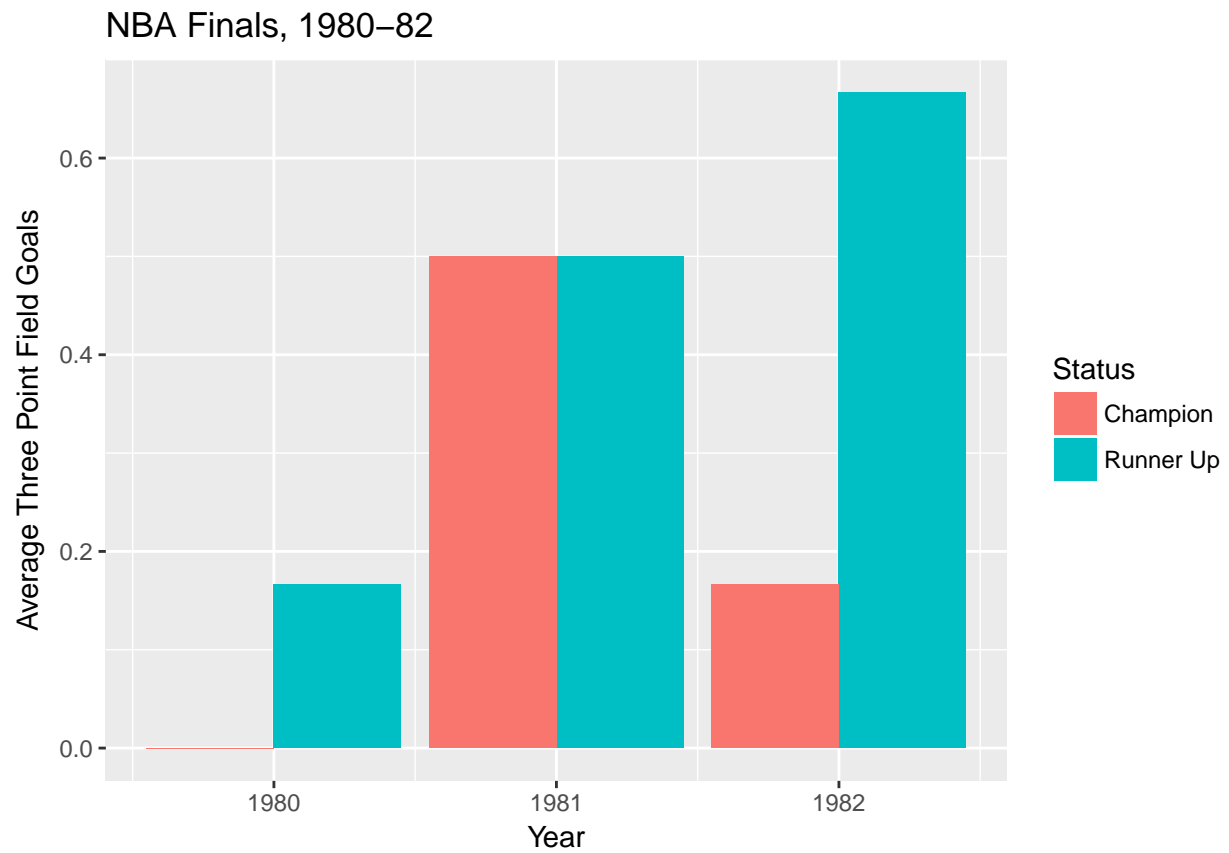# NBA Finals Three Point Stats, 1980-2017

Intro

The 1980 NBA Finals was the first Finals series since the NBA adopted the three point line. The three point shot did have an impact on offensive output at first. The 1980 NBA Champions, the L.A. Lakers, did not make a single three pointer in the entire six game series. Their opponents, the Philadelphia 76ers, made just one three pointer in the series.

```r
suppressMessages(library(tidyverse))
library(readr)
averages <- read.csv('champs_and_runner_ups_series_averages.csv')
eighty_to_eightytwo <- ggplot(data = filter(averages,Year < 1983),aes(x = Year, y = TP,fill = Status)) +
  geom_bar(stat = 'identity',position = 'dodge') +
  scale_x_continuous(breaks=seq(1980, 1984, 1)) +
  ggtitle("NBA Finals, 1980-82") +
  ylab('Average Three Point Field Goals')

eighty_to_seventeen <- ggplot(data = averages,aes(x = Year, y = TP,fill = Status)) +
  geom_bar(stat = 'identity',position = 'dodge') +
  scale_x_continuous(breaks=seq(1980, 2017, 1)) +
  ylab('Average Three Point Field Goals') +
    theme(axis.text.x = element_text(angle=90,hjust = 1,vjust = 1)) +
  ggtitle("NBA Finals, 1980-2017")

eighty_to_eightytwo
```
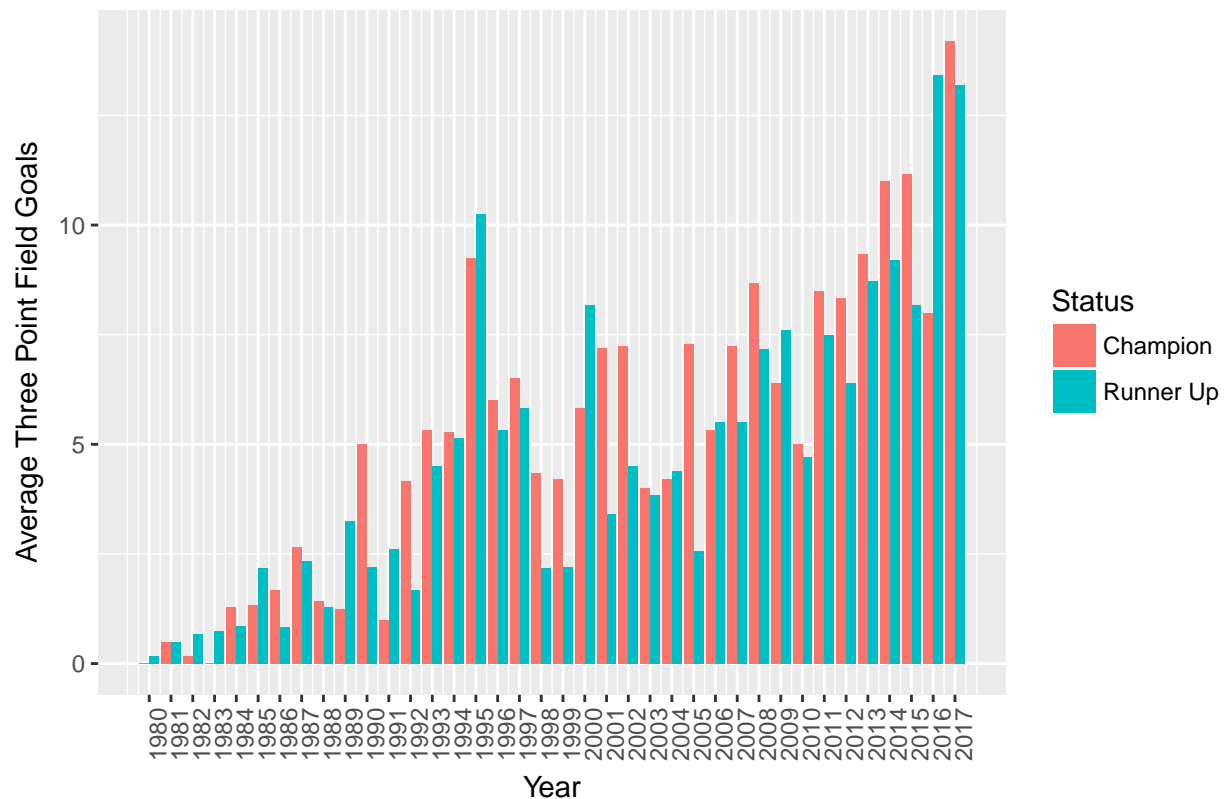
NBA Finals, 1980–82

eighty_to_seventeen

NBA Finals, 1980–2017

Three Point Shooting, Year By Year

```r
points <- ggplot(data = averages, aes(x = Year, y = PTS, color = Status)) +
  geom_point(size = 1) +
  geom_smooth(method = 'loess',se=FALSE) +
  ggtitle('Points Per Game') +
  theme(legend.position="none") +
  ylab('Points')

tp <- ggplot(data = averages, aes(x = Year, y = TP, color = Status)) +
  geom_point(size = 1) +
  geom_smooth(method = 'loess',se=FALSE) +
  ggtitle("3's Per Game") +
  ylab("3's") +
  theme(legend.position="none")


percentage_of_points_threes <- averages %>% mutate(Percentage_of_Points_Threes = 3*TP/PTS*100)

ppts_threes <- ggplot(data = percentage_of_points_threes, aes(x = Year, y = Percentage_of_Points_Threes
  geom_point(size = 1) +
  geom_smooth(method = 'loess',se=FALSE) +
  ggtitle("% of Points From 3's") +
  ylab('%') +
```

```r
    theme(axis.text.x = element_text(angle=90,hjust = 1,vjust = 1)) +
    theme(legend.position="none")

tpp <- ggplot(data = averages, aes(x = Year, y = TPP, color = Status)) +
    geom_point(size = 1) +
    geom_smooth(method = 'loess',se=FALSE) +
    theme(legend.position="none") +
    ggtitle('3PT %') +
    ylab('%')

tpa <- ggplot(data = averages, aes(x = Year, y = TPA, color = Status)) +
    geom_point(size = 1) +
    geom_smooth(method = 'loess',se=FALSE) +
     theme(legend.position="bottom")+
    ggtitle('3 Attempts Per Game') +
    ylab('Attempts')

percentage_of_attempts_threes <- averages %>% mutate(perc_attempts = TPA/FGA*100)
perc_attempts_threes <- ggplot(data = percentage_of_attempts_threes, aes(x = Year, y = perc_attempts, co
    geom_point(size = 1) +
    geom_smooth(method = 'loess',se=FALSE) +
    ggtitle("% of FG Attempts, 3's") +
    ylab('%') +
    theme(legend.position="none")

require(gridExtra)
```
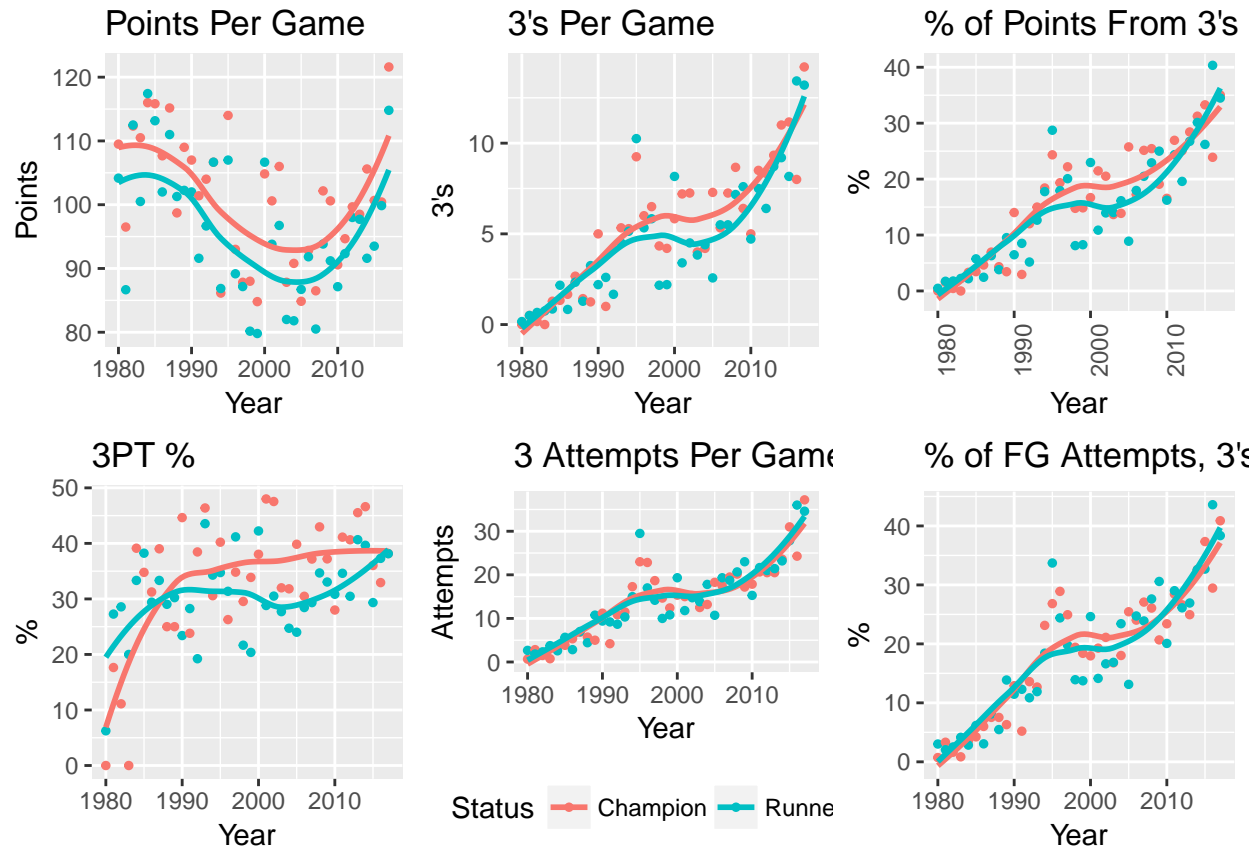
```
## Loading required package: gridExtra

##
## Attaching package: 'gridExtra'

## The following object is masked from 'package:dplyr':
##
##     combine
```

```r
grid.arrange(points,tp,ppts_threes,tpp,tpa,perc_attempts_threes,ncol=3)
```

Averages By Decade

```r
by_decade <- read.csv('stats_by_decade.csv')
scoring_by_decade <- ggplot(data = by_decade,aes(x = Years, y = Average_PTS,fill = Status)) +
  geom_bar(stat = 'identity',position = 'dodge') +
  ggtitle('Average Points Scored') +
  ylab("Points") +
  theme(axis.text.x = element_text(angle=90,hjust = 1,vjust = 1)) +
  theme(legend.position="none")
tp_by_decade <- ggplot(data = by_decade,aes(x = Years, y = Average_Made_Threes,fill = Status)) +
  geom_bar(stat = 'identity',position = 'dodge') +
  theme(axis.text.x = element_text(angle=90,hjust = 1,vjust = 1)) +
  ggtitle("3's Per Game") +
  theme(legend.position="none") +
  ylab("3's")
tpa_by_decade <- ggplot(data = by_decade,aes(x = Years, y = Average_Attempted_Threes,fill = Status)) +
  geom_bar(stat = 'identity',position = 'dodge') +
  theme(axis.text.x = element_text(angle=90,hjust = 1,vjust = 1)) +
  ggtitle('3 Attempts Per Game') +
  theme(legend.position="none") +
  ylab("Attempts")

tpp_by_decade <- ggplot(data = by_decade,aes(x = Years, y = Three_Point_Percentage,fill = Status)) +
  geom_bar(stat = 'identity',position = 'dodge') +
```

```
  theme(axis.text.x = element_text(angle=90,hjust = 1,vjust = 1)) +
  ggtitle('3PT %') +
  theme(legend.position="none") +
  ylab("%")

per_points_tp_by_decade <- ggplot(data = by_decade,aes(x = Years, y = Percent_Points_Three,fill = Status
  geom_bar(stat = 'identity',position = 'dodge') +
  theme(axis.text.x = element_text(angle=90,hjust = 1,vjust = 1)) +
  ggtitle("% of Points from 3's") +
  theme(legend.position="bottom") +
  ylab("%")
per_attempts_by_decade <- ggplot(data = by_decade,aes(x = Years, y = Percentage_of_FGAs_TPs,fill = Statu
  geom_bar(stat = 'identity',position = 'dodge') +
  theme(axis.text.x = element_text(angle=90,hjust = 1,vjust = 1)) +
  ggtitle("% of FG Attempts, 3's") +
  theme(legend.position="none") +
  ylab("%")

grid.arrange(scoring_by_decade,tp_by_decade,per_points_tp_by_decade,tpp_by_decade,tpa_by_decade,per_atte
```