

Article HW

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Table 4 to Table 6

```
library(foreign)
library(stringr)
library(plyr)
library(reshape2)
source("xtable.r")

pew <- read.spss("pew.sav")

## re-encoding from CP1252
## Warning in `levels<-`(`*tmp*`, value = if (nl == nL) as.character(labels)
## else paste0(labels, : duplicated levels in factors are deprecated

pew <- as.data.frame(pew)

religion <- pew[c("q16", "reltrad", "income")]
religion$reltrad <- as.character(religion$reltrad)
religion$reltrad <- str_replace(religion$reltrad, " Churches", "")
religion$reltrad <- str_replace(religion$reltrad, " Protestant", " Prot")
religion$reltrad[religion$q16 == " Atheist (do not believe in God) "] <- "Atheist"
religion$reltrad[religion$q16 == " Agnostic (not sure if there is a God) "] <- "Agnostic"
religion$reltrad <- str_trim(religion$reltrad)
religion$reltrad <- str_replace_all(religion$reltrad, " \\(.*?\\)", "")

religion$income <- c("Less than $10,000" = "<$10k",
                    "10 to under $20,000" = "$10-20k",
                    "20 to under $30,000" = "$20-30k",
                    "30 to under $40,000" = "$30-40k",
                    "40 to under $50,000" = "$40-50k",
                    "50 to under $75,000" = "$50-75k",
                    "75 to under $100,000" = "$75-100k",
                    "100 to under $150,000" = "$100-150k",
                    "$150,000 or more" = ">150k",
                    "Don't know/Refused (VOL)" = "Don't know/refused")[religion$income]

religion$income <- factor(religion$income, levels = c("<$10k", "$10-20k", "$20-30k", "$30-40k", "$40-50k",
                                                    "$50-75k", "$75-100k", "$100-150k", ">150k", "Don't know/refused"))

table6 <- count(religion, c("reltrad", "income"))
names(table6)[1] <- "religion"

xtable(table6[1:10, ], file = "pew-clean.tex")
View(table6)

table4 <- dcast(table6, religion ~ income)
```

```
## Using freq as value column: use value.var to override.
xtable(table4[1:10, 1:7], file = "pew-raw.tex")
View(table4)
```

Table 7 to Table 8

```
options(stringsAsFactors = FALSE)
library(lubridate)

##
## Attaching package: 'lubridate'

## The following object is masked from 'package:plyr':
##
##     here

## The following object is masked from 'package:base':
##
##     date

library(reshape2)
library(stringr)
library(plyr)
source("xtable.r")

table7 <- read.csv("billboard.csv")
table7 <- table7[, c("year", "artist.inverted", "track", "time", "date.entered", "x1st.week", "x2nd.week")]
names(table7)[2] <- "artist"

table7$artist <- iconv(table7$artist, "MAC", "ASCII//translit")
table7$track <- str_replace(table7$track, " \\(.*?\\)", "")
names(table7)[-1:5] <- str_c("wk", 1:76)
table7 <- arrange(table7, year, artist, track)

long_name <- nchar(table7$track) > 20
table7$track[long_name] <- paste0(substr(table7$track[long_name], 0, 20), "...")

xtable(table7[c(1:3, 6:10), 1:8], "billboard-raw.tex")

table8 <- melt(table7, id = 1:5, na.rm = T)
table8$week <- as.integer(str_replace_all(table8$variable, "[^0-9]+", ""))
table8$variable <- NULL

table8$date.entered <- ymd(table8$date.entered)
table8$date <- table8$date.entered + weeks(table8$week - 1)
table8$date.entered <- NULL
table8 <- rename(table8, c("value" = "rank"))
table8 <- arrange(table8, year, artist, track, time, week)
table8 <- table8[c("year", "artist", "time", "track", "date", "week", "rank")]

clean_out <- mutate(table8,
                     date = as.character(date))
xtable(clean_out[1:15, ], "billboard-clean.tex")
View(table8)
```