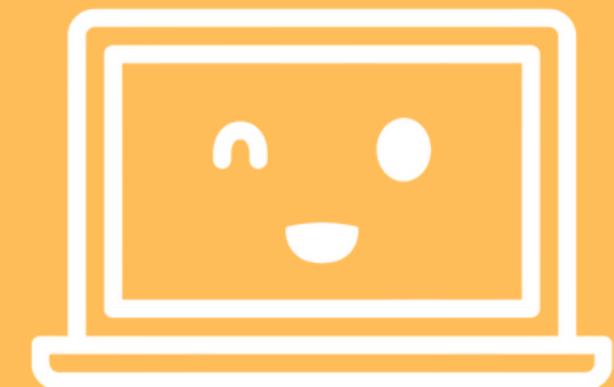

FINDING Happiness



HAPPY.
CO
HAPPINESS LAB

The Team



Abby Asomani

A SQL query walks into a bar, walks up to two tables and asks “Can I join you?”



Arvin Seeva

Data is like people – interrogate it hard enough and it will tell you whatever you want to hear.



Kom

Did you hear the one about the statistician?
Probably....



Stephen Guilmartin

There are 10 kinds of people in this world. Those who understand binary and those who don't.





WHY HAPPINESS?

Happiness is a global, existential question...



Images from: <https://www.keepinspiring.me/quotes-about-happiness/>

Defining happiness



How individuals rate their current level of satisfaction with life, on a scale from 1 to 10



What factors influence
our happiness?*

*according to the data

Questions



Q1: Which countries are the happiest?

Q2: What factors have the greatest influence on happiness (social, economic or political?)

Q3: Is there a relationship between alcohol and happiness/unhappiness?

Q4: Is the world getting happier or unhappier?



Data Exploration



Sourcing

Global libraries such as Google Dataset Search and Kaggle

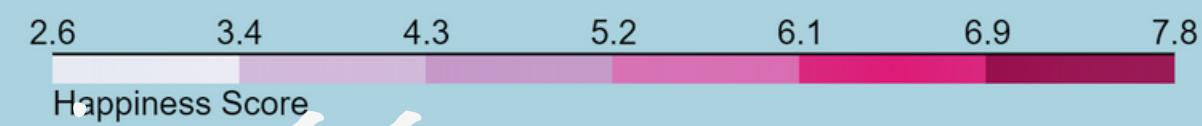
Seeing the CSV

Using Pandas to understand the dataset, using Microsoft Excel to eye-ball the CSVs.

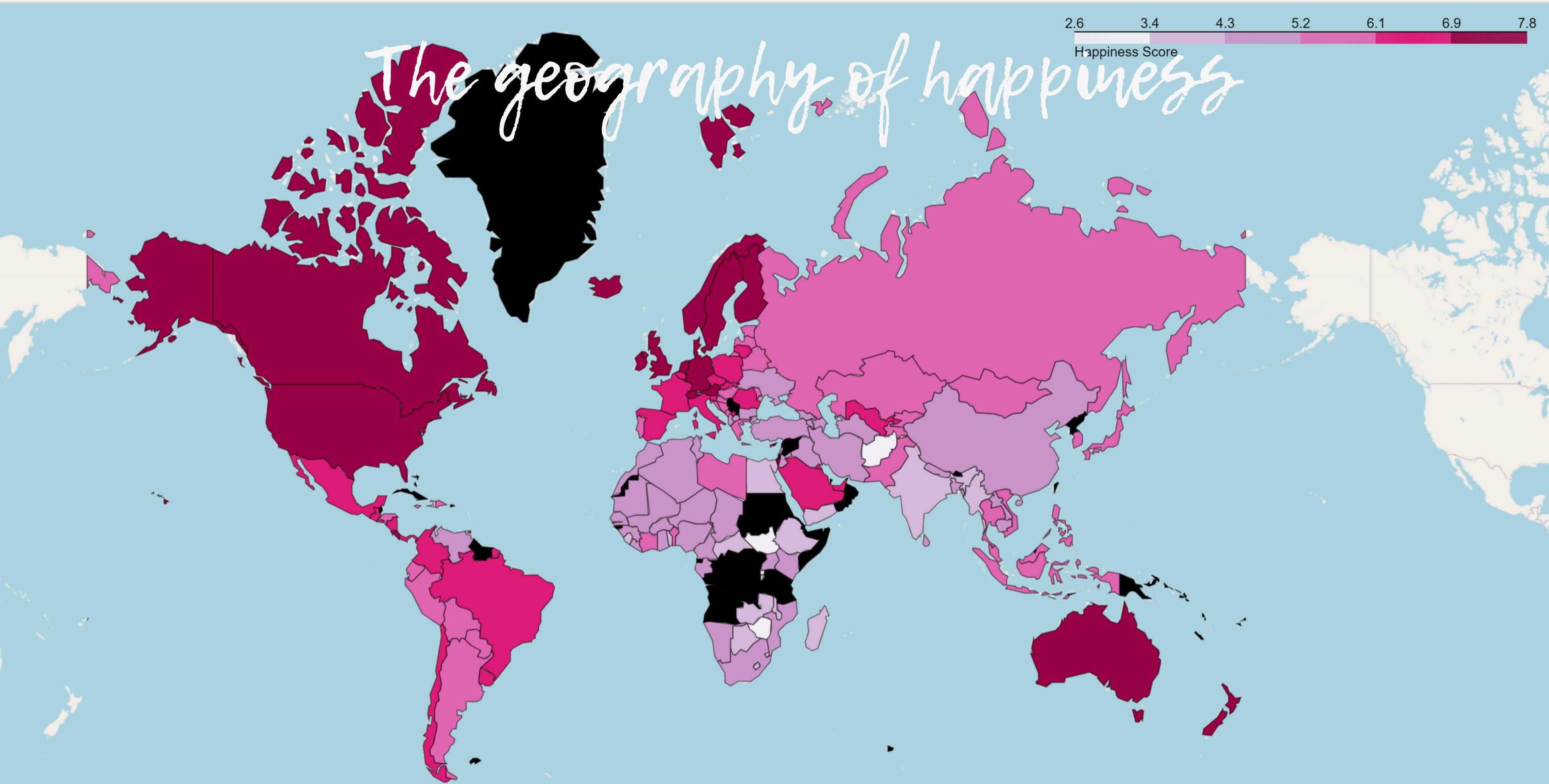
Processing the data

Understanding it, cleaning it, merging it and sharing it





The geography of happiness

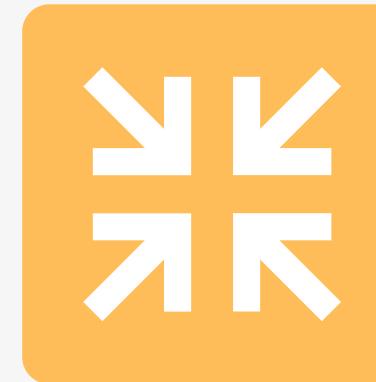


Nordic countries experience high levels of happiness (i.e. higher happiness scores)

Happiness factors



SOCIAL SCORE



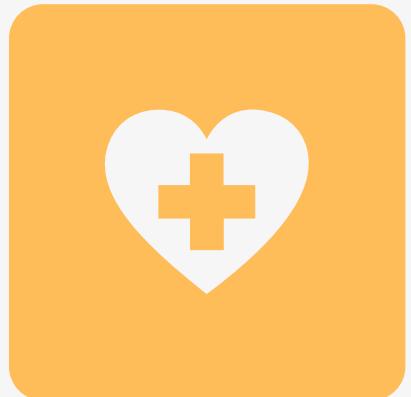
CORRUPTION SCORE



GDP SCORE



GENEROSITY SCORE



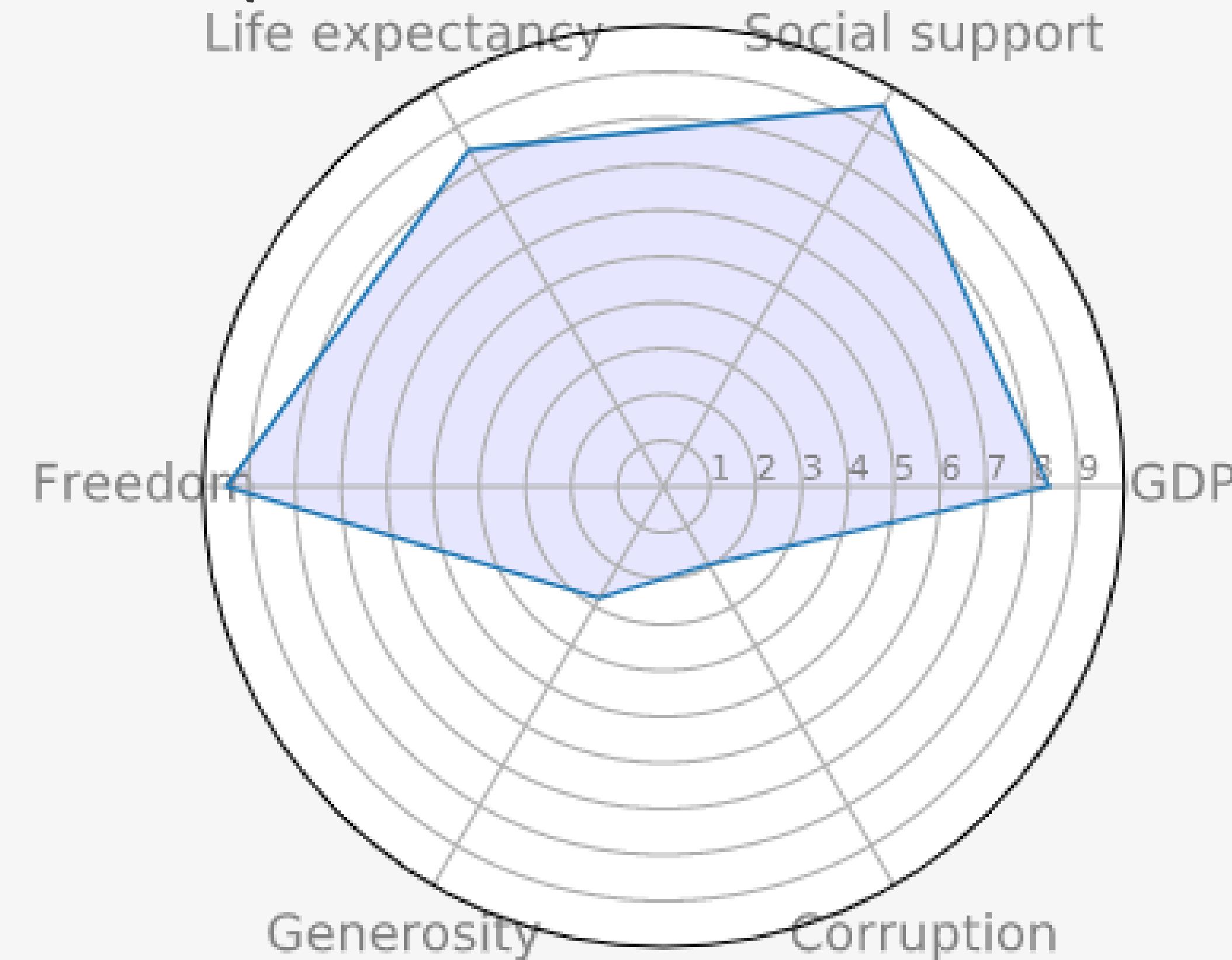
HEALTH SCORE



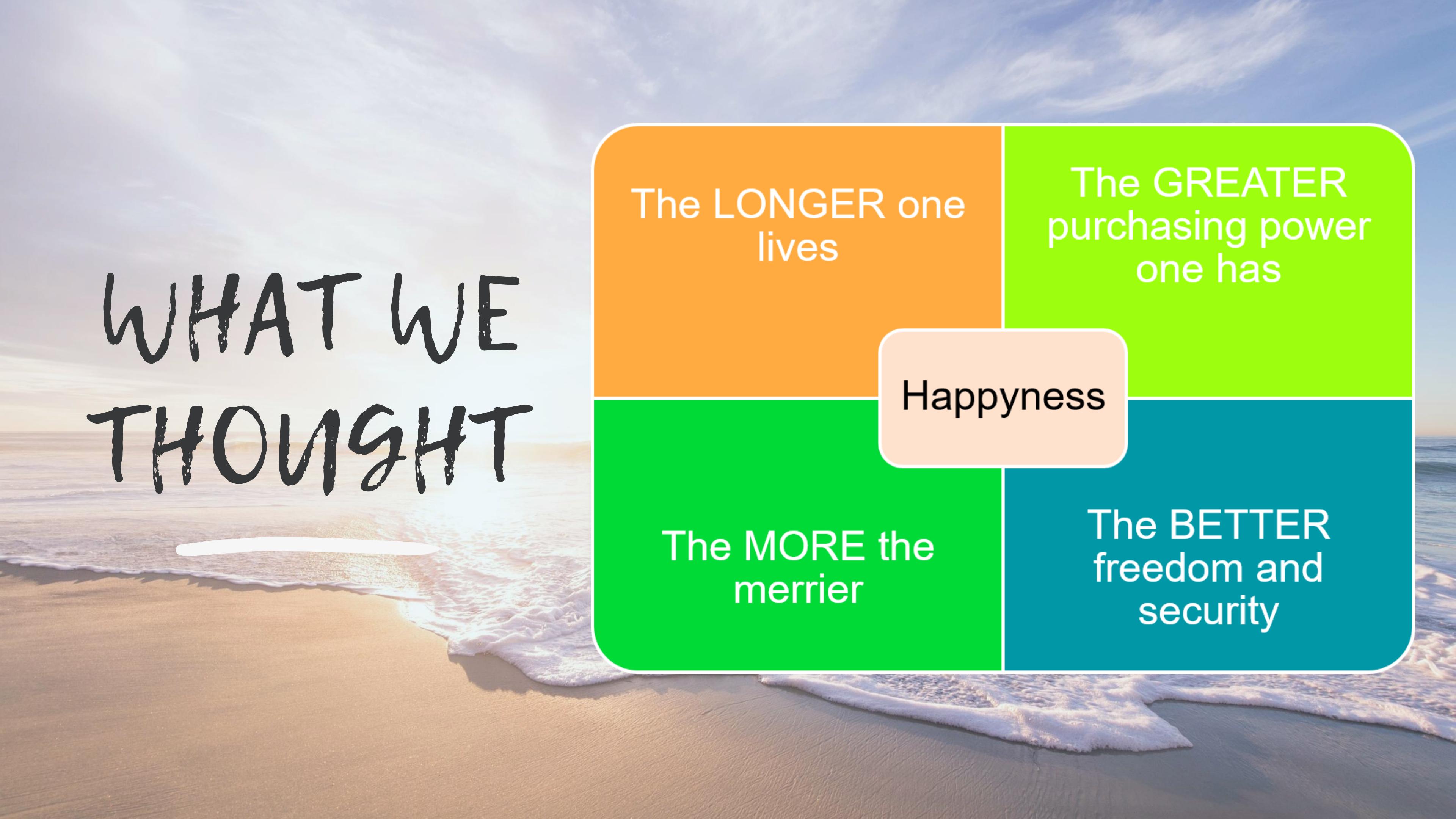
FREEDOM SCORE



Factors that influence happiness



WHAT WE THOUGHT



The LONGER one
lives

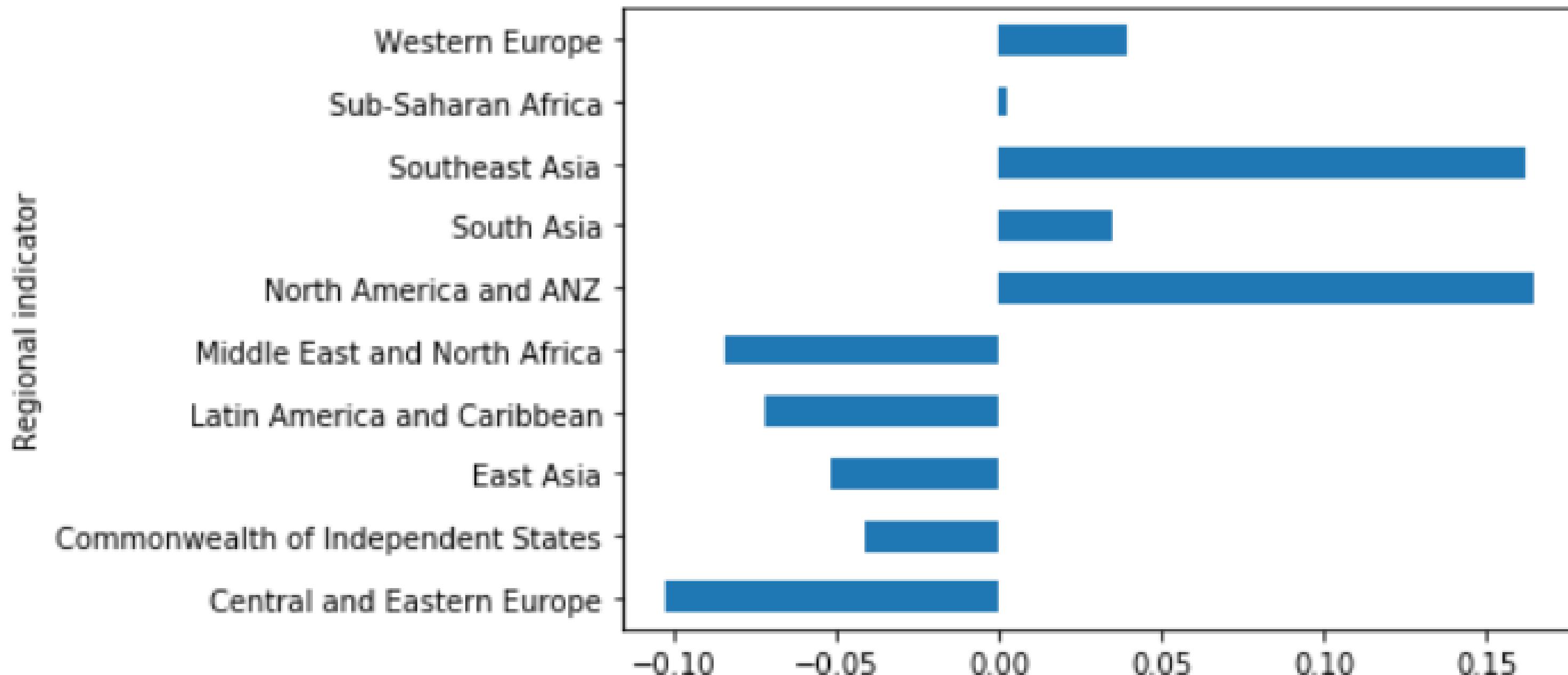
The GREATER
purchasing power
one has

Happyness

The MORE the
merrier

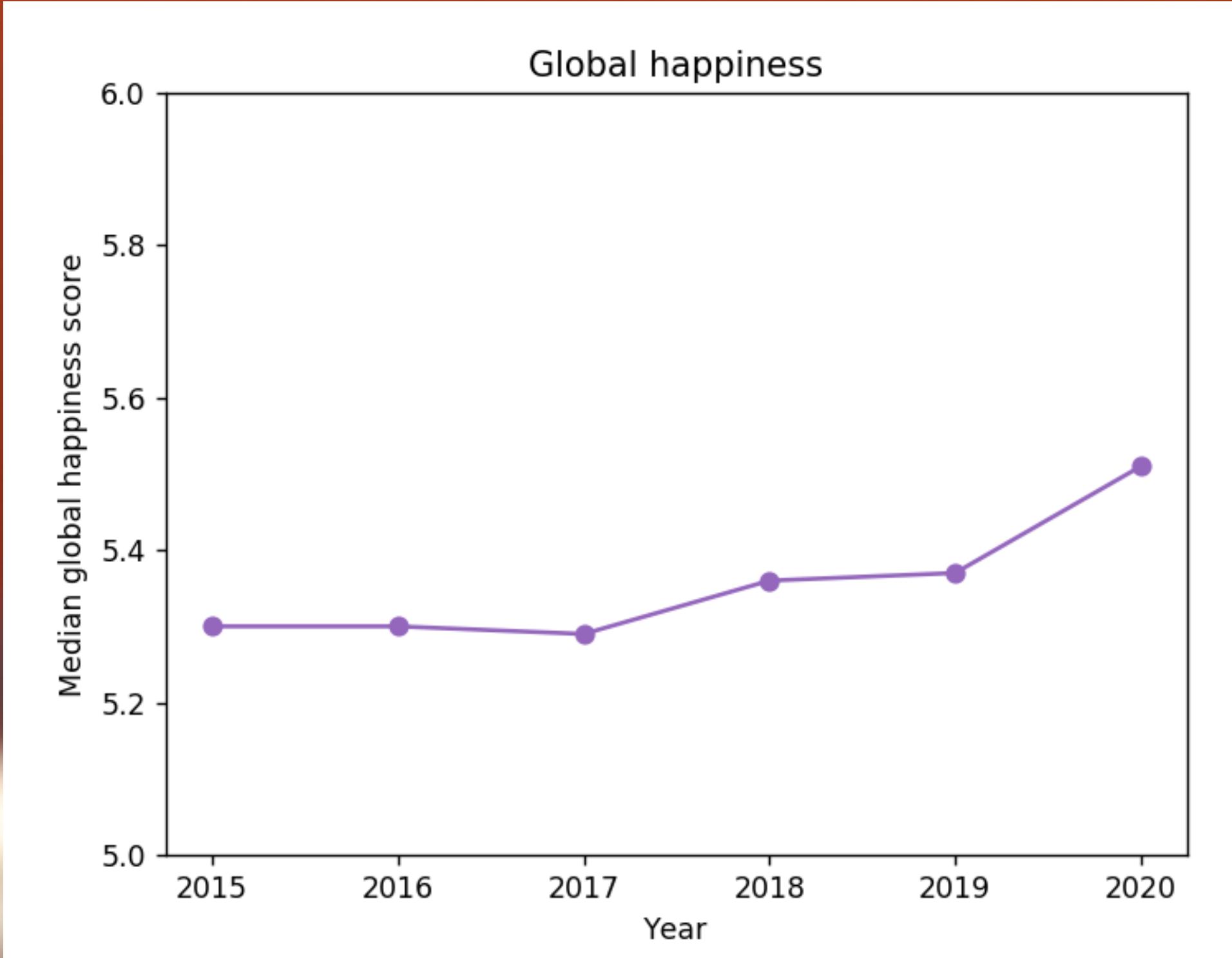
The BETTER
freedom and
security

Unexpected generosity



Sub-Saharan Africa's altruism could be an influence of religion

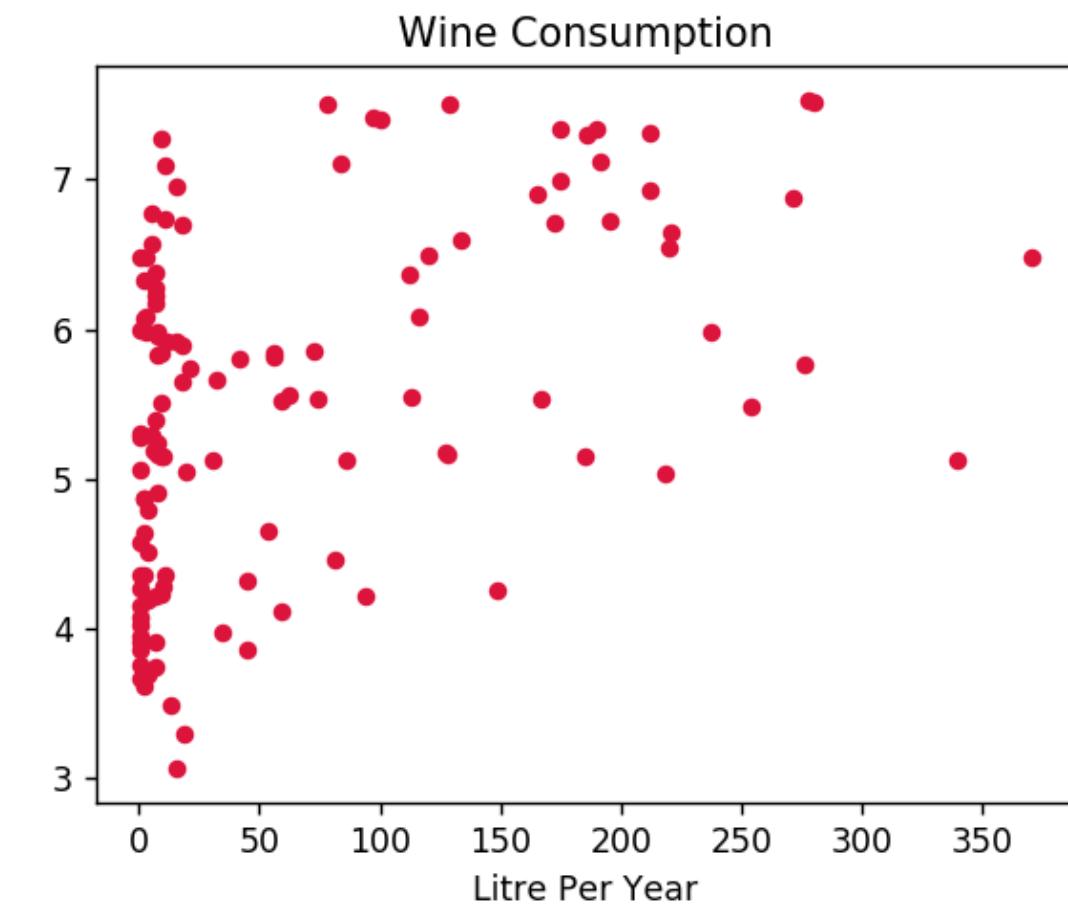
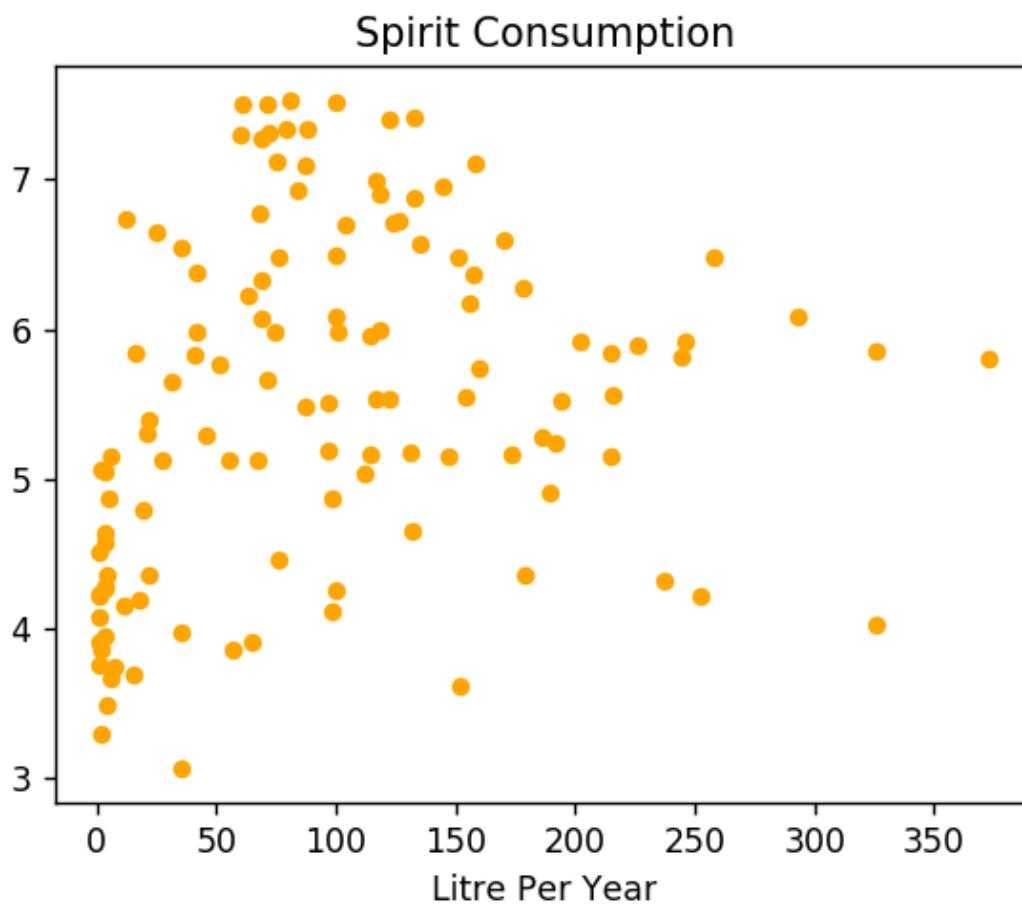
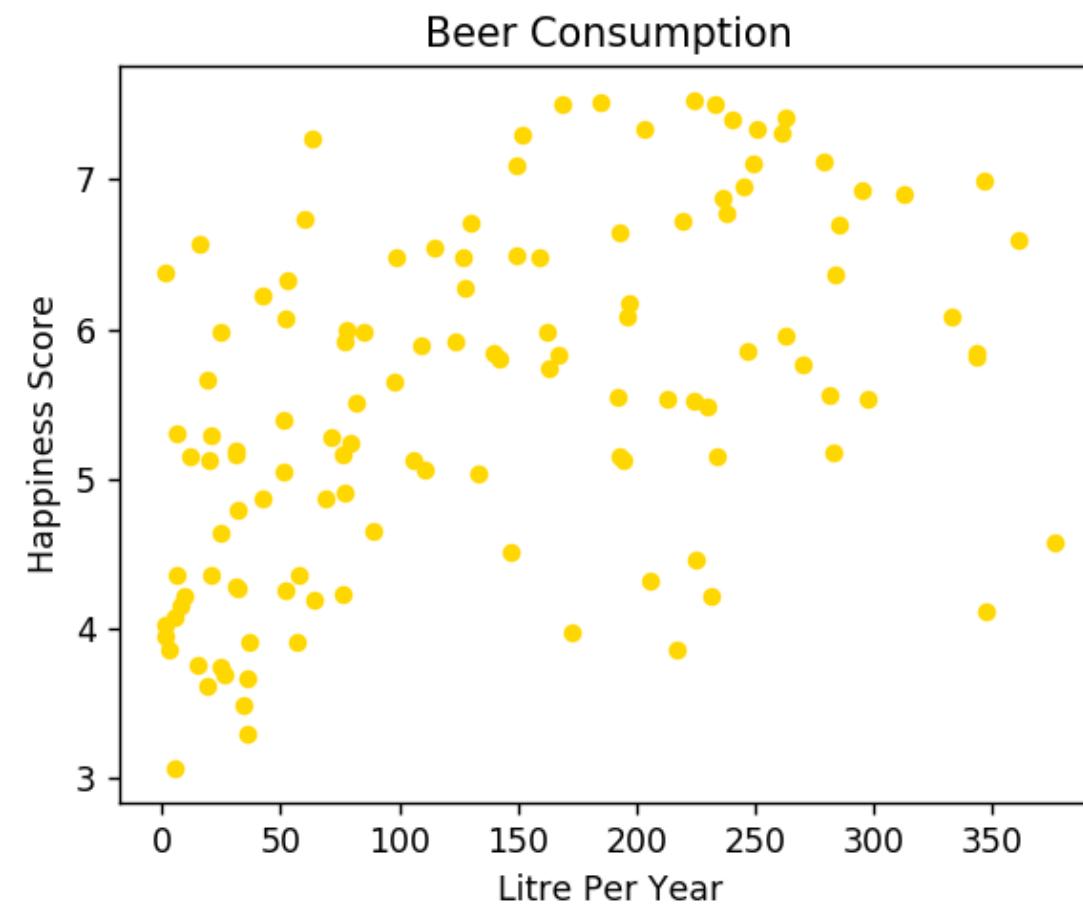
2020 isn't so bad



Data indicates an uptick in happiness for this year
* although most data collected in late 2019 to early 2020

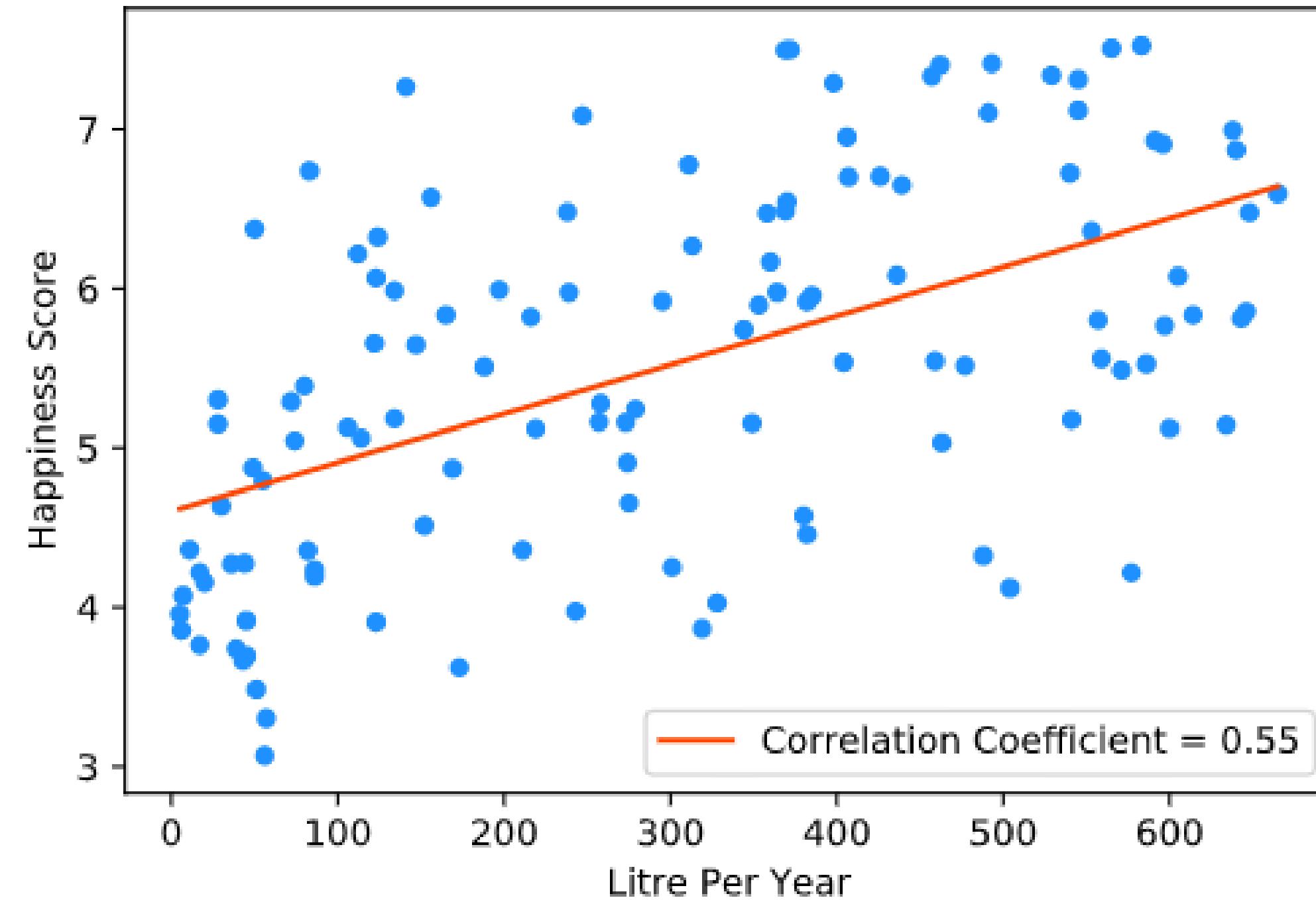


Beer, wine or spirits?



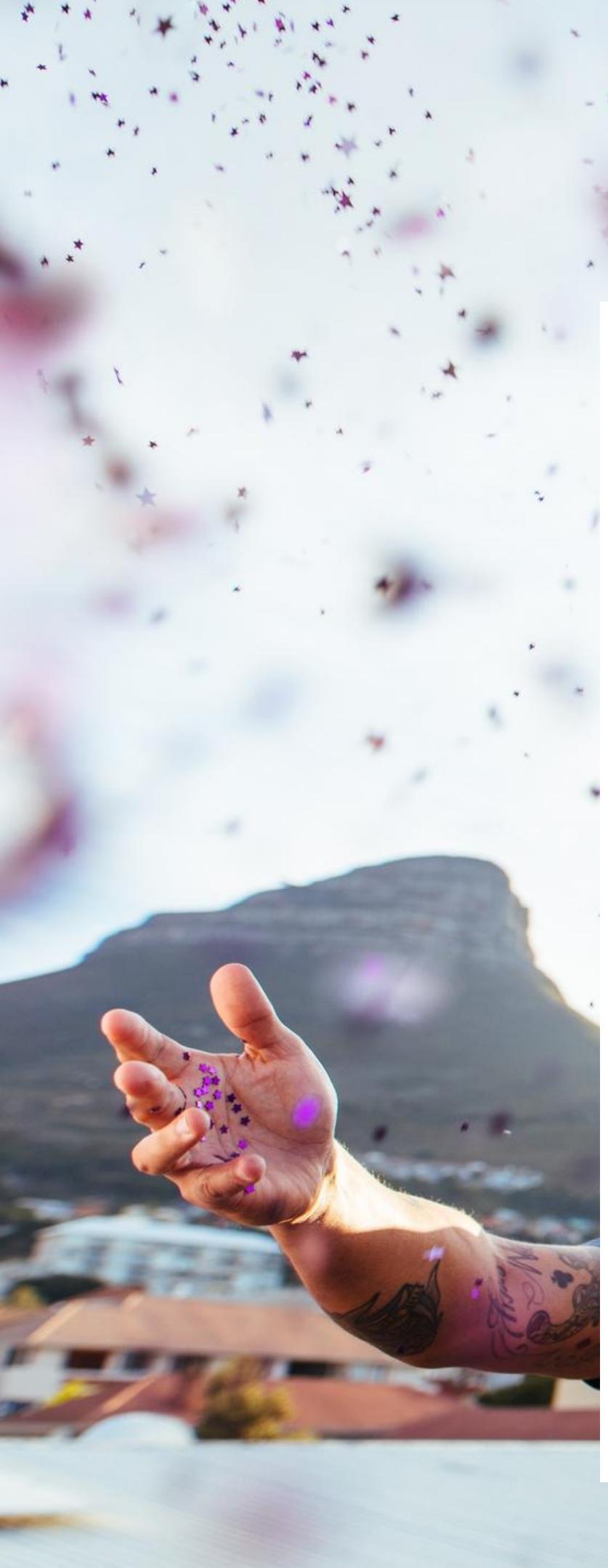
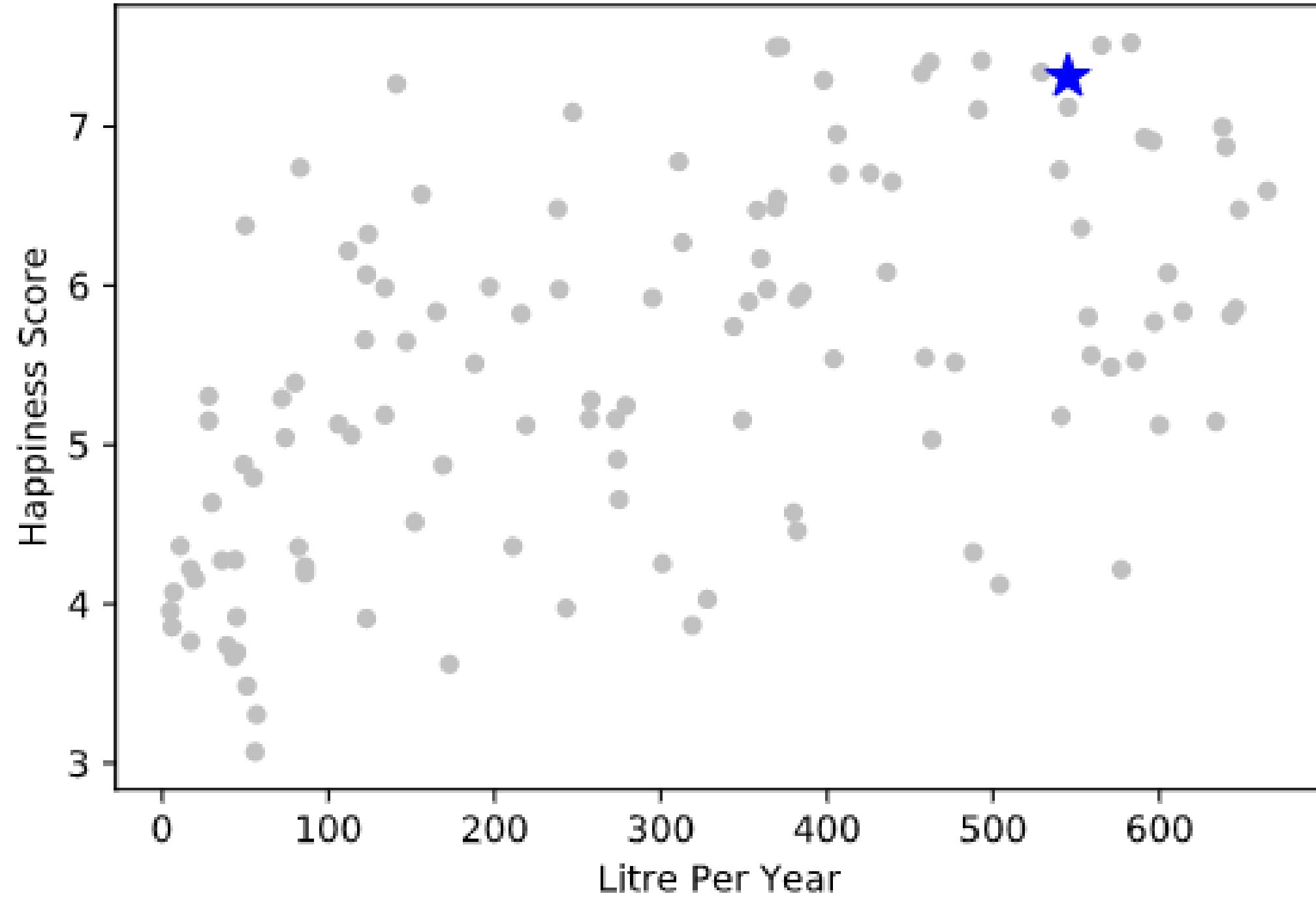
Alcohol & happiness

Alcohol Consumption



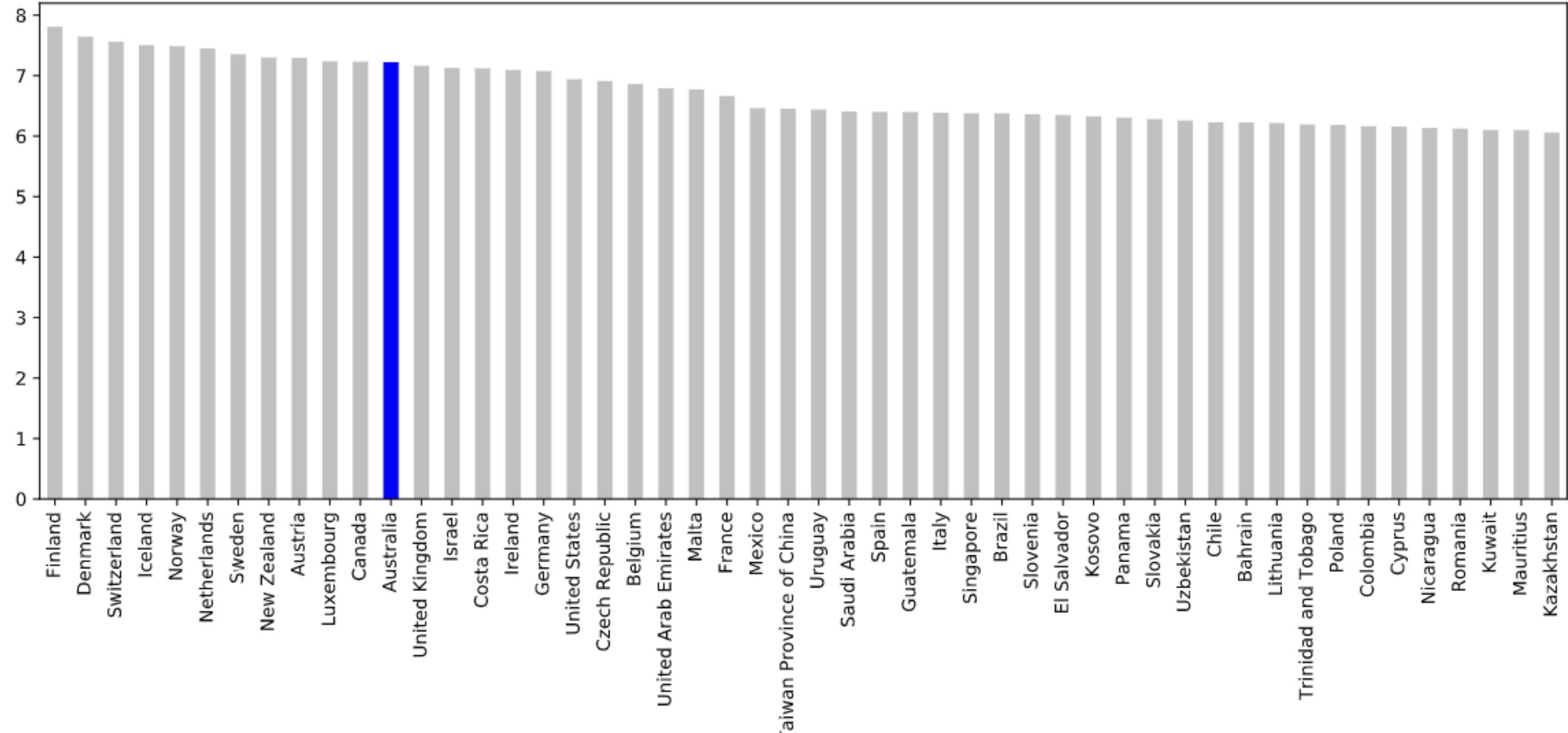
Aussies & alcohol

Australia vs World Alcohol Consumption

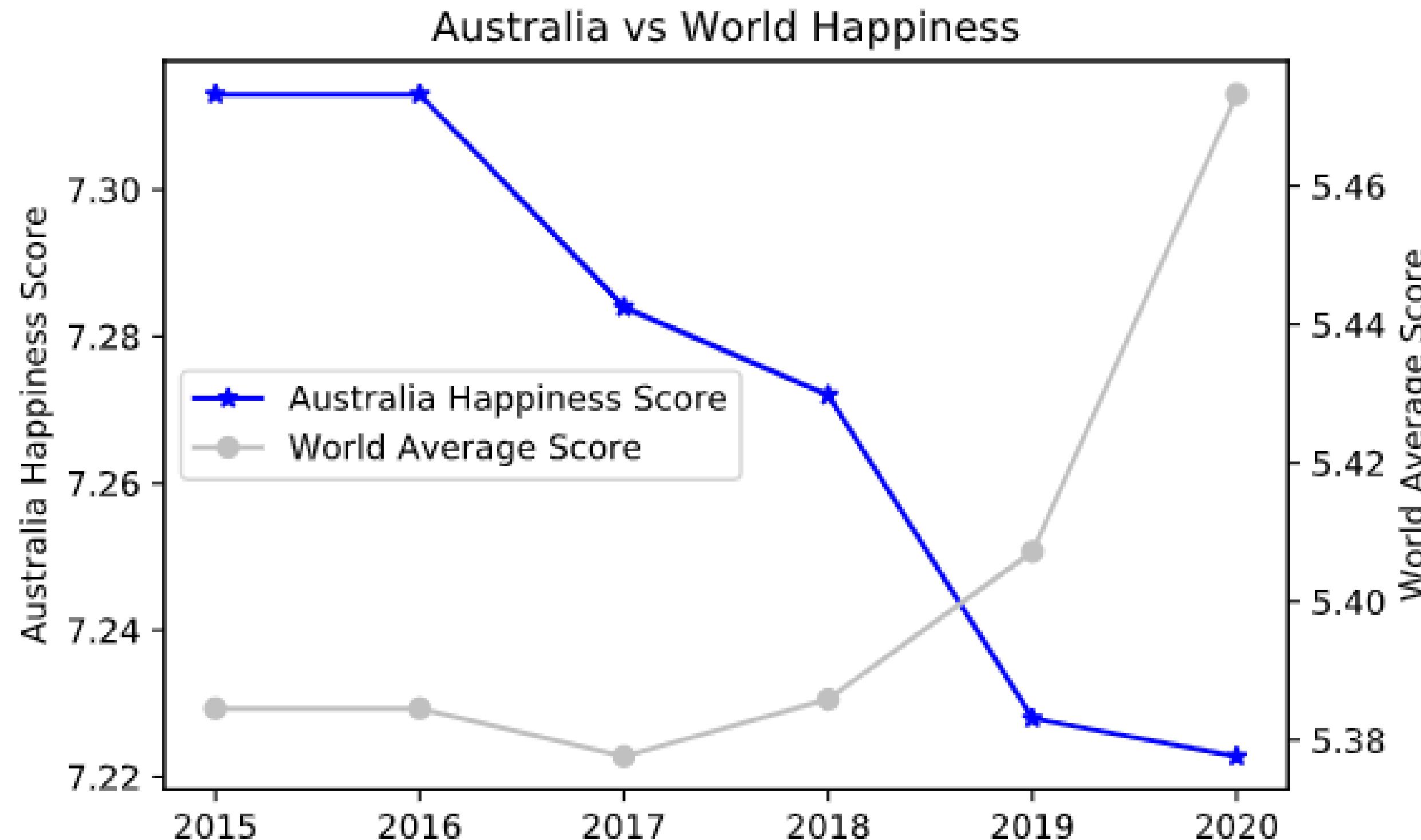


Australia's happiness

World Top 50 Happiest Country



Are we getting happier?



Findings



Scandinavian countries, Australia & NZ are consistently happier

Freedom, social support and life expectancy make the greatest contributions to happiness

Strong positive correlation between alcohol consumption and happiness (or vice versa)

Pre-COVID, the world was getting happier (but Aussie happiness was trending down)





Learnings

Pivot from FitByte to HappyCo

Finding available data with no restrictions on privacy

Understanding the data and finding any anomalies within it

Story-telling the data





What is the impact of a global pandemic on world happiness?

How does happiness change over time?

Is personal happiness reflective national happiness?



QUESTIONS ???

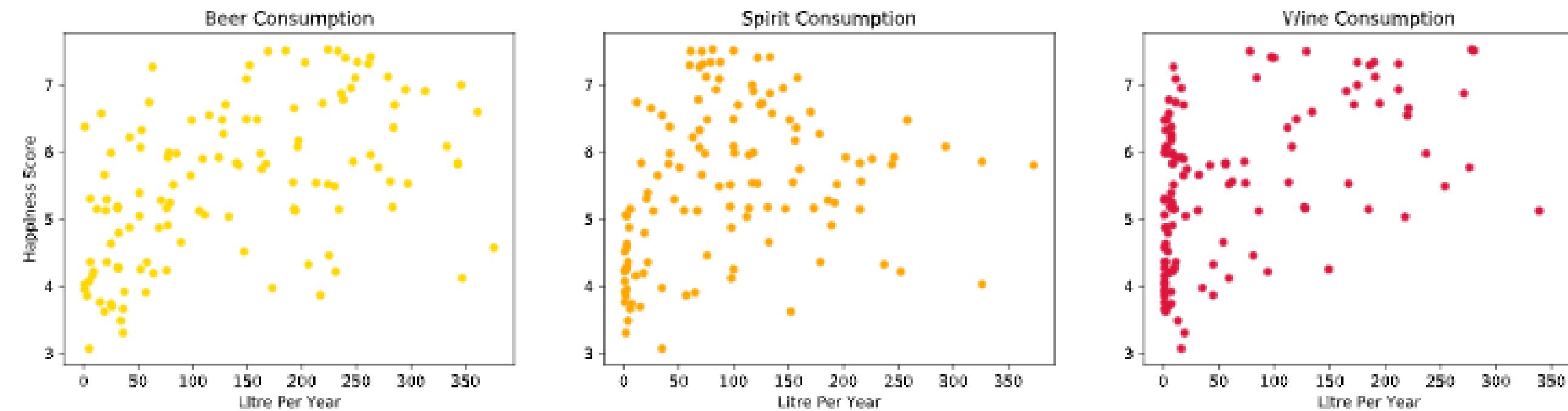


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*Examples of our code at following slides

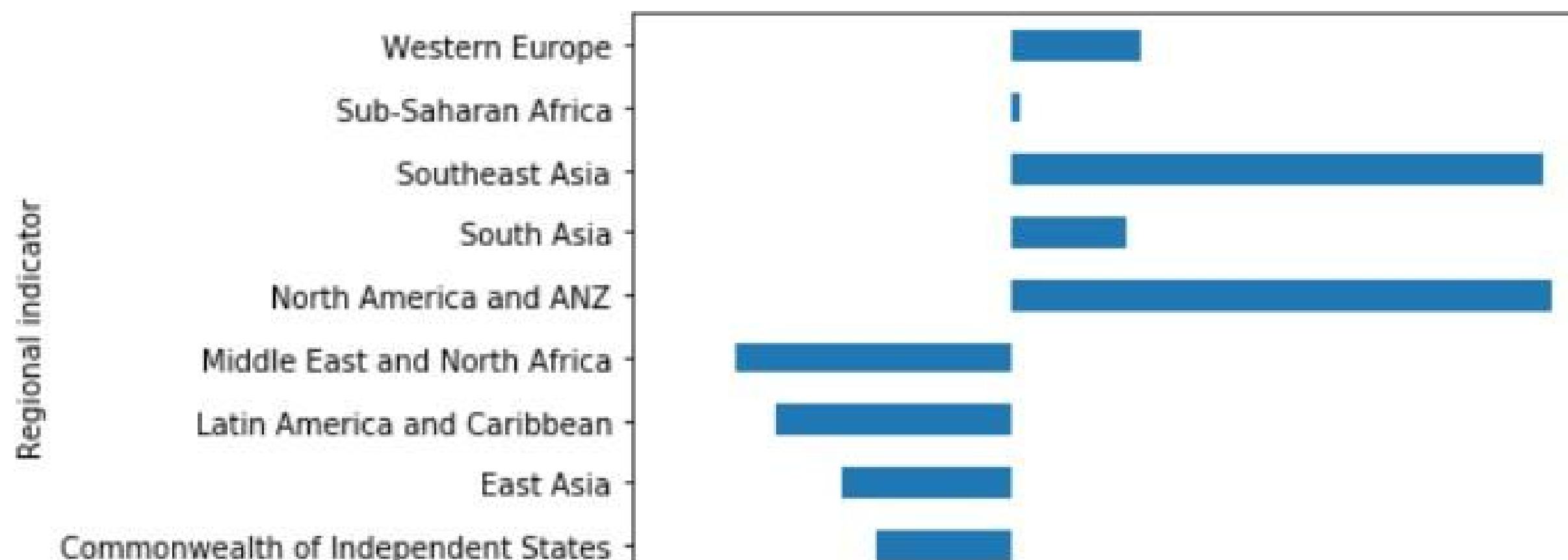
The Code - Examples from our Jupyter Notebook

```
In [4]: fg = plt.figure(figsize=(18,4))
ax1 = fg.add_subplot(131)
ax2 = fg.add_subplot(132)
ax3 = fg.add_subplot(133)
HappinessAlcoholConsumption_df.plot(kind='scatter',x='Beer_PerCapita',y='HappinessScore',ax=ax1,title='Beer Consumption',color='gold').set_xlabel('Litres Per Year')
ax1.set_ylabel('Happiness Score')
HappinessAlcoholConsumption_df.plot(kind='scatter',x='Spirit_PerCapita',y='HappinessScore',ax=ax2,title='Spirit Consumption',color='orange').set_xlabel('Litres Per Year')
ax2.set_ylabel('')
HappinessAlcoholConsumption_df.plot(kind='scatter',x='Wine_PerCapita',y='HappinessScore',ax=ax3,title='Wine Consumption',color='crimson').set_xlabel('Litres Per Year')
ax3.set_ylabel('');
```



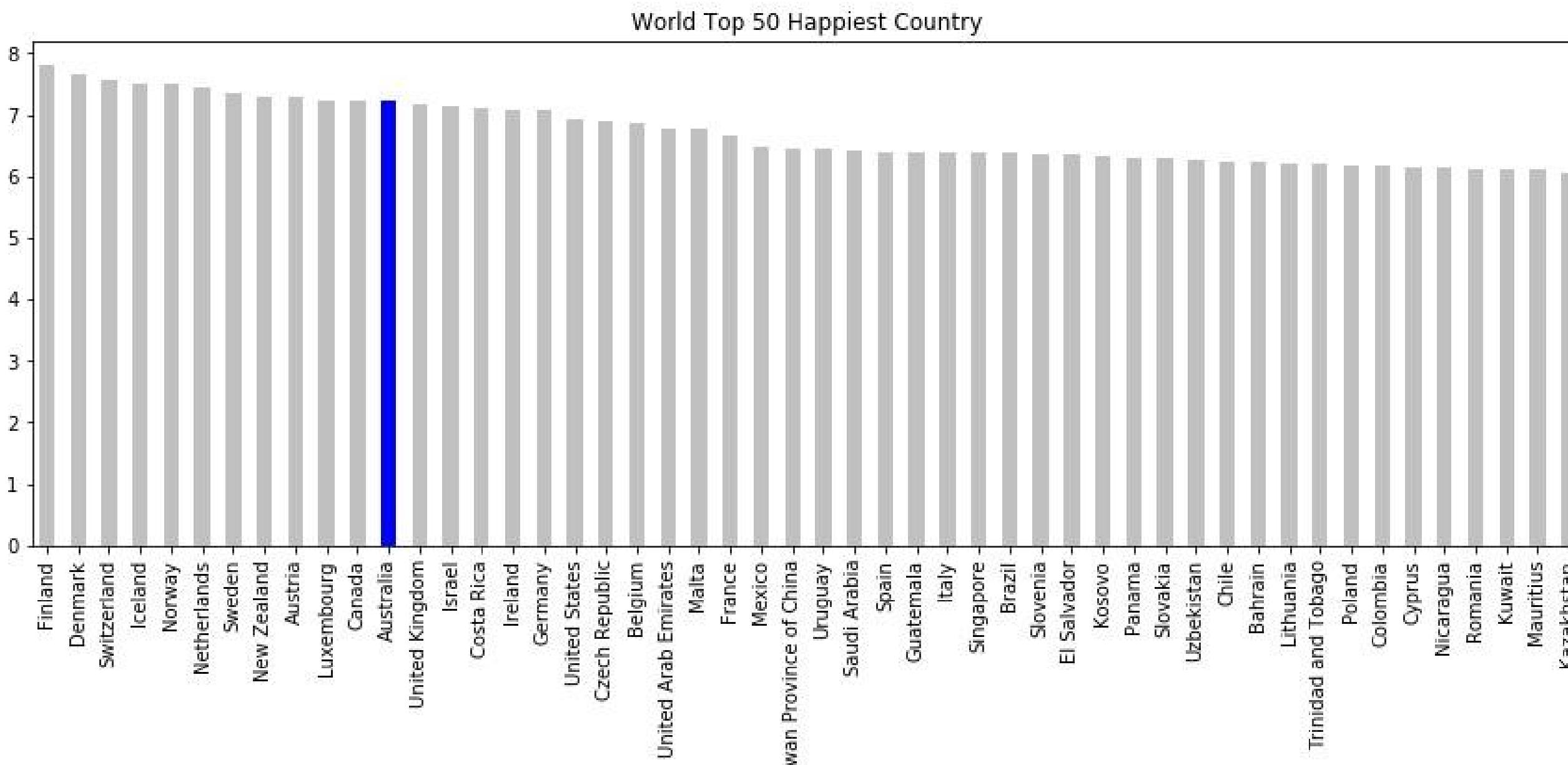
Out[27]: Regional indicator

Central and Eastern Europe	-0.102712
Commonwealth of Independent States	-0.041285
East Asia	-0.051978
Latin America and Caribbean	-0.071901
Middle East and North Africa	-0.084426
North America and ANZ	0.164180
South Asia	0.035106
Southeast Asia	0.161870
Sub-Saharan Africa	0.002383



```
In [7]: happy_50_df = happy_score_df.head(50)
happy_50_df = happy_50_df.dropna()
happy_50_df['au_color'] = 'silver'
happy_50_df.loc[happy_50_df['Country name']=='Australia','au_color'] = 'b'
happy_50_df.plot(kind='bar',x='Country name',y='Score Y20',color=happy_50_df['au_color'],title='World Top 50 Happiest Country',leg
```

```
Out[7]: <matplotlib.axes._subplots.AxesSubplot at 0x171d2697f60>
```



```

values += values[:1]
values

angles = [n / float(N) * 2 * pi for n in range(N)]
angles += angles[:-1]

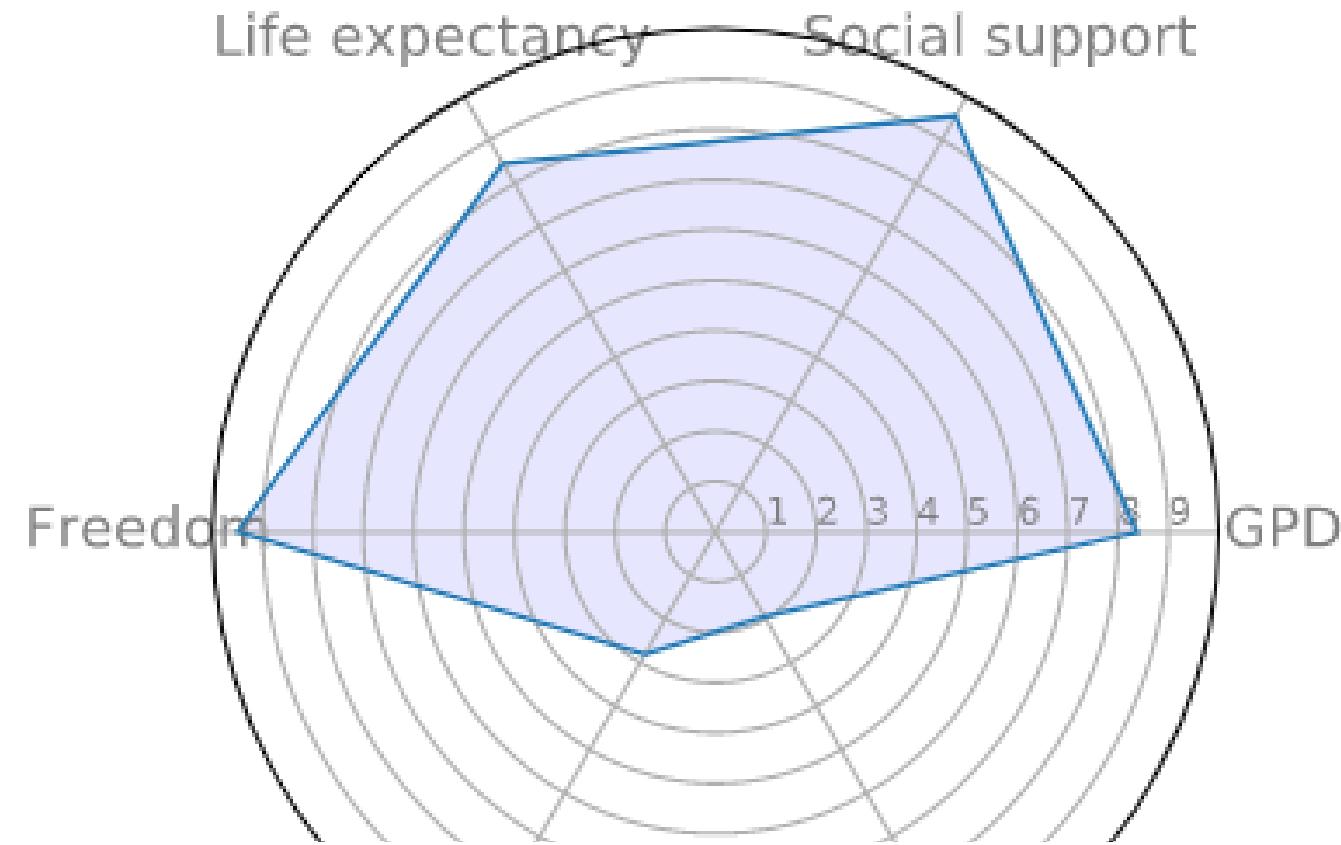
ax = plt.subplot(111, polar=True)
plt.xticks(angles[:-1], categories, color='grey', size=12)

# Draw yLabels
ax.set_rlabel_position(0)
plt.yticks([1,2,3,4,5,6,7,8,9], ["1","2","3","4","5","6","7","8","9"], color="grey", size=8)
plt.ylim(0,10)

# Plot data
ax.plot(angles, values, linewidth=1, linestyle='solid')

# Fill area
ax.fill(angles, values, 'b', alpha=0.1);

```



```
In [12]: world_geo = os.path.join('Data', 'world-countries.json')

happy_map = folium.Map(location=[37, 10], zoom_start=2)
happy_map.choropleth(geo_data=world_geo, name='choropleth', data=happy_score_df, columns=['Country name', 'Score Y20'], key_on='feature.properties.name', fill_color='PuRd', fill_opacity=1, line_opacity=0.5, legend_name='Happiness Score')
happy_map.save('happy_map.html')
happy_map
```

