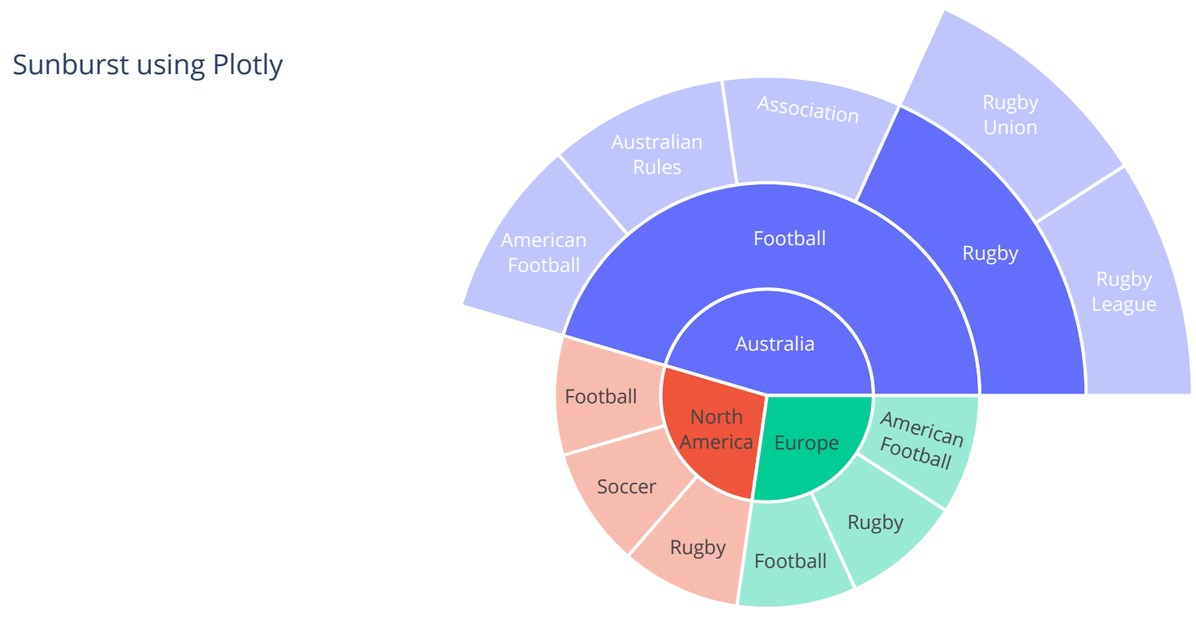
In [1]:
```
#import plotly.plotly as py
import pandas as pd
import plotly.graph_objs as go
from plotly.offline import init_notebook_mode, iplot
from plotly.subplots import make_subplots
init_notebook_mode()
```

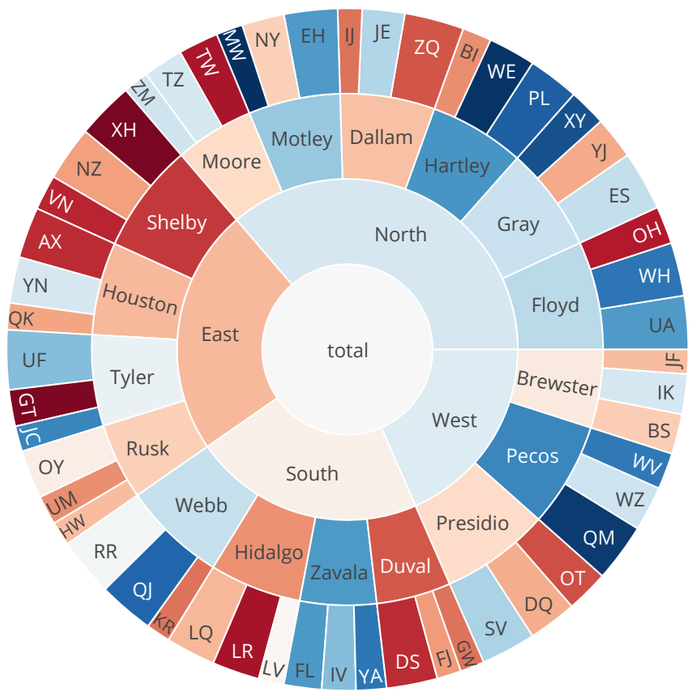
In [2]:
```
trace = go.Sunburst(
 ids=[
    "North America", "Europe", "Australia", "North America - Football", "Soccer",
    "North America - Rugby", "Europe - Football", "Rugby",
    "Europe - American Football","Australia - Football", "Association",
    "Australian Rules", "Autstralia - American Football", "Australia - Rugby",
    "Rugby League", "Rugby Union"
  ],
  labels= [
    "North<br>America", "Europe", "Australia", "Football", "Soccer", "Rugby",
    "Football", "Rugby", "American<br>Football", "Football", "Association",
    "Australian<br>Rules", "American<br>Football", "Rugby", "Rugby<br>League",
    "Rugby<br>Union"
  ],
  parents=[
    "", "", "", "North America", "North America", "North America", "Europe",
    "Europe", "Europe","Australia", "Australia - Football", "Australia - Football",
    "Australia - Football", "Australia - Football", "Australia - Rugby",
    "Australia - Rugby"
  ],
  outsidetextfont={"size": 20, "color": "#377eb8"},
  leaf={"opacity": 0.4},
  marker={"line": {"width": 2}}
)

layout = go.Layout(
    margin = go.layout.Margin(t=0, l=0, r=0, b=0),
    sunburstcolorway=["#636efa","#ef553b","#00cc96"],
    title={
        'text': "Sunburst using Plotly",
        'y':.9,
        'x':0.1,
        'xanchor': 'center',
        'yanchor': 'top',
    }
)

fig = go.Figure([trace], layout)


iplot(fig, filename='repeated_labels_sunburst')
```

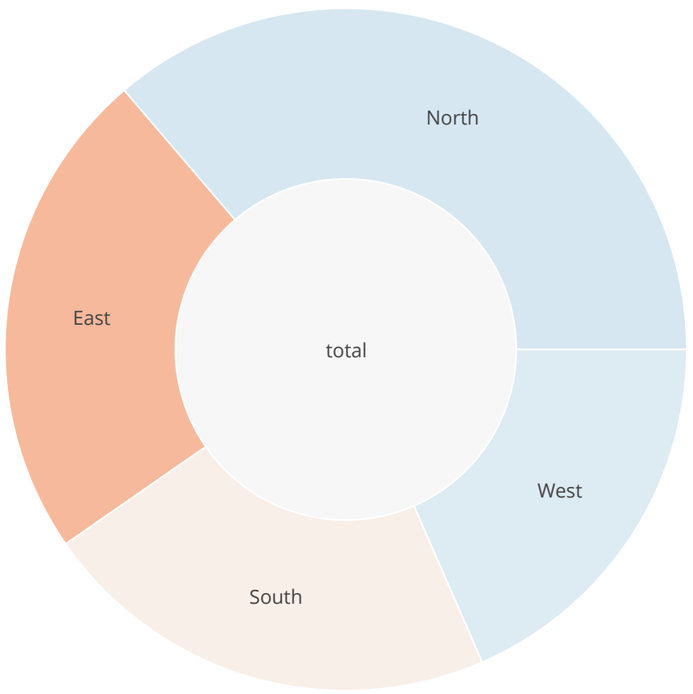


In [3]:

```
df = pd.read_csv('https://raw.githubusercontent.com/plotly/datasets/master/sales_success.csv')
print(df.head())

levels = ['salesperson', 'county', 'region'] # levels used for the hierarchical chart
color_columns = ['sales', 'calls']
value_column = 'calls'

def build_hierarchical_dataframe(df, levels, value_column, color_columns=None):
    """
    Build a hierarchy of levels for Sunburst or Treemap charts.

    Levels are given starting from the bottom to the top of the hierarchy,
    ie the last level corresponds to the root.
    """
    df_all_trees = pd.DataFrame(columns=['id', 'parent', 'value', 'color'])
    for i, level in enumerate(levels):
        df_tree = pd.DataFrame(columns=['id', 'parent', 'value', 'color'])
        dfg = df.groupby(levels[i:]).sum(numerical_only=True)
        dfg = dfg.reset_index()
        df_tree['id'] = dfg[level].copy()
        if i < len(levels) - 1:
            df_tree['parent'] = dfg[levels[i+1]].copy()
        else:
            df_tree['parent'] = 'total'
        df_tree['value'] = dfg[value_column]
        df_tree['color'] = dfg[color_columns[0]] / dfg[color_columns[1]]
        df_all_trees = df_all_trees.append(df_tree, ignore_index=True)
    total = pd.Series(dict(id='total', parent='',
                           value=df[value_column].sum(),
                           color=df[color_columns[0]].sum() / df[color_columns[1]].sum()))
    df_all_trees = df_all_trees.append(total, ignore_index=True)
    return df_all_trees


df_all_trees = build_hierarchical_dataframe(df, levels, value_column, color_columns)
average_score = df['sales'].sum() / df['calls'].sum()

fig = make_subplots(1, 2, specs=[[{"type": "domain"}, {"type": "domain"}]],)

fig.add_trace(go.Sunburst(
    labels=df_all_trees['id'],
    parents=df_all_trees['parent'],
    values=df_all_trees['value'],
    branchvalues='total',
    marker=dict(
        colors=df_all_trees['color'],
        colorscale='RdBu',
        cmid=average_score),
    hovertemplate='<b>%{label} </b> <br> Sales: %{value}<br> Success rate: %{color:.2f}',
    name=''
    ), 1, 1)

fig.add_trace(go.Sunburst(
    labels=df_all_trees['id'],
    parents=df_all_trees['parent'],
    values=df_all_trees['value'],
    branchvalues='total',
    marker=dict(
        colors=df_all_trees['color'],
        colorscale='RdBu',
        cmid=average_score),
    hovertemplate='<b>%{label} </b> <br> Sales: %{value}<br> Success rate: %{color:.2f}',
    maxdepth=2
    ), 1, 2)

fig.update_layout(margin=dict(t=10, b=10, r=10, l=10))
fig.show()
```

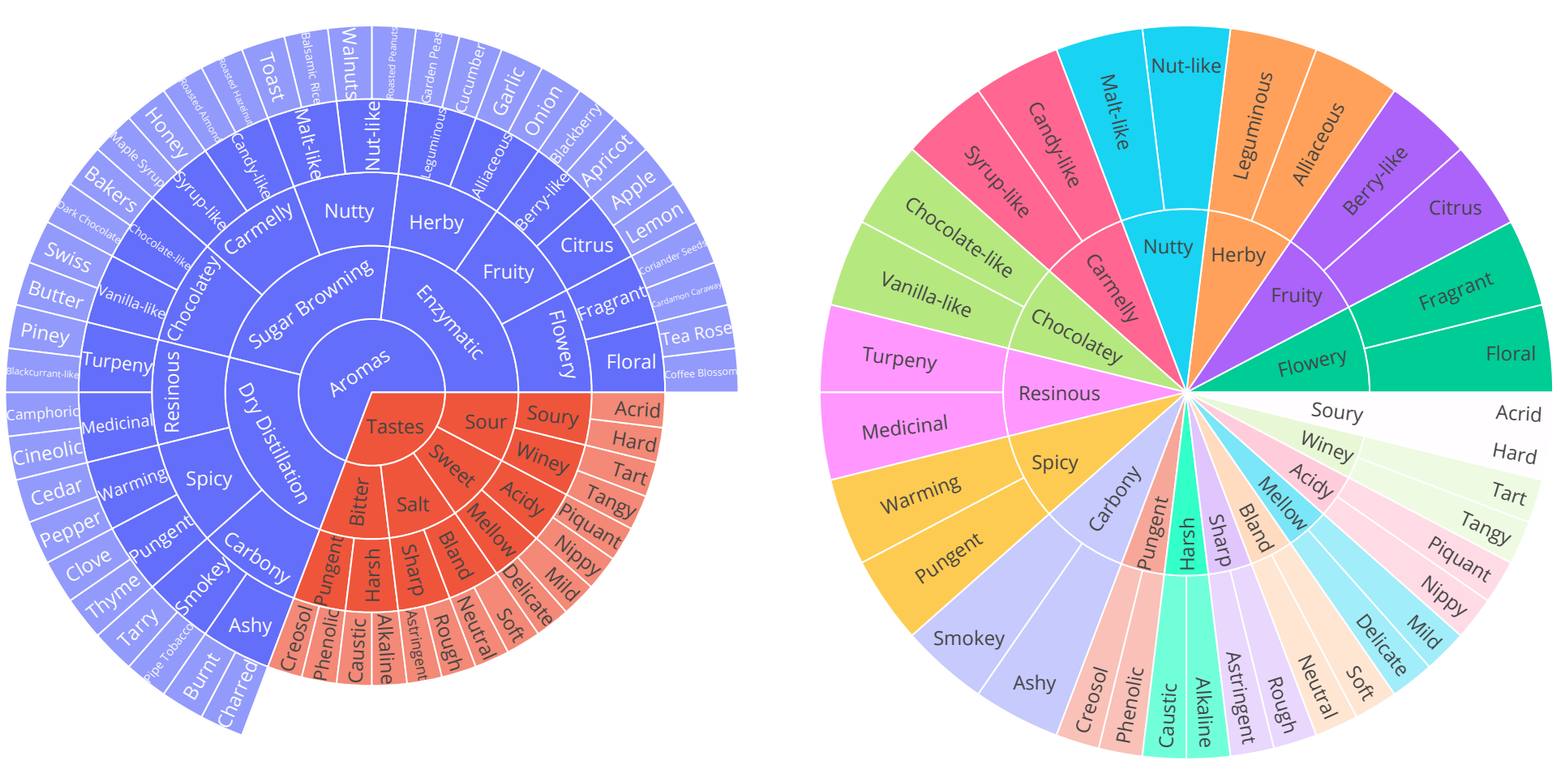
```
   Unnamed: 0 region   county salesperson  calls  sales
0           0  North   Dallam          JE     35     23
1           1  North   Dallam          ZQ     49     13
2           2  North   Dallam          IJ     20      6
3           3  North  Hartley          WE     39     37
4           4  North  Hartley          PL     42     37
```





In [4]:

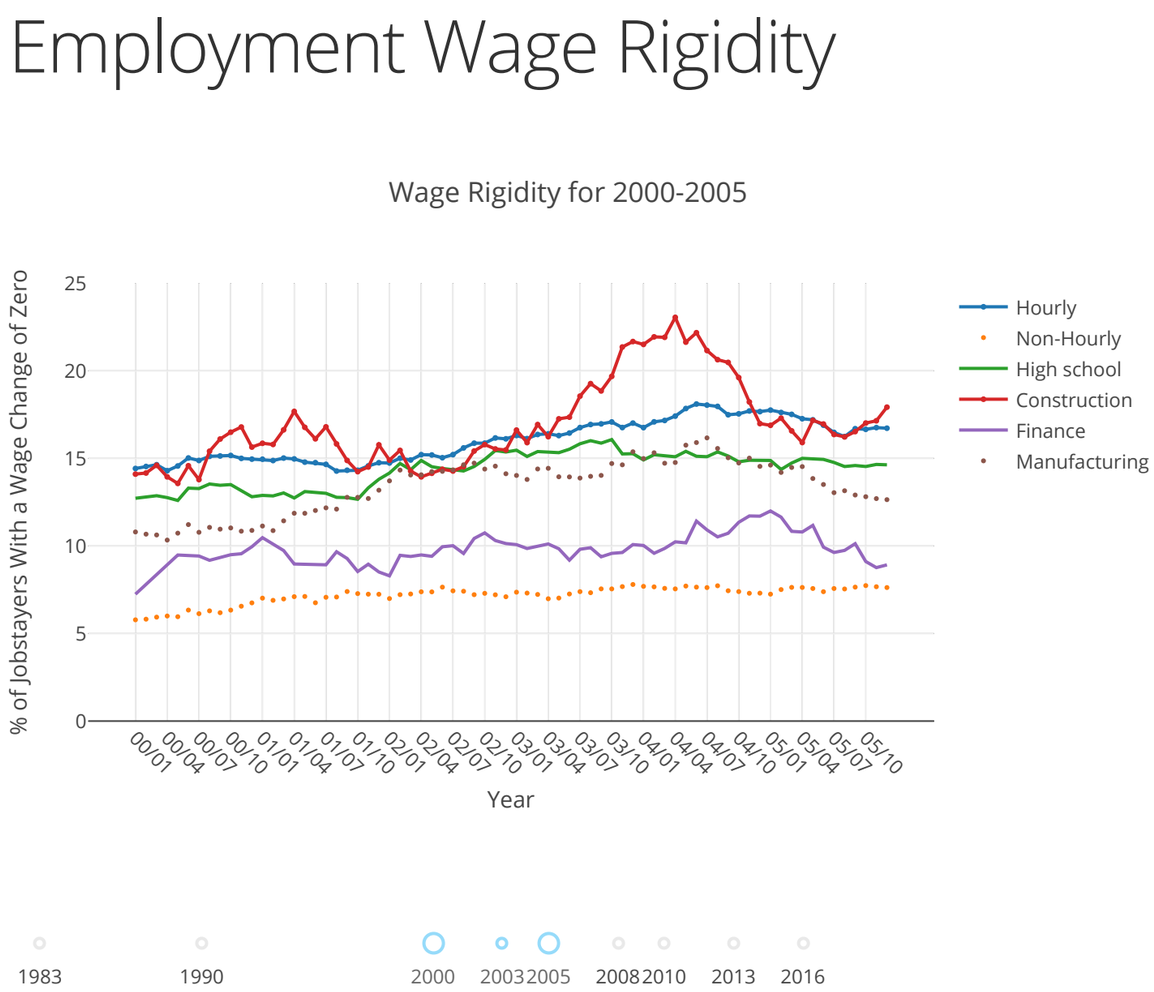
```
df1 = pd.read_csv('https://raw.githubusercontent.com/plotly/datasets/718417069ead87650b90472464c7565dc8c2cb1c/sunburst-coffee-flavors-complete.csv')
df2 = pd.read_csv('https://raw.githubusercontent.com/plotly/datasets/718417069ead87650b90472464c7565dc8c2cb1c/coffee-flavors.csv')

fig = go.Figure()

fig.add_trace(go.Sunburst(
    ids=df1.ids,
    labels=df1.labels,
    parents=df1.parents,
    domain=dict(column=0)
))

fig.add_trace(go.Sunburst(
    ids=df2.ids,
    labels=df2.labels,
    parents=df2.parents,
    domain=dict(column=1),
    maxdepth=2
))

fig.update_layout(
    grid= dict(columns=2, rows=1),
    margin = dict(t=0, l=0, r=0, b=0)
)

fig.show()
```



In [6]:

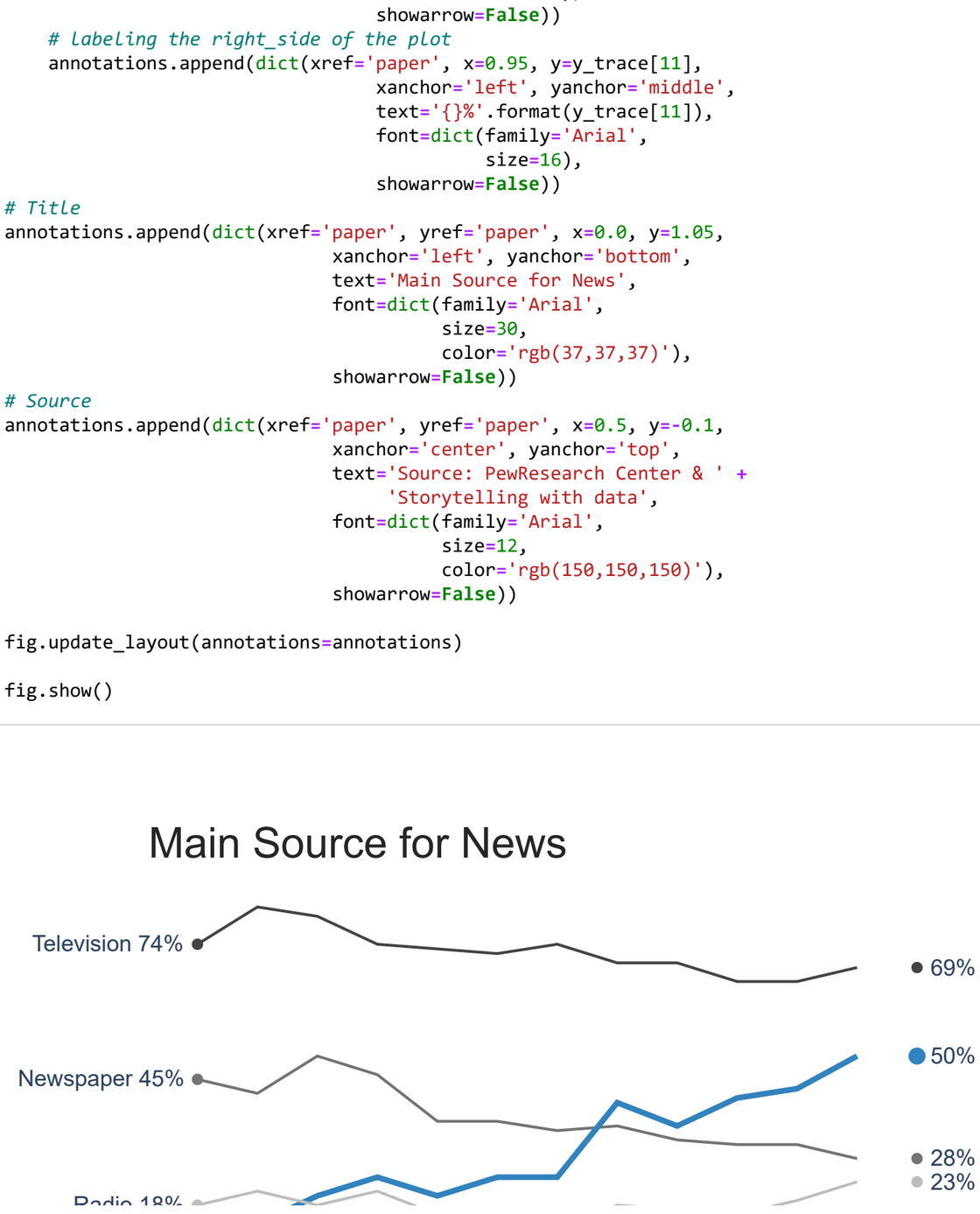
```
#Dash for embedding iframes into
from IPython.display import IFrame
IFrame(src= "https://dash-simple-apps.plotly.host/dash-linescatterplot/", width="100%",height="750px", frameBorder="0")
```

Out[6]:



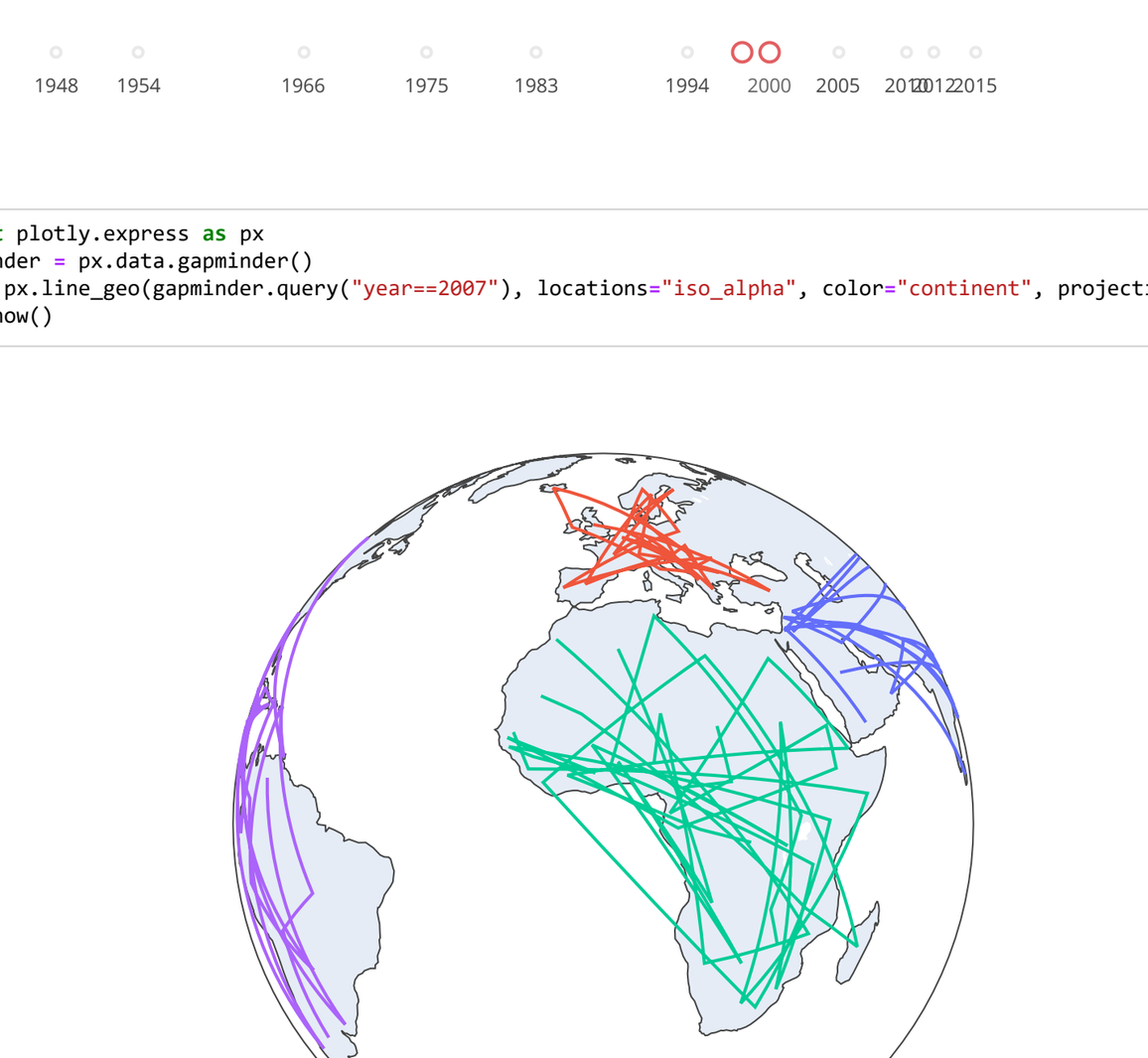
In [5]:

```
import plotly.graph_objects as go
import numpy as np

title = 'Main Source for News'
labels = ['Television', 'Newspaper', 'Internet', 'Radio']
colors = ['rgb(67,67,67)', 'rgb(115,115,115)', 'rgb(49,130,189)', 'rgb(189,189,189)']

mode_size = [8, 8, 12, 8]
line_size = [2, 2, 4, 2]

x_data = np.vstack((np.arange(2001, 2014),)*4)

y_data = np.array([
    [74, 82, 80, 74, 73, 72, 74, 70, 70, 66, 66, 69],
    [45, 42, 50, 46, 36, 36, 34, 35, 32, 31, 31, 28],
    [13, 14, 20, 24, 20, 24, 24, 40, 35, 41, 43, 50],
    [18, 21, 18, 21, 16, 14, 13, 18, 17, 16, 19, 23],
])

fig = go.Figure()

for i in range(0, 4):
    fig.add_trace(go.Scatter(x=x_data[i], y=y_data[i], mode='lines',
        name=labels[i],
        line=dict(color=colors[i], width=line_size[i]),
        connectgaps=True,
    ))

    # endpoints
    fig.add_trace(go.Scatter(
        x=[x_data[i][0], x_data[i][-1]],
        y=[y_data[i][0], y_data[i][-1]],
        mode='markers',
        marker=dict(color=colors[i], size=mode_size[i])
    ))

fig.update_layout(
    xaxis=dict(
        showline=True,
        showgrid=False,
        showticklabels=True,
        linecolor='rgb(204, 204, 204)',
        linewidth=2,
        ticks='outside',
        tickfont=dict(
            family='Arial',
            size=12,
            color='rgb(82, 82, 82)',
        ),
    ),
    yaxis=dict(
        showgrid=False,
        zeroline=False,
        showline=False,
        showticklabels=False,
    ),
    autosize=False,
    margin=dict(
        autoexpand=False,
        l=100,
        r=20,
        t=110,
    ),
    showlegend=False,
    plot_bgcolor='white'
)

annotations = []

# Adding labels
for y_trace, label, color in zip(y_data, labels, colors):
    # labeling the left_side of the plot
    annotations.append(dict(xref='paper', x=0.05, y=y_trace[0],
                                  xanchor='right', yanchor='middle',
                                  text=label + ' {}%'.format(y_trace[0]),
                                  font=dict(family='Arial',
                                            size=16),
                                  showarrow=False))
    # labeling the right_side of the plot
    annotations.append(dict(xref='paper', x=0.95, y=y_trace[11],
                                  xanchor='left', yanchor='middle',
                                  text='{}%'.format(y_trace[11]),
                                  font=dict(family='Arial',
                                            size=16),
                                  showarrow=False))
# Title
annotations.append(dict(xref='paper', yref='paper', x=0.0, y=1.05,
                              xanchor='left', yanchor='bottom',
                              text='Main Source for News',
                              font=dict(family='Arial',
                                        size=30,
                                        color='rgb(37,37,37)'),
                              showarrow=False))
# Source
annotations.append(dict(xref='paper', yref='paper', x=0.5, y=-0.1,
                              xanchor='center', yanchor='top',
                              text='Source: PewResearch Center & ' +
                                   'Storytelling with data',
                              font=dict(family='Arial',
                                        size=12,
                                        color='rgb(150,150,150)'),
                              showarrow=False))

fig.update_layout(annotations=annotations)

fig.show()
```



In [7]:
```
from IPython.display import IFrame
IFrame(src= "https://dash-simple-apps.plotly.host/dash-lineplot/", width="100%", height="650px", frameBorder="0")
```

Out[7]:



In [8]:
```
import plotly.express as px
gapminder = px.data.gapminder()
fig = px.line_geo(gapminder.query("year==2007"), locations="iso_alpha", color="continent", projection="orthographic")
fig.show()
```

In [9]:

```
import plotly.express as px
gapminder = px.data.gapminder()
fig = px.choropleth(gapminder, locations="iso_alpha", color="lifeExp", hover_name="country", animation_frame="year", range_color=[20,80])
fig.show()
```