

Psychology 405: Psychometric Theory

Homework Set 1

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April, 2013

Outline

- 1 Get the data
- 2 Descriptive statistics
- 3 Basic graphics

Get the data from the clipboard

```
> library(psych)
> my.data <- read.clipboard()
> my.data
```

	A	B	C	D	E	F
1	1	0	16	7	1	1
2	2	7	17	62	12	2
3	3	0	9	0	5	4
4	4	7	18	35	18	8
5	5	7	13	5	28	16
6	6	8	11	10	78	32
7	7	9	13	14	0	64
8	8	2	10	48	46	128
9	9	7	16	0	23	256
10	10	3	10	13	23	512
11	11	4	14	8	11	1024
12	12	4	12	9	34	2048
13	13	3	22	5	10	4096
14	14	0	10	59	5	8192
15	15	5	13	96	24	16384
16	16	7	22	97	43	32768

- 1 Make psych active (do this each time you start R)
- 2 Copy the data from a spreadsheet or text file
- 3 Read the data from the clipboard
- 4 Report the data (particularly if you don't have many cases)

Get the data from a file

```
> library(psych)
> file.name <-
  "http://personality-project.org/revelle/syllabi/405/405.example1.data.txt"
> my.data <- read.table(file.name,header=TRUE)
> my.data
```

	A	B	C	D	E	F
1	1	0	16	7	1	1
2	2	7	17	62	12	2
3	3	0	9	0	5	4
4	4	7	18	35	18	8
5	5	7	13	5	28	16
6	6	8	11	10	78	32
7	7	9	13	14	0	64
8	8	2	10	48	46	128
9	9	7	16	0	23	256
10	10	3	10	13	23	512
11	11	4	14	8	11	1024
12	12	4	12	9	34	2048
13	13	3	22	5	10	4096
14	14	0	10	59	5	8192
15	15	5	13	96	24	16384
16	16	7	22	97	43	32768

- 1 Make psych active (do this each time you start R)
- 2 Tell where the data are (on a server)
- 3 Read the data into the my.data object
- 4 Show the data

Basic descriptive statistics

```
> dim(my.data) #what is the size of the data frame?
> describe(my.data) #using psych
> summary(my.data) #using Core R
```

```
[1] 16 6
```

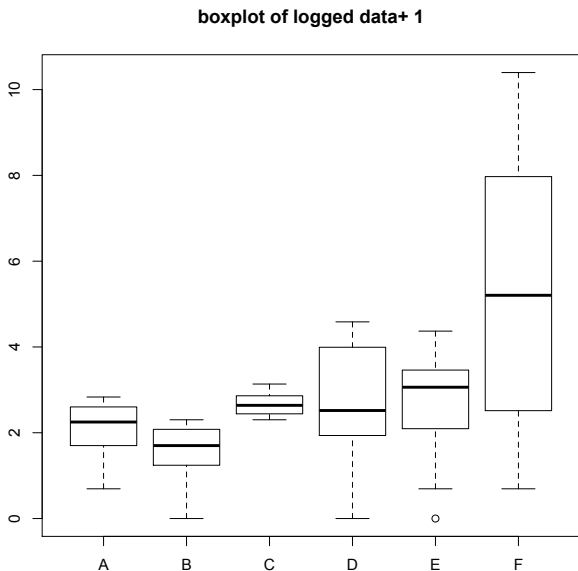
	var	n	mean	sd	median	trimmed	mad	min	max	range	skew	kurtosis	se
A	1	16	8.50	4.76	8.5	8.50	5.93	1	16	15	0.00	-1.43	1.19
B	2	16	4.56	3.01	4.5	4.57	3.71	0	9	9	-0.25	-1.43	0.75
C	3	16	14.12	4.08	13.0	13.93	4.45	9	22	13	0.63	-0.82	1.02
D	4	16	29.25	33.17	11.5	26.50	13.34	0	97	97	0.95	-0.62	8.29
E	5	16	22.56	20.36	20.5	20.21	17.79	0	78	78	1.16	0.88	5.09
F	6	16	4095.94	8806.17	192.0	2340.43	282.44	1	32768	32767	2.27	4.29	2201.54

```
>
```

	A	B	C	D	E	F
Min.	: 1.00	Min. :0.000	Min. : 9.00	Min. : 0.00	Min. : 0.00	Min. : 1
1st Qu.:	4.75	1st Qu.:2.750	1st Qu.:10.75	1st Qu.: 6.50	1st Qu.: 8.75	1st Qu.: 14
Median :	8.50	Median :4.500	Median :13.00	Median :11.50	Median :20.50	Median : 192
Mean :	8.50	Mean :4.562	Mean :14.12	Mean :29.25	Mean :22.56	Mean : 4096
3rd Qu.:	12.25	3rd Qu.:7.000	3rd Qu.:16.25	3rd Qu.:50.75	3rd Qu.:29.50	3rd Qu.: 2560
Max. :	16.00	Max. :9.000	Max. :22.00	Max. :97.00	Max. :78.00	Max. :32768

```
>
```

```
boxplot(log(my.data+1),main="boxplot of logged data+ 1")
```



```
pairs.panels(my.data)
```

