Generate clean US data

ddd

11/7/2020

- go back and delete dashes
- Mutual friends Tom edit
- decide what to do with unclassifiable race posts

NF

```
to.char.list <- c("participant_id", "post_tenure", "nf_group..y.n.", "event..y.n.")
participant.log.cdr1 <- read.csv("Data/RA Protocol/CDR/Wave 1 Participant Log.csv")
participant.log.cdr1$source <- "CDR 1"</pre>
participant.log.cdr1$participant_id <- as.character(participant.log.cdr1$participant_id)</pre>
newsfeed.df.cdr1 <- read.csv("Data/RA Protocol/CDR/Wave 1 NF.csv")</pre>
newsfeed.df.cdr1$source <- "CDR 1"</pre>
for (var in to.char.list) {
 newsfeed.df.cdr1[[var]] <- as.character(newsfeed.df.cdr1[[var]])</pre>
}
nrow(participant.log.cdr1) - length(unique(participant.log.cdr1$participant_id))
## [1] 0
participant.log.hdsl <- read.csv("Data/RA Protocol/HDSL/Facebook Study Master Sheet - HDSL - Participan
participant.log.hdsl$source <- "HDSL"</pre>
participant.log.hdsl$participant_id <- as.character(participant.log.hdsl$participant_id)</pre>
newsfeed.df.hdsl <- read.csv("Data/RA Protocol/HDSL/Facebook Study Master Sheet - HDSL - NF.csv")
newsfeed.df.hdsl$source <- "HDSL"</pre>
for (var in to.char.list) {
 newsfeed.df.hdsl[[var]] <- as.character(newsfeed.df.hdsl[[var]])</pre>
nrow(participant.log.hdsl) - length(unique(participant.log.hdsl$participant_id))
## [1] 0
participant.log.cdr2 <- read.csv("Data/RA Protocol/CDR/Wave 2 Participant Log.csv")
```

```
participant.log.cdr2$source <- "CDR 2"</pre>
participant.log.cdr2$participant_id <- as.character(participant.log.cdr2$participant_id)</pre>
newsfeed.df.cdr2 <- read.csv("Data/RA Protocol/CDR/Wave 2 NF.csv")</pre>
newsfeed.df.cdr2$source <- "CDR 2"</pre>
for (var in to.char.list) {
 newsfeed.df.cdr2[[var]] <- as.character(newsfeed.df.cdr2[[var]])</pre>
}
nrow(participant.log.cdr2) - length(unique(participant.log.cdr2$participant_id))
## [1] 0
participant.log.cdr3 <- read.csv("Data/RA Protocol/CDR/Wave 3 Participant Log.csv")</pre>
participant.log.cdr3$source <- "CDR 3"</pre>
participant.log.cdr3$participant_id <- as.character(participant.log.cdr3$participant_id)</pre>
newsfeed.df.cdr3 <- read.csv("Data/RA Protocol/CDR/Wave 3 NF.csv")</pre>
newsfeed.df.cdr3$source <- "CDR 3"</pre>
for (var in to.char.list) {
  if(var %in% colnames(newsfeed.df.cdr3)) {
    newsfeed.df.cdr3[[var]] <- as.character(newsfeed.df.cdr3[[var]])</pre>
  }
}
nrow(participant.log.cdr3) - length(unique(participant.log.cdr3$participant id))
## [1] O
participant.log.cdr4 <- read.csv("Data/RA Protocol/CDR/Wave 4 Participant Log.csv")</pre>
participant.log.cdr4$source <- "CDR 4"</pre>
participant.log.cdr4$participant_id <- as.character(participant.log.cdr4$participant_id)</pre>
newsfeed.df.cdr4 <- read.csv("Data/RA Protocol/CDR/Wave 4 NF.csv")</pre>
newsfeed.df.cdr4$source <- "CDR 4"</pre>
for (var in to.char.list) {
  if(var %in% colnames(newsfeed.df.cdr3)) {
  newsfeed.df.cdr4[[var]] <- as.character(newsfeed.df.cdr4[[var]])</pre>
  }
}
nrow(participant.log.cdr4) - length(unique(participant.log.cdr4$participant_id))
## [1] 0
newsfeed.combined.raw <- bind_rows(newsfeed.df.cdr1,</pre>
                                     newsfeed.df.hdsl,
                                     newsfeed.df.cdr2,
                                     newsfeed.df.cdr3,
                                     newsfeed.df.cdr4)
```

```
p.log.combined.raw <- bind_rows(participant.log.cdr1,</pre>
                                 participant.log.hdsl,
                                 participant.log.cdr2,
                                 participant.log.cdr3,
                                 participant.log.cdr4)
newsfeed.combined.raw <- newsfeed.combined.raw %>% filter(participant_id != "")
p.log.combined.raw <- p.log.combined.raw %>% filter(participant_id != "")
merged.combined.raw <- merge(p.log.combined.raw, newsfeed.combined.raw, by = c("participant_id", "sourc
(length(unique(newsfeed.combined.raw$participant_id)) - length(unique(merged.combined.raw$participant_id))
## [1] 0.03901734
nrow(p.log.combined.raw)
## [1] 692
(nrow(newsfeed.combined.raw) - nrow(merged.combined.raw))/nrow(newsfeed.combined.raw)
## [1] 0.03847338
table(p.log.combined.raw$source)
## CDR 1 CDR 2 CDR 3 CDR 4 HDSL
     249
            64
                125
                        52
                              202
# delete useless columns
merged.combined.raw$X <- NULL</pre>
merged.combined.raw$X.1 <- NULL</pre>
merged.combined.raw$X.2 <- NULL</pre>
merged.combined.raw$Mutual.Friends..Tom.Edit. <- NULL
# ignore the phantom row if there's no RA_id
#merged.combined.raw <- merged.combined.raw %>% filter(RA_id != "")
# remove commas and safely convert factor to numeric
 merged.combined.raw$total_friends <- as.numeric(gsub(",", "", merged.combined.raw$total_friends))</pre>
  #as.numeric(levels(participant.log$total_friends))[participant.log$total_friends] .... if it happens
# deal with gender variations
  merged.combined.raw$subject_gender_RA <- tolower(merged.combined.raw$subject_gender_RA)
# deal with race variations
    merged.combined.raw$subject_race_RA <- tolower(merged.combined.raw$subject_race_RA)
# ignore phantom rows
merged.combined.raw <- merged.combined.raw[!is.na(merged.combined.raw$preference..1.7.) & !is.na(merged
# clean up names
  colnames(merged.combined.raw) <- c("participant.id",</pre>
                              "source",
                              "RA_id",
                              "date",
```

```
"start_time",
                             "end_time",
                             "subject_race_RA",
                             "subject_gender_RA",
                             "total_friends",
                             "p_log_notes",
                             "manual_flag_p_log",
                             "study_about",
                   "nf.order",
                   "preference",
                   "post.tenure",
                   "tenure.units",
                   "human",
                   "nf.group",
                   "unrest",
                   "event",
                   "poster.nf.race.1.ra",
                   "poster.nf.race.2.ra",
                   "poster.nf.gender",
                   "nf.ra.notes",
                   "manual_flag_nf_log",
                   "familiarity",
                   "relationship",
                   "common.friends"
  merged.combined.raw$poster.nf.race.1.ra <- tolower(merged.combined.raw$poster.nf.race.1.ra)
  merged.combined.raw$poster.nf.race.2.ra <- tolower(merged.combined.raw$poster.nf.race.2.ra)
  merged.combined.raw$poster.nf.gender <- tolower(merged.combined.raw$poster.nf.gender)
# drop more phantom rows
  merged.combined.raw <- merged.combined.raw %>% filter(poster.nf.race.1.ra != 'wjoye')
  merged.combined.raw$poster.nf.race.1.ra <- ifelse(merged.combined.raw$poster.nf.race.1.ra %in% c("bla
merged.combined.raw$poster.nf.race.1.ra <- ifelse(merged.combined.raw$poster.nf.race.1.ra %in% c("asian
merged.combined.raw$race.in.group <- ((merged.combined.raw$poster.nf.race.1.ra == merged.combined.raw$s
merged.combined.raw$gender.in.group <- merged.combined.raw$poster.nf.gender == merged.combined.raw$subj
merged.combined.raw <- merged.combined.raw %>% filter(subject_race_RA != "")
merged.combined.raw <- merged.combined.raw %>% filter(preference <= 7)
merged.combined.raw <- merged.combined.raw %>% filter(nf.order <= 60)
merged.combined.raw$date <- paste0(merged.combined.raw$date, "/2020")
merged.combined.raw$date <- mdy(merged.combined.raw$date)</pre>
merged.combined.raw$primary.id <- paste0(merged.combined.raw$date, merged.combined.raw$participant.id)
length(unique(merged.combined.raw$primary.id))
```

```
## [1] 662
to.missing <- c("", "`", "rs", "Years", ",")
to.mins <- c("m", "maleinutes", "min", "mins", "minutes", "Minutes", "minw")
to.hours <- c("hours", "Hours")</pre>
to.days <- c("days", "Days", "day", "fays")
merged.combined.raw$tenure.units <- as.character(merged.combined.raw$tenure.units)</pre>
merged.combined.raw$tenure.units <- ifelse(merged.combined.raw$tenure.units %in% to.missing,
                                          NA.
                                          merged.combined.raw$tenure.units)
merged.combined.raw$tenure.units <- ifelse(merged.combined.raw$tenure.units %in% to.mins,
                                          "mins",
                                          merged.combined.raw$tenure.units)
merged.combined.raw$tenure.units <- ifelse(merged.combined.raw$tenure.units %in% to.hours,
                                          "hours",
                                          merged.combined.raw$tenure.units)
merged.combined.raw$tenure.units <- ifelse(merged.combined.raw$tenure.units %in% to.days,
                                          "days",
                                          merged.combined.raw$tenure.units)
merged.combined.raw$post.tenure <- as.numeric(as.character(merged.combined.raw$post.tenure))</pre>
## Warning: NAs introduced by coercion
# clean up
merged.combined.raw$nf.group <- as.numeric(as.character(merged.combined.raw$nf.group))
## Warning: NAs introduced by coercion
merged.combined.raw$nf.group <- with(merged.combined.raw, ifelse(nf.group %in% 0:1,
                                                                  nf.group,
                                                                  NA))
write.csv(merged.combined.raw, file = "Temp/Clean US Data NF.csv")
```

PYMK

```
colnames(pymk.combined.raw) <- c("participant_id",</pre>
                   "pymk.order",
                   "familiarity",
                   "mutual.friends",
                   "poster.pymk.race.1.ra",
                   "poster.pymk.race.2.ra",
                   "poster.pymk.gender",
                   "pymk.ra.notes",
                   "manual_flag",
                   "source")
  pymk.combined.raw$poster.pymk.race.1.ra <- tolower(pymk.combined.raw$poster.pymk.race.1.ra)
  pymk.combined.raw$poster.pymk.race.2.ra <- tolower(pymk.combined.raw$poster.pymk.race.2.ra)
  pymk.combined.raw$poster.pymk.gender <- tolower(pymk.combined.raw$poster.pymk.gender)
# drop more phantom rows
  pymk.combined.raw <- pymk.combined.raw %>% filter(participant_id != "")
  merged.combined.raw <- merge(p.log.combined.raw, pymk.combined.raw, by = c("participant_id", "source"
     merged.combined.raw$poster.pymk.race.1.ra <- ifelse(merged.combined.raw$poster.pymk.race.1.ra %in%
     merged.combined.raw$poster.pymk.race.2.ra <- ifelse(merged.combined.raw$poster.pymk.race.2.ra %in%
  merged.combined.raw$subject_race_RA <- tolower(merged.combined.raw$subject_race_RA)
   merged.combined.raw$subject_gender_RA <- tolower(merged.combined.raw$subject_gender_RA)
  merged.combined.raw$race.in.group <- ((merged.combined.raw$poster.pymk.race.1.ra == merged.combined.r
merged.combined.raw$gender.in.group <- merged.combined.raw$poster.pymk.gender == merged.combined.raw$su
merged.combined.raw$date <- paste0(merged.combined.raw$date, "/2020")
merged.combined.raw$date <- mdy(merged.combined.raw$date)</pre>
merged.combined.raw$primary.id <- paste0(merged.combined.raw$date, merged.combined.raw$participant_id)
merged.combined.raw <- merged.combined.raw %>% filter(familiarity <= 7)
merged.combined.raw <- merged.combined.raw %>% filter(!is.na(pymk.order))
  write.csv(merged.combined.raw, file = "Temp/Clean US Data PYMK.csv")
  dim(merged.combined.raw)
## [1] 25052
                23
  length(unique(merged.combined.raw$participant id))
## [1] 417
```

Recent

```
recent.cdr.1 <- read.csv("Data/RA Protocol/CDR/Recent 1.csv")</pre>
recent.cdr.1$source <- "CDR 2"
recent.cdr.2 <- read.csv("Data/RA Protocol/CDR/Recent 2.csv")</pre>
recent.cdr.2$source <- "CDR 4"
recent.combined.raw <- bind_rows(recent.cdr.1, recent.cdr.2)</pre>
recent.combined.raw <- recent.combined.raw[!is.na(recent.combined.raw$react) & !is.na(recent.combined.r
# clean up names
  colnames(recent.combined.raw) <- c("participant_id",</pre>
                   "recent.order",
                   "react",
                   "comment",
                   "post_tenure",
                   "tenure_units",
                   "human",
                   "poster.recent.race",
                   "poster.recent.gender",
                   "manual_diag",
                   "notes",
                   "source")
  recent.combined.raw$poster.recent.race <- tolower(recent.combined.raw$poster.recent.race)
  recent.combined.raw$poster.recent.gender <- tolower(recent.combined.raw$poster.recent.gender)
# drop more phantom rows
  recent.combined.raw <- recent.combined.raw %>% filter(participant_id != "")
  recent.combined.raw$participant_id <- as.character(recent.combined.raw$participant_id)
  recent.combined.raw <- merge(p.log.combined.raw, recent.combined.raw, by = c("participant_id", "sour
  recent.combined.raw$poster.recent.race <- ifelse(recent.combined.raw$poster.recent.race %in% c("asia
  recent.combined.raw$subject_race_RA <- tolower(recent.combined.raw$subject_race_RA)
   recent.combined.raw$subject_gender_RA <- tolower(recent.combined.raw$subject_gender_RA)
   recent.combined.raw$race.in.group <- ((recent.combined.raw$poster.recent.race == recent.combined.raw
   recent.combined.raw$gender.in.group <- recent.combined.raw$poster.recent.gender == recent.combined.
  write.csv(recent.combined.raw, file = "Temp/Clean US Data Recent.csv")
  length(unique(recent.combined.raw$participant_id))
## [1] 103
```

Qualtrics data

```
nf.data.raw <- read.csv("Temp/Clean US Data NF.csv")
pymk.data.raw <- read.csv("Temp/Clean US Data PYMK.csv")

nf.data <- nf.data.raw %>% group_by(primary.id,
```

```
subject_gender_RA,
                               subject_race_RA,
                               source,
                               total friends) %>% dplyr::summarise(recorded.posts = max(nf.order, na.rm =
                                                                    mean.rating = mean(preference, na.rm
                                                                    sd.rating = sd(preference, na.rm = T)
                                                                    median.rating = median(preference, na
## `summarise()` regrouping output by 'primary.id', 'subject_gender_RA', 'subject_race_RA', 'source' (o
pymk.data <- pymk.data.raw %>% group_by(primary.id) %>% dplyr::summarise(pymk.recorded.posts = max(pymk
                                                                    pymk.mean.rating = mean(familiarity, :
                                                                    pymk.sd.rating = sd(familiarity, na.r
                                                                    pymk.median.rating = median(familiari)
## `summarise()` ungrouping output (override with `.groups` argument)
nf.data <- nf.data %>% dplyr::rename(uni.id = primary.id)
qualtrics1 <- read.csv("Data/Self-Assessments/FB Standard.csv")</pre>
qualtrics2 <- read.csv("Data/Self-Assessments/FB Network Structure.csv")</pre>
combined.qualtrics <- bind_rows(qualtrics1, qualtrics2)</pre>
combined.qualtrics$date <- date(combined.qualtrics$StartDate)</pre>
## Warning: tz(): Don't know how to compute timezone for object of class factor;
## returning "UTC". This warning will become an error in the next major version of
## lubridate.
combined.qualtrics <- combined.qualtrics %>% filter(Status == "IP Address" &
                                                       Finished == "True" &
                                                       Q2 != "")
combined.qualtrics$primary.id <- paste0(combined.qualtrics$date, combined.qualtrics$subject_id)
merged <- merge(combined.qualtrics, nf.data, by.x = "primary.id", by.y = "uni.id", all.x = F, all.y = T
merged <- merge(merged, pymk.data, by = "primary.id", all.x = T, all.y = F)</pre>
merged <- merged %>% dplyr::rename(self.race = Q3,
                                    self.race.free = Q4,
                                    gender = Q5,
                                    age = Q6,
                                    education = Q7,
                                    covid.usage = Q9,
                                    last.login = Q10,
                                    pre.covid.usage = Q11)
merged$self.race <- as.character(merged$self.race)</pre>
merged$self.race <- ifelse(grep1(",",merged$self.race),"Two or more",merged$self.race)</pre>
dim(merged)
```

write.csv(merged, file = "Temp/Clean US qualtrics data.csv")