

# Data Manipulation with tidyr

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## Importing the Acitelli dataset into R.

```
acitelli_ind <- read.csv("/Users/randigarcia/Desktop/Three-day-workshop/R Workshop/Data/
```

We ultimately want to get our data into the pairwise format for the APIM. We'll need some more packages.

```
#install.packages("tidyr")
#install.packages("dplyr")

library(tidyr)
library(dplyr)
```

## Individual to Dyad Structure

```
acitelli_dyd <- acitelli_ind %>%
  mutate(gender = ifelse(gender == 1, "H", "W")) %>%
  gather(variable, value, self_pos:simhob) %>%
  unite(var_gender, variable, gender) %>%
  spread(var_gender, value)

head(acitelli_dyd)
```

```
##   cuplid  Yearsmar other_pos_H other_pos_W satisfaction_H satisfaction_W
## 1      3   8.202667         4.0         4.6         3.666667         4.000000
## 2     10  10.452667         4.0         3.8         3.666667         3.166667
## 3     11  -8.297333         4.8         4.4         3.833333         3.833333
## 4     17  -6.380667         4.4         3.6         3.833333         3.166667
```

```
## 5      21 10.202667      4.8      3.8      3.500000      4.000000
## 6      22 15.036000      4.6      5.0      4.000000      3.666667
##   self_pos_H self_pos_W simhob_H simhob_W tension_H tension_W
## 1          3.8      4.8      1      0      2.5      1.5
## 2          4.2      4.6      0      0      2.0      4.0
## 3          4.2      5.0      0      0      2.5      2.5
## 4          4.0      4.0      0     -1      2.0      3.0
## 5          4.4      4.2      0      0      2.5      3.5
## 6          4.4      4.0      0     -1      2.5      2.0
```

## Individual to Pairwise Structure

```
tempA <- acitelli_ind %>%
  mutate(genderE = gender, partnum = 1) %>%
  mutate(gender = ifelse(gender == 1, "A", "P")) %>%
  gather(variable, value, self_pos:genderE) %>%
  unite(var_gender, variable, gender) %>%
  spread(var_gender, value)

tempB <- acitelli_ind %>%
  mutate(genderE = gender, partnum = 2) %>%
  mutate(gender = ifelse(gender == 1, "P", "A")) %>%
  gather(variable, value, self_pos:genderE) %>%
  unite(var_gender, variable, gender) %>%
  spread(var_gender, value)

acitelli_pair <- bind_rows(tempA, tempB) %>%
  arrange(cuplid)

rm(tempA, tempB)
head(acitelli_pair)
```

```
##   cuplid  Yearsmar partnum genderE_A genderE_P other_pos_A other_pos_P
## 1      3  8.202667      1          1         -1          4.0          4.6
## 2      3  8.202667      2         -1          1          4.6          4.0
## 3     10 10.452667      1          1         -1          4.0          3.8
## 4     10 10.452667      2         -1          1          3.8          4.0
## 5     11 -8.297333      1          1         -1          4.8          4.4
## 6     11 -8.297333      2         -1          1          4.4          4.8
##   satisfaction_A satisfaction_P self_pos_A self_pos_P simhob_A simhob_P
## 1          3.666667      4.000000      3.8      4.8      1      0
## 2          4.000000      3.666667      4.8      3.8      0      1
## 3          3.666667      3.166667      4.2      4.6      0      0
```

## 4	3.166667	3.666667	4.6	4.2	0	0
## 5	3.833333	3.833333	4.2	5.0	0	0
## 6	3.833333	3.833333	5.0	4.2	0	0
##	tension_A	tension_P				
## 1	2.5	1.5				
## 2	1.5	2.5				
## 3	2.0	4.0				
## 4	4.0	2.0				
## 5	2.5	2.5				
## 6	2.5	2.5				

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## Dave's Kenny's restructuring apps

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