

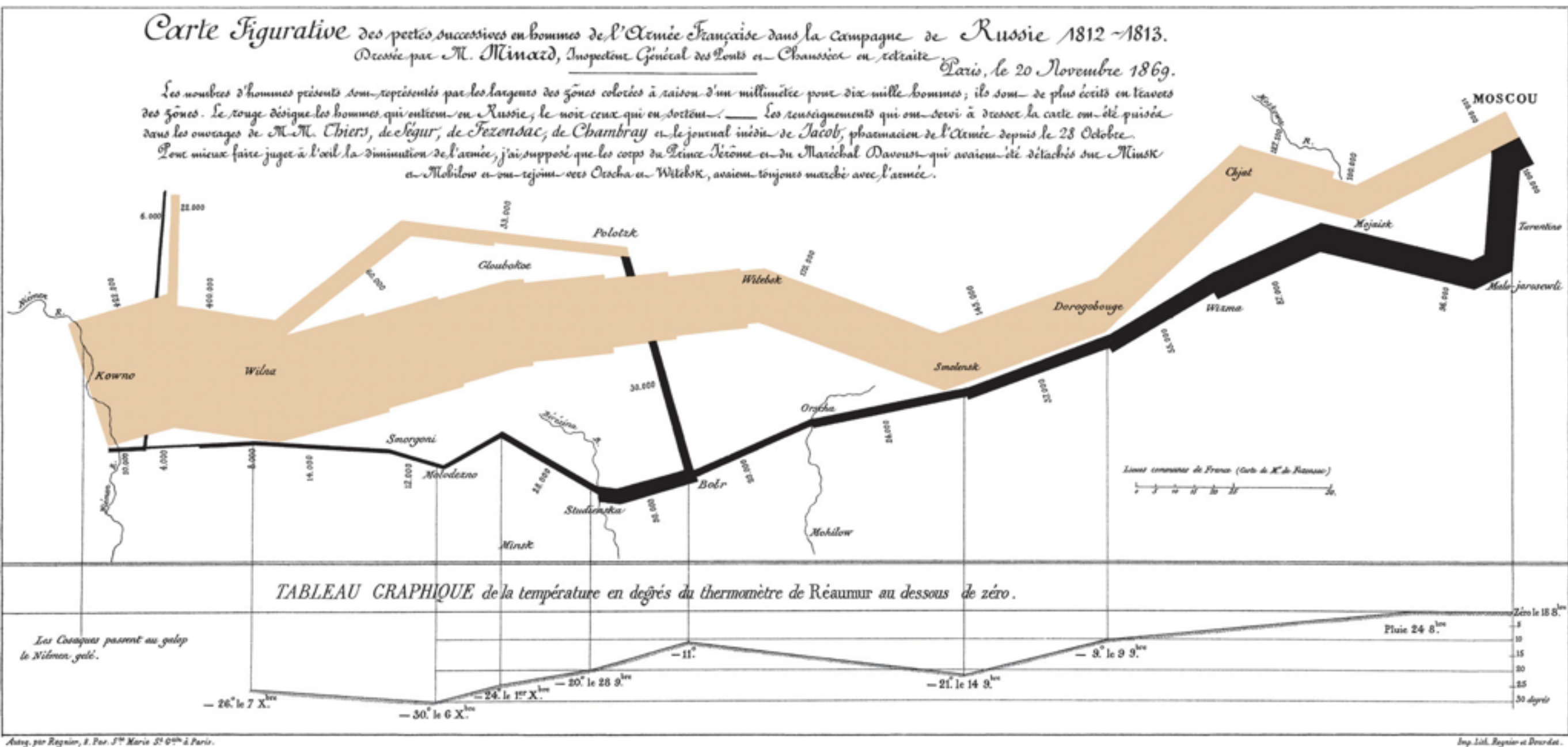


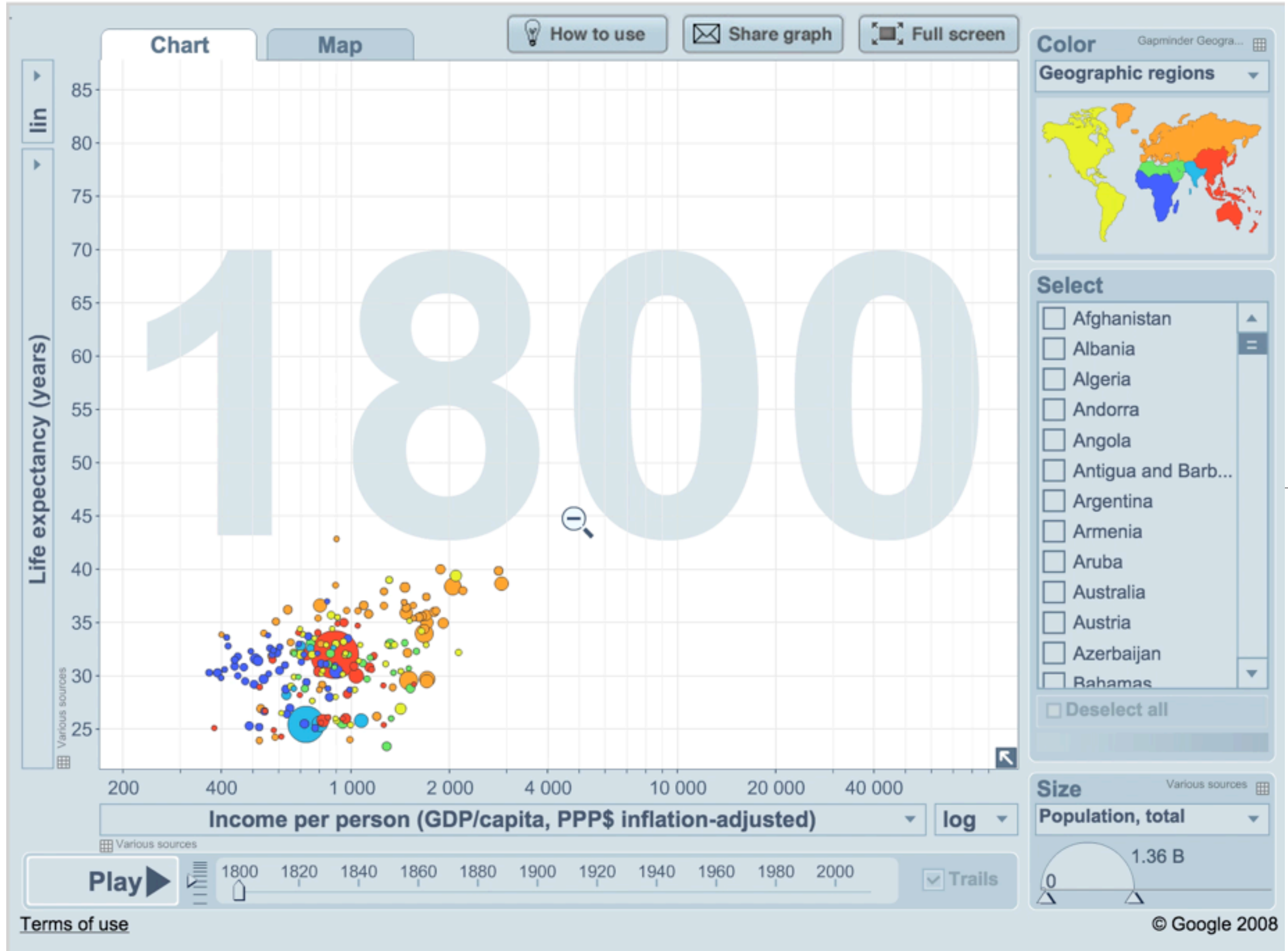
“Graphical excellence is that which gives to the viewer the greatest number of ideas in the shortest time with the least ink in the smallest space”

–Edward Tufte
leading theorist in the field of data visualization

Minard's map of Napoleon's March

best statistical graphic ever drawn?





Hans Rosling: gapminder.org

ATTACK ORIGINS

#	COUNTRY
215	United States
157	China
56	Russia
48	Netherlands
27	Germany
18	Turkey
15	Mil/Gov
14	Argentina
13	Poland
8	France

ATTACK TARGETS

#	COUNTRY
553	United States
37	Russia
28	Taiwan
13	Philippines
6	France
6	Mil/Gov
2	Netherlands
1	Czech Republic
1	Poland
1	Turkey

LIVE ATTACKS

TIMESTAMP	ATTACKER ORGANIZATION	LOCATION	IP	TARGET LOCATION	TYPE SERVICE	PORT
2015-02-19 02:20:06.35	True Internet Ltd.	Bangkok, Thailand	58.11.74.132	Dallas, United States	unknown	23035
2015-02-19 02:20:07.40	China Unicom HuNan	Changsha, China	58.20.54.249	Kirksville, United States	scp-config	10001
2015-02-19 02:20:07.41	China Unicom HuNan	Changsha, China	58.20.54.249	Kirksville, United States	scp-config	10001
2015-02-19 02:20:07.74	BellSouth.net	Owensboro, United	68.222.252.233	Saint Louis, United	unknown	52334
2015-02-19 02:20:08.05	CariNet	San Diego, United	71.6.165.200	New York, United	unknown	28017
2015-02-19 02:20:08.56	Ecatel LTD	unknown, Netherlands	89.248.162.228	Seattle, United States	unknown	5904
2015-02-19 02:20:09.25	CHINANET HUNAN PROVINCE	Changsha, China	124.232.142.220	Saint Louis, United	domain	53
2015-02-19 02:20:09.33	Telefonica de Argentina	Jacinto Arauz,	201.251.18.14	Seattle, United States	domain	53

ATTACK TYPES

#	SERVICE	PORT
82	telnet	23
36	http	80
33	http-alt	8080
30	ssdp	1900
30	ftp	21
24	unknown	5916
22	domain	53
17	unknown	5904

Visualization of network attacks

Now, on to D3...

<https://github.com/mbostock/d3/wiki/Gallery>



Example of a circle .svg file

Source code

```
1 <?xml version="1.0"?>
2 <svg viewBox="0 0 120 120" version="1.1"
3   xmlns="http://www.w3.org/2000/svg">
4   <circle cx="60" cy="60" r="50"/>
5 </svg>
```

Output result



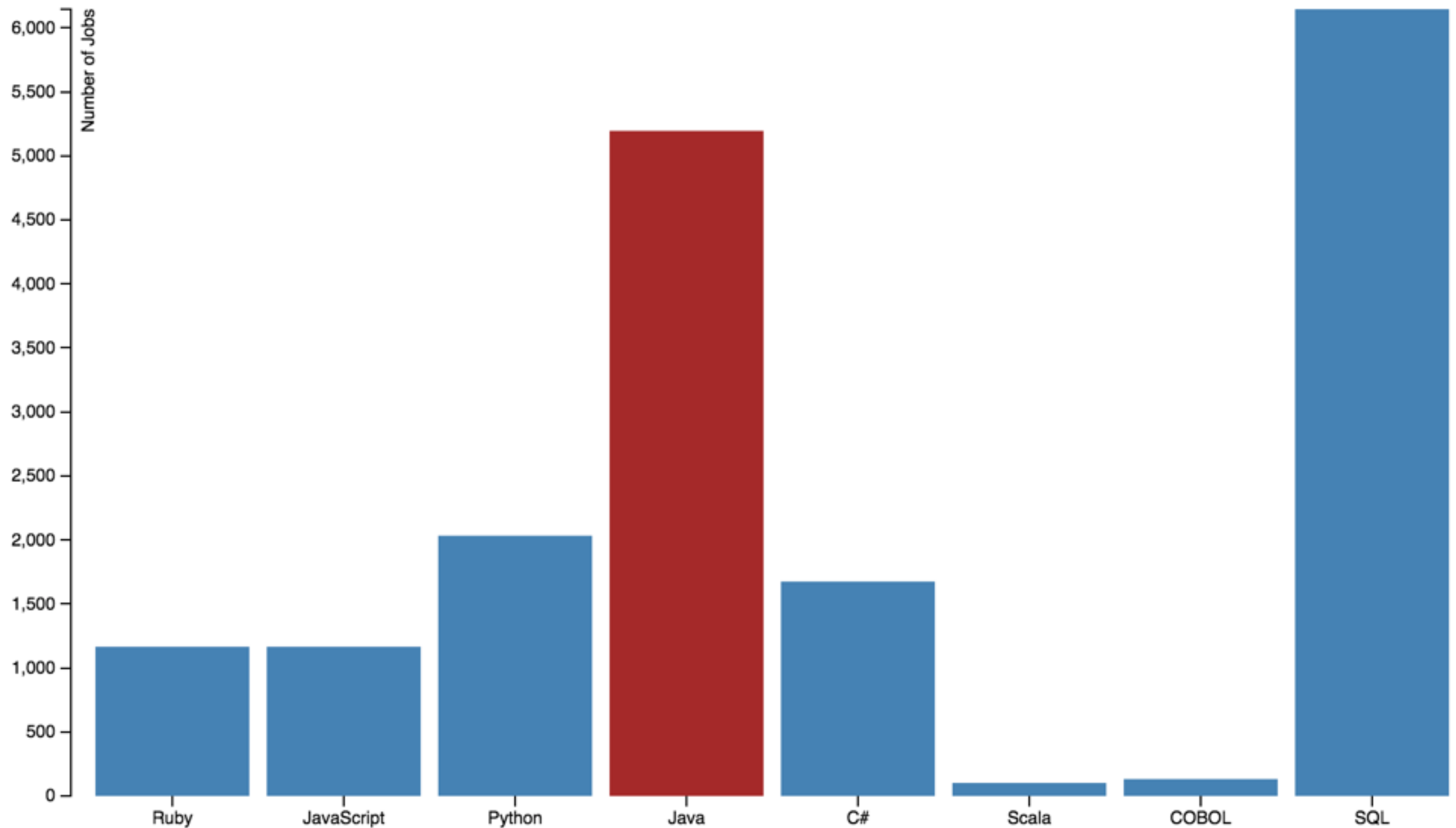

```

1  <!doctype html>
2  <html>
3  <head>
4  <script src="http://d3js.org/d3.v3.min.js" type=
   "text/JavaScript"></script>
5  </head>
6  <body>
7  <script>
8  //Make an SVG Container
9  var svgContainer = d3.select("body").append("svg
   ")
10 .attr("width", 500)
11 .attr("height", 500);
12
13 //Draw the Circle
14 var circle = svgContainer.append("circle")
15                               .attr("fill", "green")
16                               .attr("stroke-width", 2)
17                               .attr("stroke", "black")
18                               .attr("cx", 250)
19                               .attr("cy", 250)
20                               .attr("r", 246);
21 </script>
22 </body>
23 </html>

```

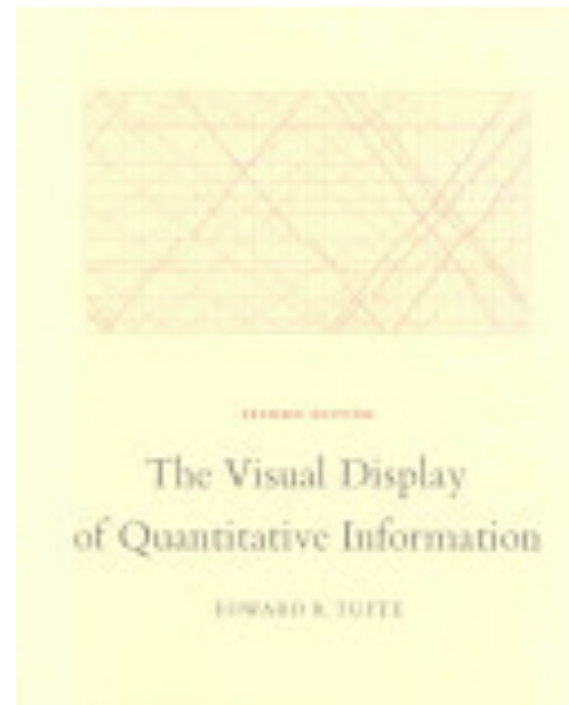
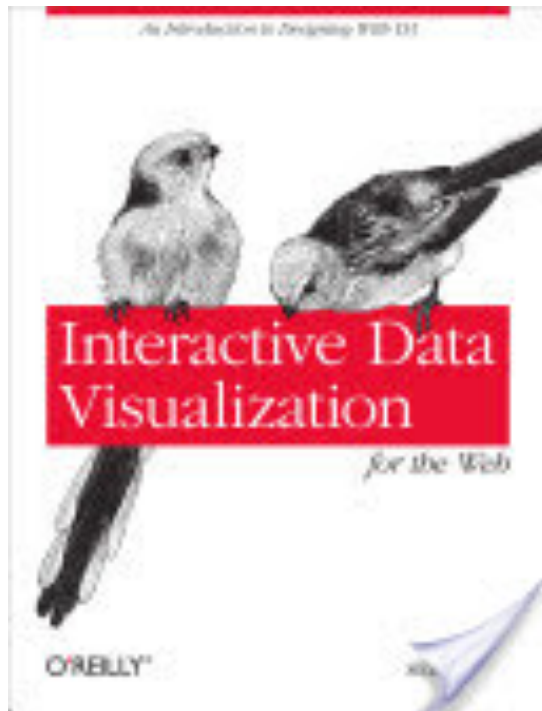
Any ideas
on what
this will
look like?

Jobs by language in Washington, DC Metro area





More resources for D3 goodness!



<http://bl.ocks.org/mbostock>

<http://d3js.org>

<http://www.gapminder.org>