mci_style_neu_rating_array_generation.R

2024-01-04

```
## ARRAY GENERATION FOR STORY RATINGS ##
# Script generates arrays for context story ratings that can be read into
# jsPsych files. The rating itself is programmed in jsPsych (de Leeuw et al.,
# 2023) and hosted on the Jatos server (Lange et al., 2015)

## Setup ## ------------------------------------------------

library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------- tidyverse 2.0.0 --
## v dplyr     1.1.2     v readr     2.1.4
## v forcats   1.0.0     v stringr   1.5.0
## v ggplot2   3.4.2     v tibble    3.2.1
## v lubridate 1.9.2     v tidyr     1.3.0
## v purrr     1.0.1
## -- Conflicts ------------------------------------------- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
sessionInfo()
```

```
## R version 4.3.1 (2023-06-16)
## Platform: x86_64-apple-darwin20 (64-bit)
## Running under: macOS Ventura 13.4.1
##
## Matrix products: default
## BLAS:   /System/Library/Frameworks/Accelerate.framework/Versions/A/Frameworks/vecLib.framework/Versions/A/libBLAS.dylib
```

```
## LAPACK: /Library/Frameworks/R.framework/Versions/4.3-x86_64/Resources/lib/libRlapack.dylib;  LAPACK version 3.11.0
##
## locale:
## [1] en_US.UTF-8/en_US.UTF-8/en_US.UTF-8/C/en_US.UTF-8/en_US.UTF-8
##
## time zone: Europe/Berlin
## tzcode source: internal
##
## attached base packages:
## [1] stats     graphics  grDevices datasets  utils     methods   base
##
## other attached packages:
##  [1] lubridate_1.9.2 forcats_1.0.0   stringr_1.5.0   dplyr_1.1.2
##  [5] purrr_1.0.1     readr_2.1.4     tidyr_1.3.0     tibble_3.2.1
##  [9] ggplot2_3.4.2   tidyverse_2.0.0
##
## loaded via a namespace (and not attached):
##  [1] gtable_0.3.3      compiler_4.3.1    renv_0.12.0       tidyselect_1.2.0
##  [5] scales_1.2.1      yaml_2.3.7        fastmap_1.1.1     here_1.0.1
##  [9] R6_2.5.1          generics_0.1.3    knitr_1.43        munsell_0.5.0
## [13] rprojroot_2.0.3   tzdb_0.4.0        pillar_1.9.0      rlang_1.1.1
## [17] utf8_1.2.3        stringi_1.7.12    xfun_0.39         timechange_0.2.0
## [21] cli_3.6.1         withr_2.5.0       magrittr_2.0.3    digest_0.6.33
## [25] grid_4.3.1        rstudioapi_0.15.0 hms_1.1.3         lifecycle_1.0.3
## [29] vctrs_0.6.3       evaluate_0.21     glue_1.6.2        fansi_1.0.4
## [33] colorspace_2.1-0  rmarkdown_2.23    tools_4.3.1       pkgconfig_2.0.3
## [37] htmltools_0.5.5
```

```
Sys.setlocale("LC_ALL", "de_DE.UTF-8")
```

```
## [1] "de_DE.UTF-8/de_DE.UTF-8/de_DE.UTF-8/C/de_DE.UTF-8/en_US.UTF-8"
```

```
## Read in stimulus list as data frame ## ------------------

df <- read.csv2(here::here(
  "ratings", "raw", "stimuli", "stimuli.csv"),
  sep = ";", encoding = "UTF8") %>% filter(!is.na(context_no))
length(unique(df$context_no))
```

```
## [1] 50
```

```
colnames(df)
```

```
## [1] "context_no" "fairytale"  "unmarked"   "intuitive"  "MCI"        "SEV"
```

```
## Generate two data frames ## ----------------------------
# A) fairy tale context for even and unmarked context for uneven numbers
# B) unmarked context for even and fairy tale context for uneven numbers
df$context_no <- as.numeric(as.character(df$context_no))

even <- df %>% filter(context_no %% 2 == 0)
uneven <- df %>% filter(context_no %% 2 == 1)

versiona <- rbind(even %>% rename(story=fairytale) %>%
                    mutate(style="fairytale") %>%
                    select(context_no, style, story),
                  uneven %>% rename(story=unmarked) %>%
                    mutate(style="unmarked") %>%
                    select(context_no, style, story)) %>%
  arrange(context_no)
versionb <- rbind(uneven %>% rename(story=fairytale) %>%
                    mutate(style="fairytale") %>%
                    select(context_no, style, story),
                  even %>% rename(story=unmarked) %>%
                    mutate(style="unmarked") %>%
                    select(context_no, style, story)) %>%
  arrange(context_no)

## Create vector as needed in jspsych and save as .txt ## ------------
# Each line is written in "[],\n", each column is separated by ",",
# and characters are embedded in ' '. The first element has an
# additional "[", and the last element "]]" instead of "],\n".
colnames(versiona)
```

```
## [1] "context_no" "style"      "story"
```

```
versiona <- versiona %>%
  mutate(context_no = paste0("[", context_no, ",", sep=""),
         style = paste0("'", style, "',", sep=""),
         story = paste0("'", story, "'],\n"))
versiona[1,1] <- paste0("[", versiona[1,1])
versiona[nrow(versiona), ncol(versiona)] <-
  paste0(stringr::str_sub(versiona[nrow(versiona), ncol(versiona)], end=-3),
         "]", sep="")
versiona_final <- apply(versiona, 1,
                        function(row) paste(row, collapse = ""))
versiona_final <- paste(versiona_final, collapse = "")
writeLines(versiona_final, here::here(
  "ratings", "raw", "stimuli", "versiona.txt"))

colnames(versionb)
```

```
## [1] "context_no" "style"      "story"
```

```
versionb <- versionb %>%
  mutate(context_no = paste0("[", context_no, ",", sep=""),
         style = paste0("'", style, "',", sep=""),
         story = paste0("'", story, "'],\n"))
versionb[1,1] <- paste0("[", versionb[1,1])
versionb[nrow(versionb), ncol(versionb)] <-
  paste0(stringr::str_sub(versionb[nrow(versionb), ncol(versionb)], end=-3),
         "]", sep="")
versionb_final <- apply(versionb, 1,
                        function(row) paste(row, collapse = ""))
versionb_final <- paste(versionb_final, collapse = "")
writeLines(versionb_final, here::here(
  "ratings", "raw", "stimuli", "versionb.txt"))
```