3
## 68	0	-3	3
## 69	0	-3	3
## 70	0	-3	3
## 71	0	-3	3
## 72	0	-3	3
##	AttentionCheck_DE_4	AttentionCheck_DE_5	AttentionCheck_DE_6
## 1	2	3	-3
## 2	2	3	-3
## 3	2	3	-3
## 4	2	3	-3
## 5	2	3	-3
## 6	2	3	-3
## 7	2	3	-3

## 8	2	3	-3
## 9	2	3	-3
## 10	2	3	-3
## 11	2	3	-3
## 12	2	3	-3
## 13	2	3	-3
## 14	2	3	-3
## 15	2	3	-3
## 16	2	3	-3
## 17	2	3	-3
## 18	2	3	-3
## 19	2	3	-3
## 20	2	3	-3
## 21	2	3	-3
## 22	2	3	-3
## 23	2	3	-3
## 24	2	3	-3
## 25	2	3	-3
## 26	2	3	-3
## 27	2	3	-3
## 28	2	3	-3
## 29	2	3	-3
## 30	2	3	-3
## 31	2	3	-3
## 32	2	3	-3
## 33	2	3	-3
## 34	2	3	-3
## 35	2	3	-3
## 36	2	3	-3
## 37	2	3	-3
## 38	2	3	-3
## 39	2	3	-3
## 40	2	3	-3
## 41	2	3	-3
## 42	2	3	-3
## 43	2	3	-3
## 44	2	3	-3
## 45	2	3	-3
## 46	2	3	-3

## 47	2		3			-3
## 48	2		3			-3
## 49	2		3			-3
## 50	2		3			-3
## 51	2		3			-3
## 52	2		3			-3
## 53	2		3			-3
## 54	2		3			-3
## 55	2		3			-3
## 56	2		3			-3
## 57	2		3			-3
## 58	2		3			-3
## 59	2		3			-3
## 60	2		3			-3
## 61	2		3			-3
## 62	2		3			-3
## 63	2		3			-3
## 64	2		3			-3
## 65	2		3			-3
## 66	2		3			-3
## 67	2		3			-3
## 68	2		3			-3
## 69	2		3			-3
## 70	2		3			-3
## 71	2		3			-3
## 72	2		3			-3
##	AttentionCheck_DE_7	Q_DE_HLA1	Q_DE_HLA2	Q_DE_HLA3	Q_DE_HLA4	Q_DE_HLB1
## 1	1	-2	-2	-2	-2	-3
## 2	1	-3	-3	-3	-1	-3
## 3	1	2	2	2	2	-1
## 4	1	-3	-3	-3	-3	-2
## 5	1	3	3	3	3	3
## 6	1	0	0	0	0	1
## 7	1	-3	-3	-3	-2	1
## 8	1	-3	-3	-3	-3	-3
## 9	1	0	-3	-3	0	0
## 10	1	0	0	0	0	-1
## 11	1	0	0	0	0	-1
## 12	1	-3	-3	-3	-3	-1

## 13	1	-3	-3	-1	1	-1
## 14	1	-3	-3	-3	-3	-2
## 15	1	3	3	3	3	3
## 16	1	3	3	3	3	3
## 17	1	1	1	2	1	1
## 18	1	-2	-3	-2	-3	-2
## 19	1	-2	-1	-2	-2	-1
## 20	1	0	0	0	-1	0
## 21	1	-1	-1	-1	-1	-2
## 22	1	-1	-1	-3	0	-1
## 23	1	-3	-3	-3	-3	-3
## 24	1	-3	-3	-3	-3	-1
## 25	1	-2	-3	-1	-2	-3
## 26	1	1	2	2	2	-1
## 27	1	-2	-2	-2	-2	-2
## 28	1	-2	-2	-2	-1	-2
## 29	1	-3	-3	-2	-3	1
## 30	1	-2	-3	-3	-3	0
## 31	1	1	0	1	2	3
## 32	1	1	0	1	0	2
## 33	1	-3	2	2	1	1
## 34	1	2	2	2	1	1
## 35	1	-3	-3	-3	-3	-3
## 36	1	-3	-3	-2	-3	-2
## 37	1	1	1	1	1	1
## 38	1	-1	0	1	1	-1
## 39	1	0	0	0	1	-1
## 40	1	-3	-3	-3	-3	-3
## 41	1	1	-1	-1	0	2
## 42	1	-3	-3	-3	-3	-3
## 43	1	2	2	2	1	2
## 44	1	1	1	1	-2	1
## 45	1	-2	-2	-2	-3	0
## 46	1	0	-3	-3	-3	-1
## 47	1	-3	-3	-3	0	1
## 48	1	1	2	1	1	-3
## 49	1	-3	-3	-3	-3	-3
## 50	1	1	1	1	1	-2
## 51	1	2	2	2	2	2

## 52	1	-2	-2	-1	-1	0		
## 53	1	-3	-3	-3	-3	1		
## 54	1	-3	-3	-3	-3	-3		
## 55	1	-1	-3	-3	-3	-2		
## 56	1	-3	-3	-3	-3	0		
## 57	1	-2	-1	-1	-3	-2		
## 58	1	-3	-3	-3	-3	-2		
## 59	1	-3	-3	-2	-3	-3		
## 60	1	-3	-3	-3	-3	-3		
## 61	1	-2	-2	-2	-3	-2		
## 62	1	2	-3	2	1	3		
## 63	1	-3	-3	-3	-3	-2		
## 64	1	-3	-3	-2	-3	-3		
## 65	1	2	2	3	2	1		
## 66	1	-3	-3	0	-3	-3		
## 67	1	-2	-3	-3	-3	2		
## 68	1	-3	-3	-3	-3	-3		
## 69	1	-2	-3	-2	-3	0		
## 70	1	-1	-2	-3	-3	1		
## 71	1	-3	-3	-3	-3	-3		
## 72	1	2	3	2	2	1		
##	Q_DE_HLB2	Q_DE_HLB3	Q_DE_HLB4	Q_DE_HLB5	Q_DE_NA1	Q_DE_NA2	Q_DE_NA3	Q_DE_NA4
## 1	2	1	0	0	-2	-1	-2	-3
## 2	-2	-3	-2	-1	-1	-2	-2	-1
## 3	1	2	2	2	-1	2	2	1
## 4	1	1	-1	-1	1	1	2	1
## 5	3	3	3	3	-2	3	3	2
## 6	1	1	0	1	-1	0	-1	0
## 7	-2	-1	-2	-2	-3	-1	-3	-2
## 8	-3	-3	-3	-3	-3	2	2	3
## 9	0	0	0	3	3	3	3	3
## 10	0	-1	-1	-1	-1	0	-2	0
## 11	1	1	0	1	-1	0	1	1
## 12	1	1	-1	1	-1	-2	-3	0
## 13	-1	1	-1	1	-3	1	1	1
## 14	1	0	1	-2	-3	0	-2	0
## 15	3	3	3	3	2	3	0	-3
## 16	3	3	3	3	3	3	2	3
## 17	1	0	1	1	1	1	-1	0

## 18	-3	-2	-2	-3	3	2	3	2
## 19	-1	0	-2	-2	-1	-3	-3	-3
## 20	3	3	2	3	-1	1	1	2
## 21	-2	-1	-2	-1	-2	-1	-3	-1
## 22	1	1	-1	1	-1	-1	-2	-1
## 23	-3	-3	-3	-3	3	2	3	1
## 24	-2	-3	-1	-2	-2	-1	-2	-3
## 25	1	-1	-1	-1	-3	-1	-3	-1
## 26	2	1	1	1	-1	-3	1	-3
## 27	-1	-3	-1	-2	-2	-2	-2	-2
## 28	1	-3	-3	-1	1	-2	-2	-1
## 29	1	1	0	0	-3	-2	-3	-2
## 30	2	0	-3	-1	1	0	1	0
## 31	2	3	1	3	-1	0	-3	2
## 32	0	0	1	1	0	1	0	1
## 33	1	1	1	2	-3	-3	-3	0
## 34	2	1	1	1	2	1	2	2
## 35	-2	-3	-3	-3	-3	-3	-3	-3
## 36	-2	1	-2	0	-1	-2	-3	1
## 37	1	3	2	3	1	-3	-3	-3
## 38	1	1	1	1	1	1	1	1
## 39	2	1	1	2	-2	0	1	-1
## 40	-3	1	-3	-2	-3	-3	-3	-3
## 41	1	0	-2	-2	-2	1	-1	-2
## 42	-3	-3	-3	-2	2	3	-2	3
## 43	2	2	2	2	0	1	0	1
## 44	1	2	1	1	-3	1	-1	-1
## 45	-2	3	-1	0	-3	0	3	-3
## 46	0	0	-3	-2	-3	-3	-3	-2
## 47	2	2	2	3	-3	-1	2	-1
## 48	-3	-3	-3	-2	-3	0	-2	-1
## 49	-3	-2	-3	-3	-3	-3	-3	-2
## 50	-1	1	1	1	-2	1	-2	-2
## 51	2	2	2	2	2	3	2	2
## 52	0	1	2	1	-1	0	2	0
## 53	-1	1	-1	-1	3	3	3	3
## 54	-2	-3	-3	-3	-3	-3	-3	-3
## 55	-1	-1	-3	-2	-3	-3	-3	1
## 56	2	3	-1	3	-3	-3	-1	-3

## 57	-1	-3	-2	-2	-3	-1	1	-3
## 58	-1	-1	-2	-2	-3	-1	-3	-2
## 59	-2	-2	-2	-2	-2	-2	1	-1
## 60	-3	-3	-3	-3	-3	-3	-3	-3
## 61	-1	-2	-2	-2	-2	-2	-2	-3
## 62	1	3	3	3	3	-1	-3	2
## 63	-2	-2	-2	-2	1	3	3	2
## 64	-3	-3	-3	-2	-2	-1	-2	-2
## 65	1	1	1	0	-2	3	2	2
## 66	1	1	-1	1	-1	-1	1	0
## 67	2	2	2	2	-2	0	-3	-2
## 68	-3	-3	-3	-3	-3	1	2	1
## 69	1	1	-1	-1	-3	-2	-1	-3
## 70	1	1	1	1	-1	-2	-2	0
## 71	-2	-3	-1	-3	-3	-2	-2	-3
## 72	2	2	1	1	-3	2	2	2
##	Q_DE_NA5	Q_DE_NB1	Q_DE_NB2	Q_DE_NB3	Q_DE_AAS1	Q_DE_AAS2	Q_DE_AAS3	Q_DE_AU1
## 1	-3	-3	0	-1	1	-1	-1	1
## 2	2	-2	-2	-2	2	-1	2	2
## 3	1	1	2	1	1	1	2	1
## 4	1	-3	-2	1	2	3	2	1
## 5	2	3	3	3	2	3	2	-2
## 6	1	-1	1	1	2	2	2	3
## 7	1	-3	-1	-3	3	3	3	2
## 8	2	-3	3	1	3	3	3	3
## 9	3	3	3	3	3	3	3	3
## 10	0	-3	1	-1	-1	1	1	2
## 11	0	-2	0	0	2	2	2	2
## 12	0	1	1	1	2	2	2	3
## 13	-1	-2	1	1	0	2	0	2
## 14	0	-3	2	-1	1	2	0	2
## 15	2	3	2	3	3	3	2	0
## 16	3	3	3	3	3	3	3	1
## 17	1	-2	1	-1	1	2	2	1
## 18	3	2	2	3	3	3	3	3
## 19	-2	-3	-1	-3	0	0	-3	-2
## 20	1	0	2	2	2	1	0	3
## 21	1	-3	-3	-2	1	1	-1	-2
## 22	-1	-2	1	-2	2	-1	-1	2

## 23	3	-3	3	3	3	3	3	3
## 24	-1	-3	-1	-2	0	-1	-2	0
## 25	-2	-2	-1	1	1	2	1	1
## 26	2	-3	1	1	2	3	2	1
## 27	-2	-2	-2	-2	-2	-2	-2	1
## 28	-1	-2	-1	1	1	1	0	2
## 29	1	-3	1	-1	3	0	2	3
## 30	2	-1	1	1	1	2	1	1
## 31	3	3	3	3	2	3	2	2
## 32	-1	-3	0	1	1	1	1	2
## 33	-1	-3	1	2	0	0	1	0
## 34	1	-2	1	1	2	2	2	2
## 35	3	0	-2	-3	2	1	2	2
## 36	1	-3	-1	-2	2	2	1	1
## 37	0	3	-3	3	1	1	1	0
## 38	2	1	1	1	1	1	2	1
## 39	1	2	1	1	1	1	1	2
## 40	1	-3	-3	-3	1	-3	2	3
## 41	-2	-3	-1	-2	-1	-2	1	1
## 42	2	-3	2	3	3	3	3	3
## 43	1	-2	2	1	2	2	2	2
## 44	1	0	-2	1	1	3	1	3
## 45	0	-3	-3	1	-3	1	-3	1
## 46	3	-3	-1	-2	3	0	2	-1
## 47	2	-1	1	1	0	0	1	3
## 48	1	-3	-3	-3	1	0	1	1
## 49	1	-3	0	-3	1	1	-1	1
## 50	0	-3	0	0	2	3	3	2
## 51	3	2	3	2	2	2	2	2
## 52	0	0	-1	1	0	1	-1	-1
## 53	2	3	3	3	3	-1	3	1
## 54	1	-3	1	-3	3	3	3	3
## 55	-2	-3	-2	-1	-3	-3	-2	3
## 56	2	0	1	-1	3	3	3	3
## 57	-2	-3	-1	-1	0	0	-1	-1
## 58	1	-3	-2	-2	2	1	2	0
## 59	0	-3	-2	0	1	1	1	2
## 60	1	-3	-1	-3	2	2	3	-1
## 61	-2	-3	-2	-3	-1	-1	-1	0

## 62	-2	-3	3	3	3	3	3	3
## 63	3	3	2	3	2	3	2	0
## 64	0	-3	-2	-2	1	2	2	1
## 65	1	1	1	3	3	3	2	0
## 66	-2	-3	0	-1	0	1	0	0
## 67	2	1	1	2	1	2	2	1
## 68	-1	-1	1	0	3	2	2	3
## 69	-2	-3	-2	0	-2	1	0	2
## 70	-1	-1	1	1	1	1	2	3
## 71	-1	-3	-2	-2	0	0	0	0
## 72	2	-3	1	0	3	3	2	2
##	Q_DE_AU2	Q_DE_AU3	Q_DE_PF1	Q_DE_PF2	Q_DE_PF3	Q_DE_AL1	Q_DE_AL2	Q_DE_AL3
## 1	1	2	-1	-1	0	-2	-1	0
## 2	-2	-1	3	2	1	-3	2	-3
## 3	-1	2	1	1	1	2	2	-2
## 4	1	2	1	1	1	1	-2	1
## 5	2	0	0	-2	1	1	0	1
## 6	2	2	3	2	2	2	3	-3
## 7	1	2	2	3	3	1	3	-3
## 8	3	3	3	3	2	3	3	-3
## 9	2	2	2	3	3	3	2	-3
## 10	2	1	2	2	2	-1	1	-2
## 11	1	3	2	3	2	1	1	-2
## 12	3	3	3	1	3	-1	-2	1
## 13	2	2	0	2	-1	-1	0	1
## 14	2	2	2	1	2	-1	1	-2
## 15	2	3	3	2	2	-3	2	-1
## 16	3	2	3	3	3	3	3	-3
## 17	1	-1	2	1	2	2	1	-1
## 18	2	3	3	2	2	2	3	-3
## 19	-2	-2	-2	3	-3	-3	-3	3
## 20	2	3	3	2	1	2	0	0
## 21	-3	1	0	2	0	2	3	-2
## 22	-1	1	1	-1	-1	1	-1	2
## 23	-3	3	3	3	3	3	3	-3
## 24	0	0	0	0	-1	0	-1	0
## 25	2	2	1	2	1	-2	-1	1
## 26	1	2	2	0	1	2	1	-2
## 27	1	1	-1	1	0	-3	-2	2

## 28	2	2	1	3	0	1	2	-3
## 29	3	3	3	3	3	1	1	0
## 30	0	2	2	3	2	2	0	-3
## 31	2	3	1	2	2	1	3	-3
## 32	2	2	2	2	2	-1	1	0
## 33	1	1	0	-1	0	1	0	-3
## 34	1	1	1	2	1	1	-1	-1
## 35	2	2	2	2	2	1	0	0
## 36	2	1	2	2	2	-1	1	-2
## 37	1	1	3	2	1	-3	-3	3
## 38	1	1	1	1	1	2	1	-2
## 39	1	2	2	2	2	2	3	-3
## 40	3	3	3	-2	1	-3	0	0
## 41	-1	-2	2	-1	-2	-1	2	-2
## 42	3	3	3	3	3	3	3	-3
## 43	2	2	0	2	1	1	0	-2
## 44	2	3	3	3	3	0	0	0
## 45	2	3	-2	2	0	1	-3	3
## 46	2	2	0	-2	1	0	1	-1
## 47	3	3	3	3	3	0	1	-3
## 48	1	1	1	-2	-2	0	0	0
## 49	-1	-1	3	2	2	0	2	-3
## 50	-1	1	2	1	0	1	1	-1
## 51	2	2	2	2	2	2	2	-2
## 52	1	1	1	2	1	-1	0	-2
## 53	-1	-1	1	2	2	2	3	-3
## 54	3	3	3	2	2	1	2	-3
## 55	3	3	3	3	3	-3	-2	2
## 56	1	3	3	1	0	2	3	-3
## 57	-2	0	-2	0	0	-2	-2	3
## 58	0	1	-1	2	1	1	2	-2
## 59	2	2	2	2	1	1	2	-2
## 60	-2	2	2	-3	0	0	3	0
## 61	0	1	0	0	0	-3	-2	2
## 62	3	3	3	3	3	3	3	-3
## 63	0	0	1	2	1	1	2	-3
## 64	0	-2	-1	0	-2	-2	-3	3
## 65	-2	-1	2	0	3	2	1	-2
## 66	1	1	1	1	0	0	0	0

## 67	2	2	1	3	1	1	3	-3
## 68	-1	1	2	3	2	2	3	-3
## 69	1	2	2	2	1	-2	0	0
## 70	3	3	2	1	1	1	2	-2
## 71	0	0	3	0	2	0	1	0
## 72	3	3	2	3	2	0	2	-3
##	Q_DE_AL4	Q_DE_AL5	Q_DE_AS1	Q_DE_AS2	Q_DE_AS3	Q_DE_APP1	Q_DE_APP2	Q_DE_APP3
## 1	1	-1	-1	1	1	-1	2	-2
## 2	0	2	-2	-2	-2	1	3	-3
## 3	1	2	1	1	1	1	-1	1
## 4	3	-1	2	1	2	-1	1	-3
## 5	-1	-2	2	0	3	3	-3	3
## 6	3	1	2	2	3	0	-1	-1
## 7	3	2	-1	1	1	0	-1	1
## 8	3	2	2	3	3	2	-3	-3
## 9	3	2	2	2	3	1	0	1
## 10	2	-1	2	2	-1	0	2	-2
## 11	2	1	2	2	2	1	-1	-1
## 12	2	-3	3	3	-1	1	-1	1
## 13	2	-3	-1	-2	1	1	-1	-3
## 14	1	-1	2	2	0	-2	3	-2
## 15	0	3	1	3	3	2	-2	3
## 16	3	2	3	3	3	3	0	3
## 17	2	2	1	1	1	-1	-1	1
## 18	3	3	3	0	2	1	-3	1
## 19	1	-3	-2	0	1	-2	3	-2
## 20	3	1	3	2	3	2	3	-1
## 21	2	1	0	1	1	-2	-2	-2
## 22	1	-1	1	0	1	0	2	0
## 23	3	3	3	3	1	-3	-3	-3
## 24	1	-2	-1	0	-1	0	0	0
## 25	2	-1	2	1	3	-2	0	-1
## 26	2	-3	2	2	2	0	2	-3
## 27	-1	-2	-1	1	1	-1	2	-2
## 28	1	2	1	1	0	-2	-1	0
## 29	3	-3	3	3	3	-1	3	-1
## 30	3	0	2	3	2	0	-1	-1
## 31	2	3	2	1	3	3	-3	3
## 32	2	1	2	2	2	-3	3	-3

## 33	0	-3	1	-1	-1	-3	3	-3
## 34	1	-1	1	1	1	1	-1	-2
## 35	2	0	0	2	0	1	1	-1
## 36	1	-1	-3	-2	-3	-3	3	-3
## 37	3	-3	-2	-1	1	-3	3	0
## 38	1	1	1	1	1	1	1	0
## 39	1	3	1	1	1	2	2	1
## 40	2	0	0	3	-3	0	-1	-3
## 41	2	3	-2	2	1	-1	1	-3
## 42	3	3	2	3	3	2	-2	-3
## 43	2	-2	2	2	2	0	0	2
## 44	3	-3	2	3	-2	-2	-1	-2
## 45	2	-1	2	2	0	-3	2	-3
## 46	1	-3	-2	1	-2	-2	3	-3
## 47	3	1	3	3	1	0	3	0
## 48	3	-3	-3	1	-2	-3	3	-3
## 49	2	0	-1	-2	-2	-3	0	-3
## 50	1	0	1	1	1	1	-1	-3
## 51	2	1	2	2	2	2	-2	1
## 52	2	0	1	1	1	1	0	0
## 53	3	3	1	1	1	2	-3	1
## 54	0	2	1	-1	2	3	-3	0
## 55	2	-2	-1	3	-2	-2	3	-3
## 56	3	3	2	3	1	1	0	-2
## 57	0	-3	0	-2	0	2	2	-3
## 58	2	2	-1	2	1	-2	3	-2
## 59	2	0	1	2	0	-1	2	-2
## 60	-2	2	-3	-3	-3	1	-1	-3
## 61	1	-3	0	0	0	-3	3	-2
## 62	3	3	3	3	3	3	3	-3
## 63	2	2	0	-2	2	1	-1	3
## 64	-1	-3	-2	-2	-3	2	3	-3
## 65	0	-2	2	1	2	1	0	1
## 66	1	-1	0	0	1	-2	0	-1
## 67	2	3	2	2	2	2	-3	2
## 68	1	2	-2	1	2	-1	2	-2
## 69	2	-2	1	2	1	-3	1	-1
## 70	2	-2	1	3	1	3	1	-2
## 71	0	-2	-2	-1	-3	-3	3	-3

## 72	2	0	2	2	2	1	3	-3
##	Q_DE_UAA1	Q_DE_UAA2	Q_DE_UAA3	Q_DE_AE1	Q_DE_AE2	Q_DE_AE3	Q_DE_AE4	
## 1	0	0	0	2	0	0	-1	
## 2	2	1	0	-3	2	1	-1	
## 3	2	1	-1	-2	2	2	-2	
## 4	1	1	-1	-1	1	1	0	
## 5	-2	0	1	-2	2	-3	1	
## 6	2	2	-3	-3	3	3	-3	
## 7	1	2	1	-3	2	1	-3	
## 8	2	3	2	-3	2	2	2	
## 9	2	2	-3	-2	2	3	-3	
## 10	1	2	-2	0	1	2	-2	
## 11	2	1	-1	-2	2	2	-3	
## 12	3	3	-1	0	0	-1	0	
## 13	1	0	1	2	-2	1	-2	
## 14	2	1	-3	-2	2	2	-2	
## 15	1	1	3	-3	3	2	-2	
## 16	3	3	1	-3	3	3	-3	
## 17	1	2	2	-2	1	1	1	
## 18	3	2	-3	-3	2	2	-3	
## 19	3	1	-1	3	-3	3	3	
## 20	2	1	0	-2	2	2	-2	
## 21	2	2	1	-2	1	1	-2	
## 22	-1	-1	1	1	1	-1	1	
## 23	1	3	-3	-3	3	3	-3	
## 24	-2	0	-1	1	1	1	3	
## 25	1	1	-2	1	-1	1	1	
## 26	2	2	-2	0	2	2	-3	
## 27	-1	-2	1	1	0	-2	2	
## 28	0	1	-2	-2	2	2	-2	
## 29	3	3	3	3	1	2	-1	
## 30	3	3	0	-1	3	2	-2	
## 31	3	2	-3	-2	3	2	-3	
## 32	2	2	-3	1	1	2	-1	
## 33	0	0	0	0	-1	-2	0	
## 34	1	1	-1	-1	1	1	-1	
## 35	2	2	-2	-2	2	2	-2	
## 36	1	2	-2	-2	1	1	-2	
## 37	3	3	-3	0	-1	3	1	

## 38	1	1	-2	-2	1	2	-3
## 39	2	2	2	-2	1	2	-2
## 40	2	2	-2	2	1	0	2
## 41	-2	2	2	1	2	2	1
## 42	3	3	3	-3	3	3	-3
## 43	0	0	0	-3	2	-1	-1
## 44	3	3	-3	-1	3	3	2
## 45	1	1	-2	-2	2	1	-2
## 46	3	3	-3	1	1	1	-1
## 47	2	3	3	-3	2	2	-3
## 48	1	1	-2	2	0	-1	1
## 49	2	2	0	-1	1	2	0
## 50	2	2	2	1	1	2	-1
## 51	2	2	2	-1	2	2	-2
## 52	1	1	1	-1	1	3	-1
## 53	1	2	-3	-3	3	3	-3
## 54	3	2	-3	-3	3	2	-3
## 55	3	2	-3	1	1	2	-1
## 56	0	1	-3	-1	3	0	-2
## 57	3	3	-3	2	-3	3	0
## 58	3	3	-2	-2	3	2	-3
## 59	2	2	-2	-1	2	2	-2
## 60	1	2	-2	-3	2	2	-1
## 61	-2	-1	1	2	-2	-2	1
## 62	3	3	-3	-3	3	3	-3
## 63	2	1	-3	-2	2	3	-3
## 64	-1	-1	0	3	-3	-2	1
## 65	1	0	-1	-2	2	-1	-1
## 66	0	0	-2	1	-2	0	1
## 67	2	1	-2	-2	2	2	-3
## 68	2	2	3	-2	3	3	-3
## 69	3	3	0	-1	-1	3	0
## 70	1	1	-2	-2	2	2	-2
## 71	2	2	-3	-3	3	1	-3
## 72	3	3	-3	-3	3	2	-3

3 Transformation results as input data file for further analysis

3.1 File summative_first_half_transformed.sav

We removed scores of attention control questions and other irrelevant data (e.g. ‘Finished’ and ‘rand_id’), retaining ratings of English items and corresponding German translations. The code excluding people failing attention checks (from the Chinese translation codebase) is still in place. However, for the current study we already excluded participants failing the checks on Qualtrics. **Please note: Since these participants are not paid for their submission, we cannot use or publish their data in any way.**

```
# Select only question items from data frame (incl. attention checks)
# dd1 = all participants
dd1 <- data.frame(cbind(select(d_ASA_1, AttentionCheck_E_1:Q_DE_AE4), select(df, agentName)))

# Filter out participant entries based on failed attention checks
attention_check_filtering <- function(data){
  # Select attention check questions
  # Note: for German translation rounds,
  # no single row should be removed based
  # on failed attention checks. This is already done in Qualtrics.
  # Note: This code chunk remains for 1) the final evaluation 2) legacy compatibility
  i <- grep("AttentionCheck", colnames(data))

  # Select desired answers for attention check questions
  Atten <- c(-3,3,3,-3,0,3,-3,0,-3,3,2,3,-3,1)

  # The following code and comments still remain from the Chinese translation code
  # with minor adjustments:

  x <- NULL # Row number of participant who failed the attention check
  for (j in (1:nrow(data))){
    # Find participants who failed attention check in 'dd1'
    count <- 0
    # The number of incorrectly answered attention control questions of each participant
    for (k in 1:14){

      if (as.numeric(data[[i[k]]][j])!=Atten[k]) # Check whether each participant's
```

```

        # attention control question answers are consistent with the correct answers
        count <- count+1

    }

    if (count>2)
        # Row number of the participant who failed more than two
        # attention control questions were added to 'x'
        x <- append(x,j)
        # Participants who failed more than two attention control questions
    }
m <- length(x) # The number of participants who failed attention check
if (m!=0)
    data <- data[-x,] # Participants who failed attention check were excluded

# Print whether any participants failed attention checks
cat("Amount of participants who failed attention checks: ", m,
    "\nAmount of participants left after filtering based on attention checks: ", nrow(data), "\n")
return(data)
}

#Perform filtering
dd1 <- attention_check_filtering(dd1)

```

```
## Amount of participants who failed attention checks: 0
```

```
## Amount of participants left after filtering based on attention checks: 72
```

All participants' evaluation data were included as none of the participants failed any of the attention control questions (logically). We added prefix R to questions which have the sign [R] in the ASA questionnaire. Then, scores of these questions were inverted. Thus, we obtained the output data `summative_first_half_transformed.sav` for further evaluation.

```

# Add R prefix to inverted score items
colnames(dd1)[colnames(dd1) == "Q_E_AL3"] = "Q_E_R_AL3"
colnames(dd1)[colnames(dd1) == "Q_E_APP2"] = "Q_E_R_APP2"
colnames(dd1)[colnames(dd1) == "Q_E_UAA3"] = "Q_E_R_UAA3"
colnames(dd1)[colnames(dd1) == "Q_E_AE1"] = "Q_E_R_AE1"
colnames(dd1)[colnames(dd1) == "Q_E_AE4"] = "Q_E_R_AE4"

colnames(dd1)[colnames(dd1) == "Q_DE_AL3"] = "Q_DE_R_AL3"
colnames(dd1)[colnames(dd1) == "Q_DE_APP2"] = "Q_DE_R_APP2"

```

```

colnames(dd1)[colnames(dd1) == "Q_DE_UAA3"] ="Q_DE_R_UAA3"
colnames(dd1)[colnames(dd1) == "Q_DE_AE1"] ="Q_DE_R_AE1"
colnames(dd1)[colnames(dd1) == "Q_DE_AE4"] ="Q_DE_R_AE4"

for (i in grep("R",colnames(dd1))){
  # Find column number of reversing-scoring items and translations
  dd1[[i]][] <- dd1[[i]][]*(-1)
  # Reverse scores of reverse-scoring items and translations
}

# Add the 'agentName' column data
dd1$AgentID <- 0 # Add a column 'AgentID' to facilitate analysis for comparison
# between different cultural backgrounds in the main markdown file
# No specific meaning for 14 numbers, just a code for each agent
dd1$AgentID[dd1$agentName=='iCAT']<-1
dd1$AgentID[dd1$agentName=='DEEPBLUE']<-2
dd1$AgentID[dd1$agentName=='AMY']<-3
dd1$AgentID[dd1$agentName=='FURBY']<-4
dd1$AgentID[dd1$agentName=='POPPIE']<-5
dd1$AgentID[dd1$agentName=='SIRI']<-6
dd1$AgentID[dd1$agentName=='HAL 9000']<-7
dd1$AgentID[dd1$agentName=='SIM SENSEI']<-8
dd1$AgentID[dd1$agentName=='CHAPPIE']<-9
dd1$AgentID[dd1$agentName=='AIBO']<-10
dd1$AgentID[dd1$agentName=='SARAH']<-11
dd1$AgentID[dd1$agentName=='NAO']<-12
dd1$AgentID[dd1$agentName=='MARCUS']<-13
dd1$AgentID[dd1$agentName=='DOG']<-14
# Label AgentID for 14 ASAs
attr(dd1$agentName,"label")<-c("iCAT, DEEPBLUE, AMY, FURBY, POPPIE, SIRI,
HAL 9000, SIM SENSEI, CHAPPIE, AIBO, SARAH, NAO, MARCUS, DOG")
# Add label to 'AgentID'
attr(dd1$AgentID,"label")<-c("1=iCAT, 2=DEEPBLUE, 3=AMY, 4=FURBY, 5=POPPIE, 6=SIRI,
7=HAL 9000, 8=SIM SENSEI, 9=CHAPPIE, 10=AIBO, 11=SARAH, 12=NAO, 13=MARCUS, 14=DOG")
# Add label to 'AgentID'

```