

# Homework Lesson 5

Completed by Leon Woltermann

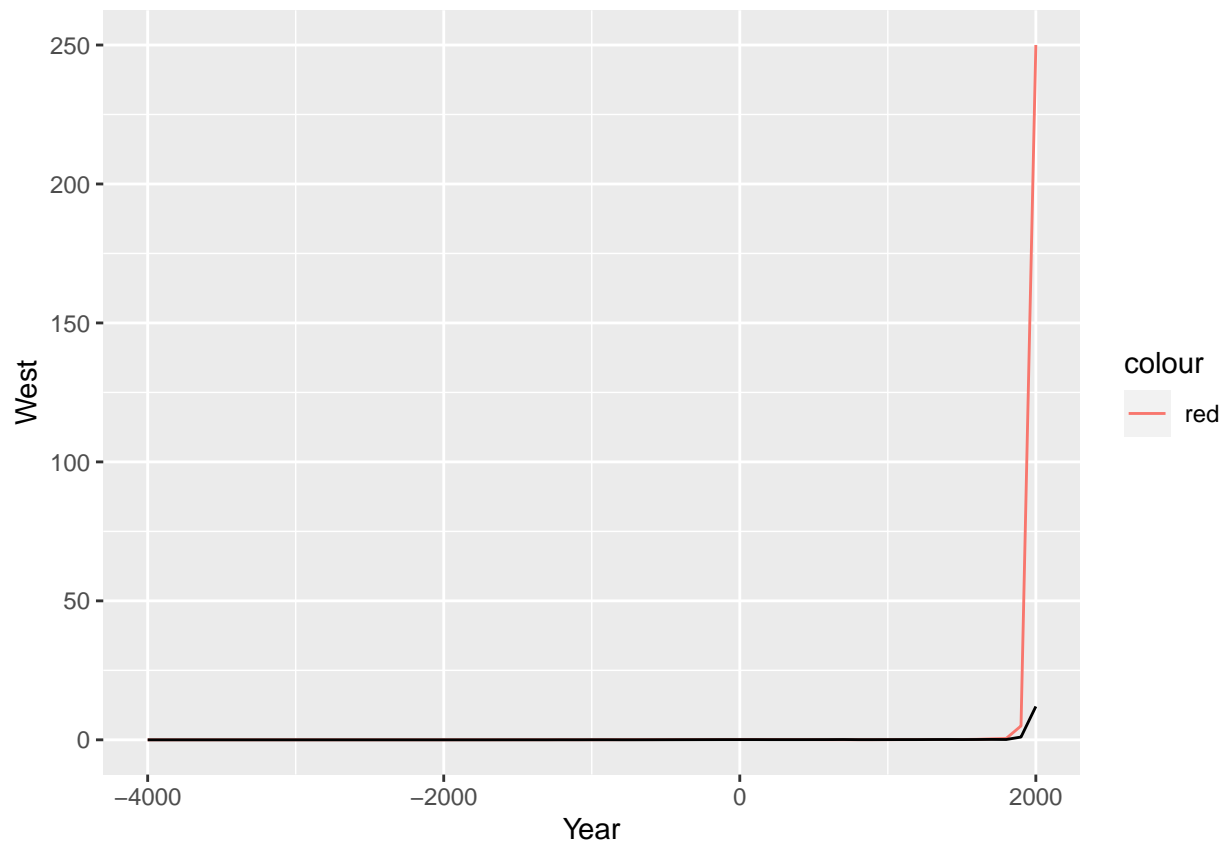
```
file = read.csv(file="Sample_Page_With_Tabular_Data_Morris", sep="\t")
head(file)
```

```
##      Year BCE_CE West East
## 1 -4000     BCE 0.00    0
## 2 -3000     BCE 0.01    0
## 3 -2500     BCE 0.01    0
## 4 -2250     BCE 0.01    0
## 5 -2000     BCE 0.01    0
## 6 -1750     BCE 0.02    0
```

```
library(ggplot2)
```

*#The y scale of this graph is too big. This is because of the value of the West for the year 2000 which*

```
ggplot(file) +
  geom_line(aes(x = Year, y = West, color="red")) +
  geom_line(aes(x = Year, y = East))
```



```
library(dplyr)
```

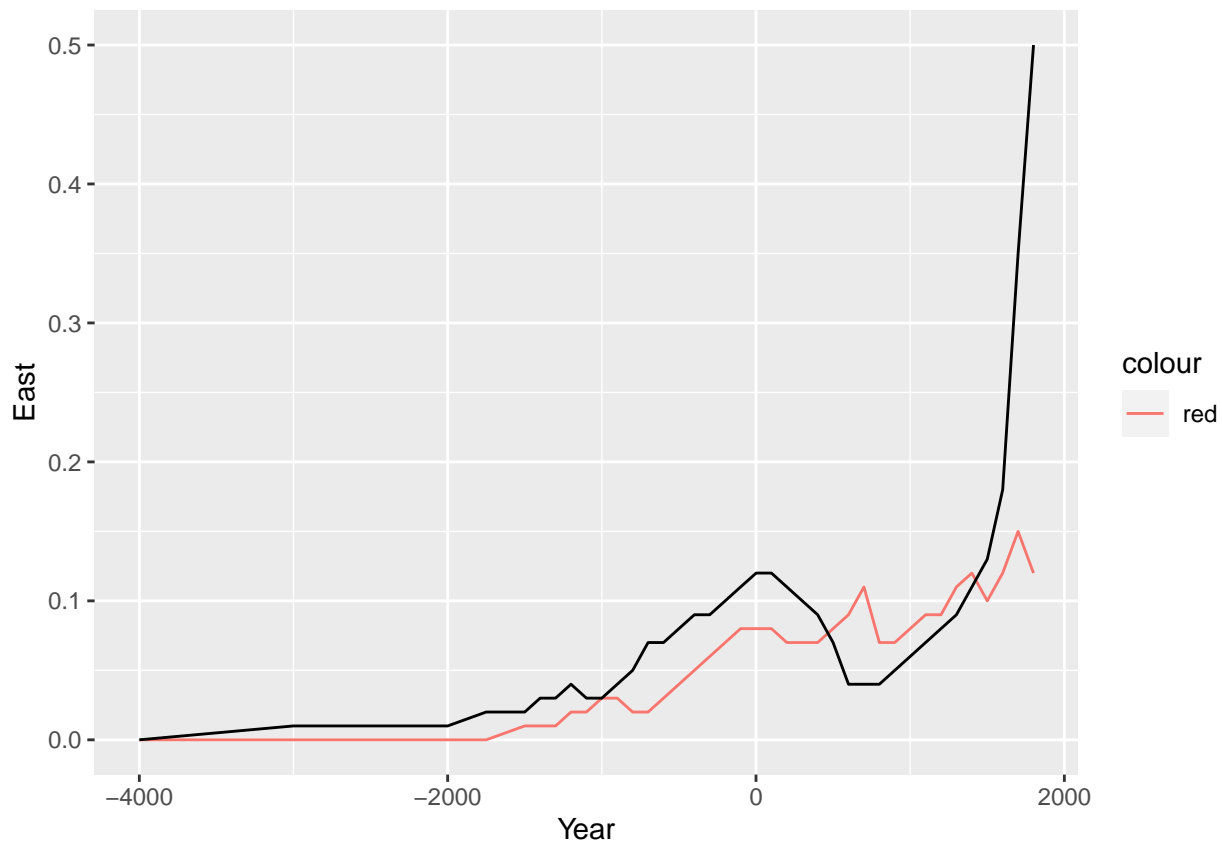
```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

```
temp <- file %>%
  filter(Year < 1900)

ggplot(temp) + geom_line(aes(x = Year, y = East, color = "red")) +
  geom_line(aes(x = Year, y = West))
```



Add a new chunk by clicking the *Insert Chunk* button on the toolbar or by pressing *Cmd+Option+I*.

```
west <- file$West
east <- file$East
years <- file$Year

west_lead <- west > east
east_lead <- west < east

years_west_lead <- years[west_lead]
years_east_lead <- years[east_lead]

cat("These are the years the west led in war making capacities:", years_west_lead, "\n")
```

```
## These are the years the west led in war making capacities: -3000 -2500 -2250 -2000 -1750 -1500 -1400
```

```
cat("And these are the years the east led in war making capacities:", years_east_lead)
```

```
## And these are the years the east led in war making capacities: 500 600 700 800 900 1000 1100 1200 1300
```

```
file2 = read.csv(file="settlement_sizes", sep="\t")
head(file2)
```

```
##      Year Era      Settlement  Size Points West.East
## 1 -4000 BCE      Jiangzhai, Jiahu    300    0.00      East
```

```
## 2 -3500 BCE                Xipo  2,000  0.02    East
## 3 -3000 BCE                Dadiwan 5,000  0.05    East
## 4 -2500 BCE Taosi, Liangchengzhen, Yaowangcheng 10,000 0.09    East
## 5 -2250 BCE Taosi, Liangchengzhen, Yaowangcheng 14,000 0.13    East
## 6 -2000 BCE                Fengcheng-Nanshui 11,000 0.10    East
```

```
west_before1900 <- file2 %>%
  filter(West.East=="West", Year < 1900)

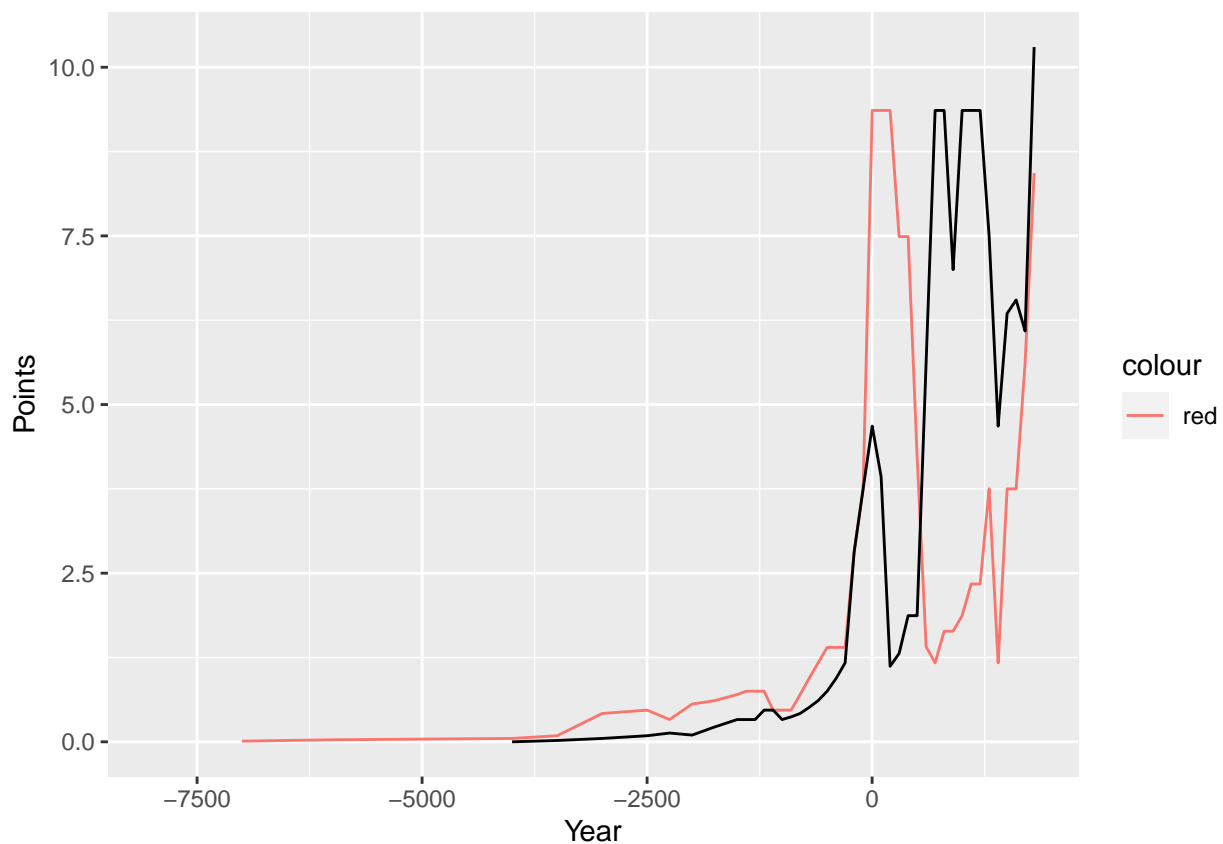
east_before1900 <- file2 %>%
  filter(West.East=="East", Year < 1900)

head(west)
```

```
## [1] 0.00 0.01 0.01 0.01 0.01 0.02
```

```
ggplot() +
  geom_line(data = west_before1900, aes(x = Year, y = Points, color="red")) +
  geom_line(data= east_before1900, aes(x = Year, y = Points))
```

```
## Warning: Removed 1 row(s) containing missing values (geom_path).
```



```
west <- file2 %>%
  filter(West.East=="West") %>%
  select(-West.East)
```

```

east <- file2 %>%
  filter(West.East=="East") %>%
  select(-West.East)

west_east <- west %>%
  left_join(east, by = "Year")

west_east_after5000BCE <- west_east %>%
  filter(Year > -5000)

west_points <- west_east_after5000BCE$Points.x
east_points <- west_east_after5000BCE$Points.y
years_points <- west_east_after5000BCE$Year

west_lead2 <- west_points>east_points
east_lead2 <- west_points<east_points

years_west_lead2 <- years_points[west_lead2]
years_east_lead2 <- years_points[east_lead2]

cat("These are the years the west led in settlement points:", years_west_lead2, "\n")

```

```
## These are the years the west led in settlement points: -4000 -3500 -3000 -2500 -2250 -2000 -1750 -1500
```

```
cat("And these are the years the east led settlement points:", years_east_lead2)
```

```
## And these are the years the east led settlement points: 600 700 800 900 1000 1100 1200 1300 1400 1500
```