LS 88 Val

November 23, 2017

In [2]:
```
import numpy as np
from datascience import *

import matplotlib
%matplotlib inline
import matplotlib.pyplot as plt
plt.style.use('fivethirtyeight')
import warnings
warnings.simplefilter('ignore', FutureWarning)

from ipywidgets import interact, interactive, fixed, interact_manual
import ipywidgets as widgets
```

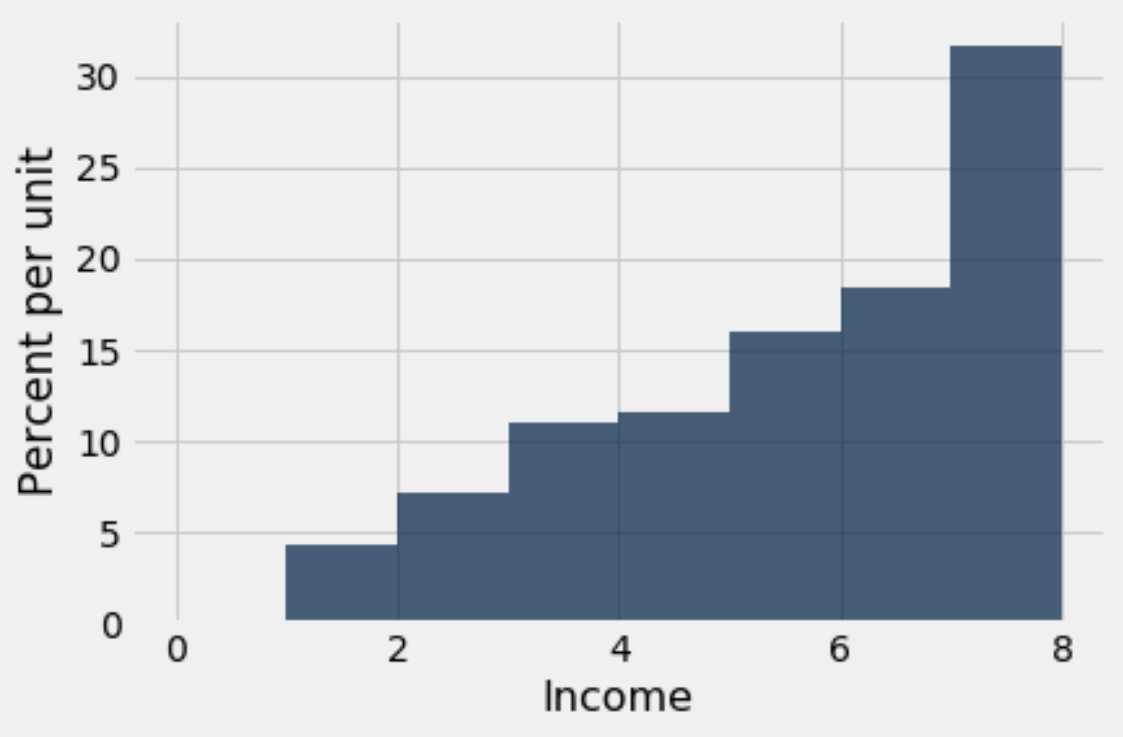
In [2]:
```
data06_15 = Table.read_table('NCVS_2006-2015.csv').where('gender', 2).drop(1,2,7,9,10,
data06_15
```

Out[2]:

year	race1r	hispanic	ethnic1r	ager	Income
2006	1	2	1	8	88
2006	1	2	1	7	7
2006	1	2	1	6	88
2006	1	2	1	6	7
2006	1	2	1	8	2
2006	1	2	1	8	4
2006	1	2	1	7	3
2006	2	2	2	3	1
2006	2	2	2	4	1
2006	1	2	1	8	88

... (545130 rows omitted)

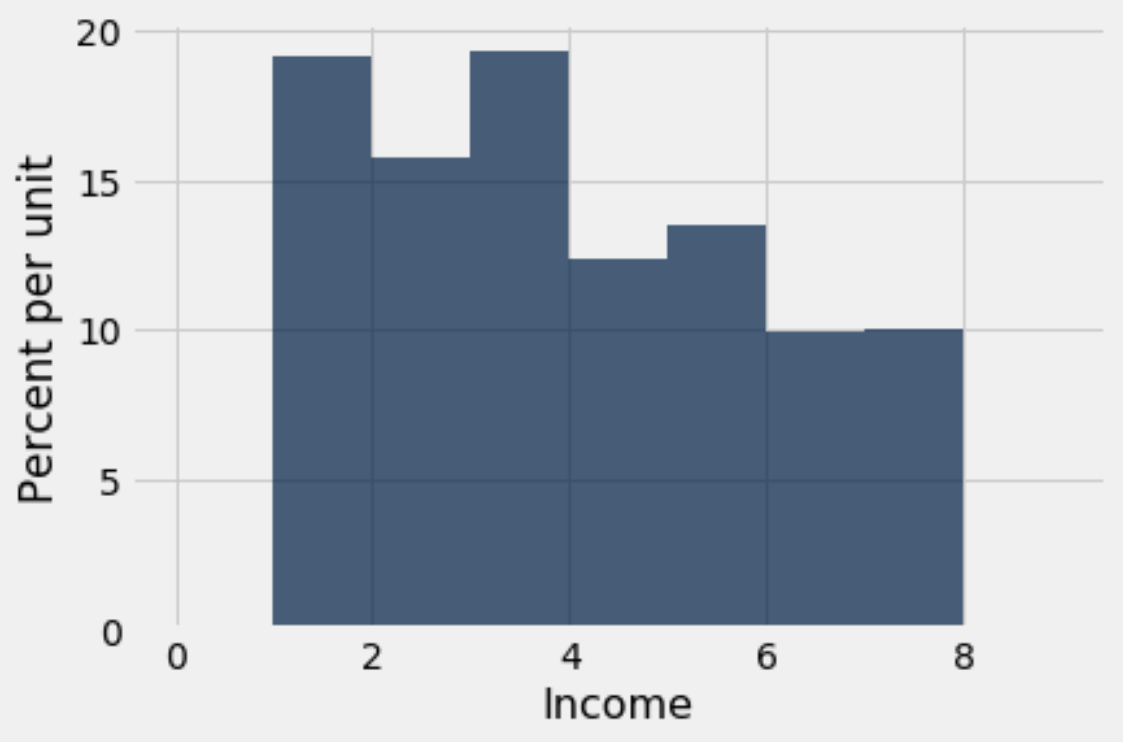
In [16]:
```
hincome = data06_15.drop(1,2,3,4)
 hincome.hist(1, bins=[0,1,2,3,4,5,6,7,8])
```




```
In [3]: larger_data = Table.read_table('NCVS_1993-2015.csv').where('gender', 2).where('newoff'
        larger_data
```

```
Out[3]: Year | race1r | hispanic | ethnic1r | ager | Income
        1993 | 1      | 2        | 1        | 4    | 3
        1993 | 1      | 2        | 1        | 6    | 3
        1993 | 1      | 2        | 1        | 6    | 3
        1993 | 1      | 2        | 1        | 4    | 4
        1993 | 1      | 2        | 1        | 5    | 88
        1993 | 1      | 1        | 4        | 6    | 5
        1993 | 1      | 2        | 1        | 6    | 3
        1993 | 2      | 2        | 2        | 4    | 2
        1993 | 1      | 2        | 1        | 3    | 1
        1993 | 2      | 2        | 2        | 3    | 2
        ... (1936 rows omitted)
```

```
In [3]: trial = larger_data.drop(1,2,3,4)
        trial.hist(1, bins=[0,1,2,3,4,5,6,7,8,9])
```



Graph above shows that there were more reports of sexual assault with lower income.

```
In [4]: counts = trial.group(0)
        counts

Out[4]: Year | count
        1993 | 161
        1994 | 186
        1995 | 144
        1996 | 108
        1997 | 115
        1998 | 103
        1999 | 116
        2000 | 84
        2001 | 82
        2002 | 65
        ... (13 rows omitted)

In [8]: counts.plot(0)
```

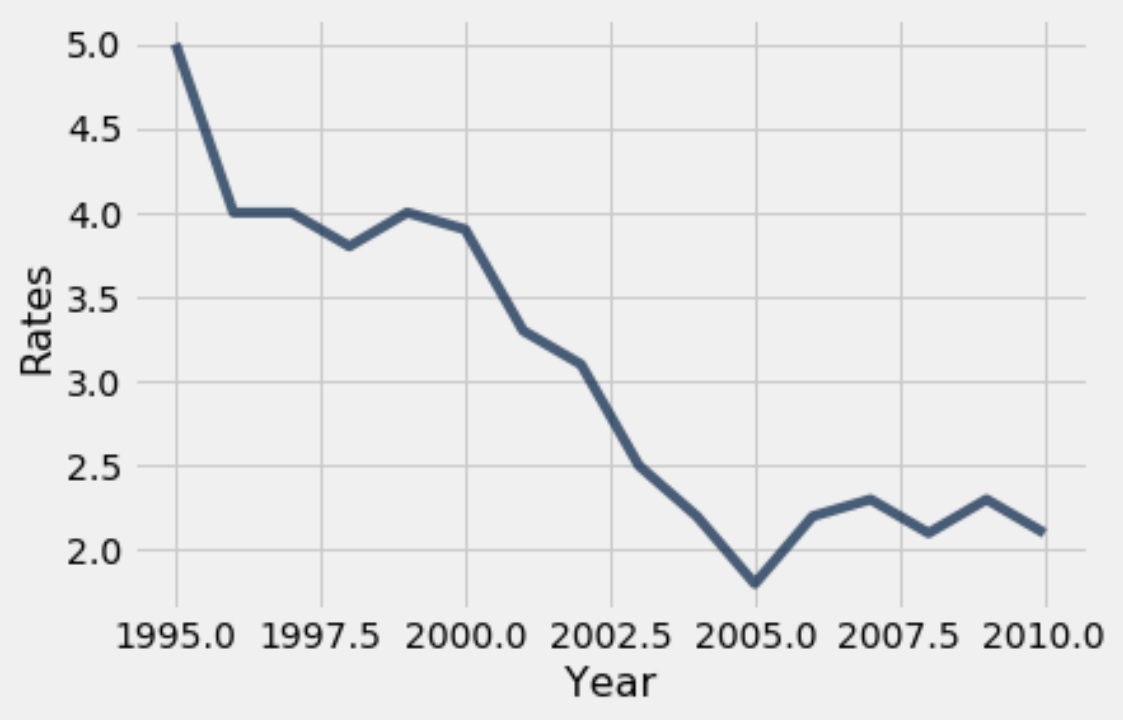

```
In [35]: count = trial.group(1)
         count
```

```
Out[35]: Income | count
         1      | 315
         2      | 259
         3      | 317
         4      | 203
         5      | 222
         6      | 163
         7      | 164
         88     | 303
```

```
In [19]: trend = Table.read_table('year_and_rate.csv').relabel('Female', 'Rates')
         trend.show()
```

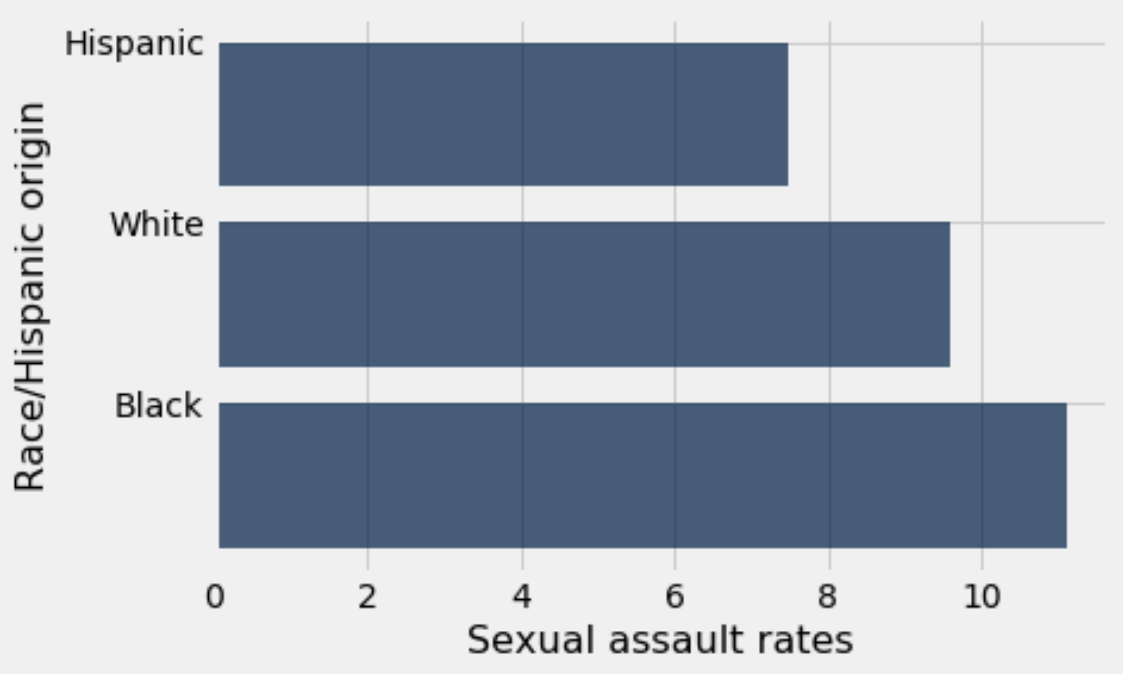
```
<IPython.core.display.HTML object>
```

```
In [20]: trend.plot('Year')
```



Graph shows overall trend for sexual assault has decreased over time.

```
In [6]: eth = Table.read_table('ethnics_re.csv').sort(1)
        eth.barh(0)
```



Graph shows there were more sexual assault reports for Black women.

```
In [6]: larger_data.group('race1r')

Out[6]: race1r | count
        1      | 1570
        2      | 267
        3      | 109

In [7]: larger_data.group('ethnic1r')

Out[7]: ethnic1r | count
        1        | 1397
        2        | 262
        3        | 93
        4        | 194

In [10]: larger_data.select('race1r', 'ethnic1r').show(25)

<IPython.core.display.HTML object>
```