

Betweenness and Weighted Degree vs Popularity-Change

In [4]:

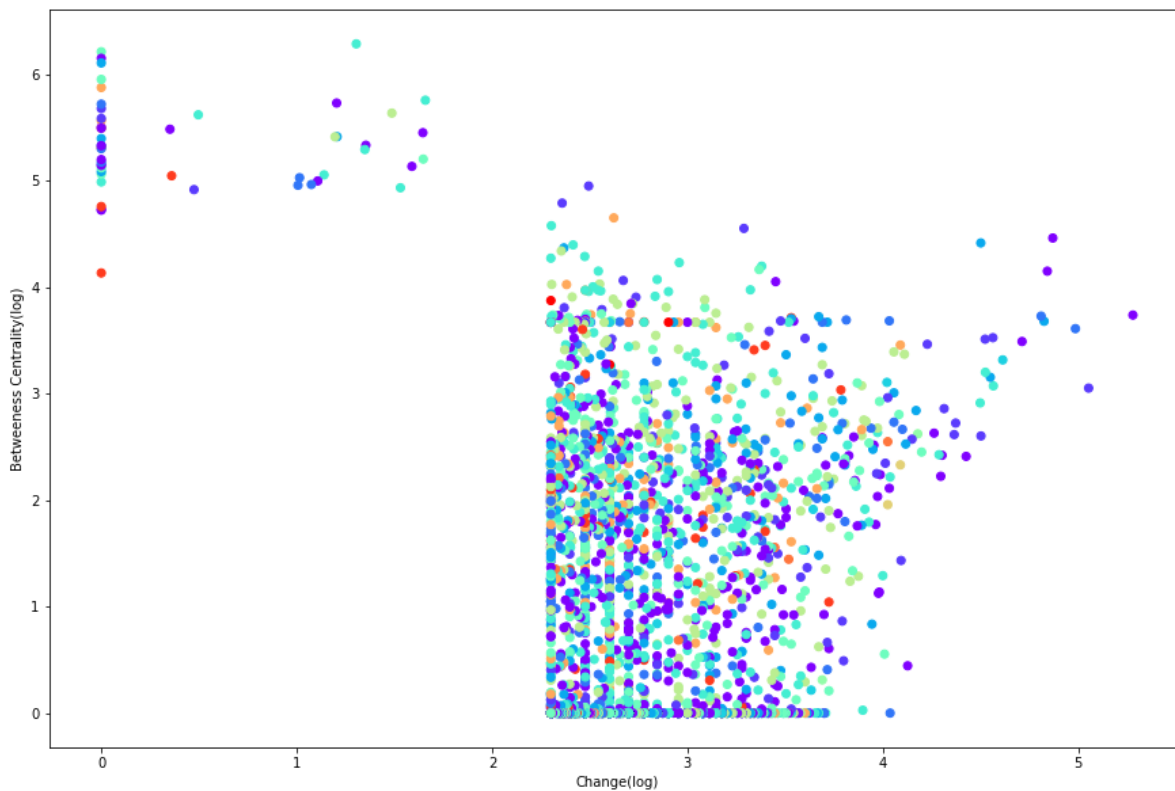
```
1 import matplotlib.pyplot as plt
2 import numpy as np
3 import pandas as pd
4
5 df = pd.read_csv('NeTags_popularity_change/full-weighted-indegree-graph-stats.csv')
6
7 df.head()
```

Out[4]:

	Id	Label	timeset	0	1	componentnumber	Weighted Degree	Eccentricity	closeness
0	react-hooks	react-hooks	NaN	1	190600.0	0	3049	6	
1	swiftui	swiftui	NaN	13	113100.0	0	1440	6	
2	laravel-5.8	laravel-5.8	NaN	4	96800.0	0	1390	6	
3	angular7	angular7	NaN	1	74150.0	0	5637	6	
4	angular8	angular8	NaN	1	69500.0	0	980	5	

In [6]:

```
1 class_colors = plt.cm.rainbow(np.linspace(0,1,len(df['0'].unique())))
2 color_dict = {group:color for group, color in zip(df['0'].unique(), class_colors)}
3
4 colors = [color_dict[group] for group in df['0'].values]
5
6 x = np.log10(df['1'].values)
7 y = np.log10(df['betweennesscentrality'].values+1)
8 # Plot
9 plt.figure(figsize=(15,10))
10
11 plt.scatter(x, y, c=colors, alpha=1)
12 plt.xlabel('Change(log)')
13 plt.ylabel('Betweenness Centrality(log)')
14 plt.show()
```



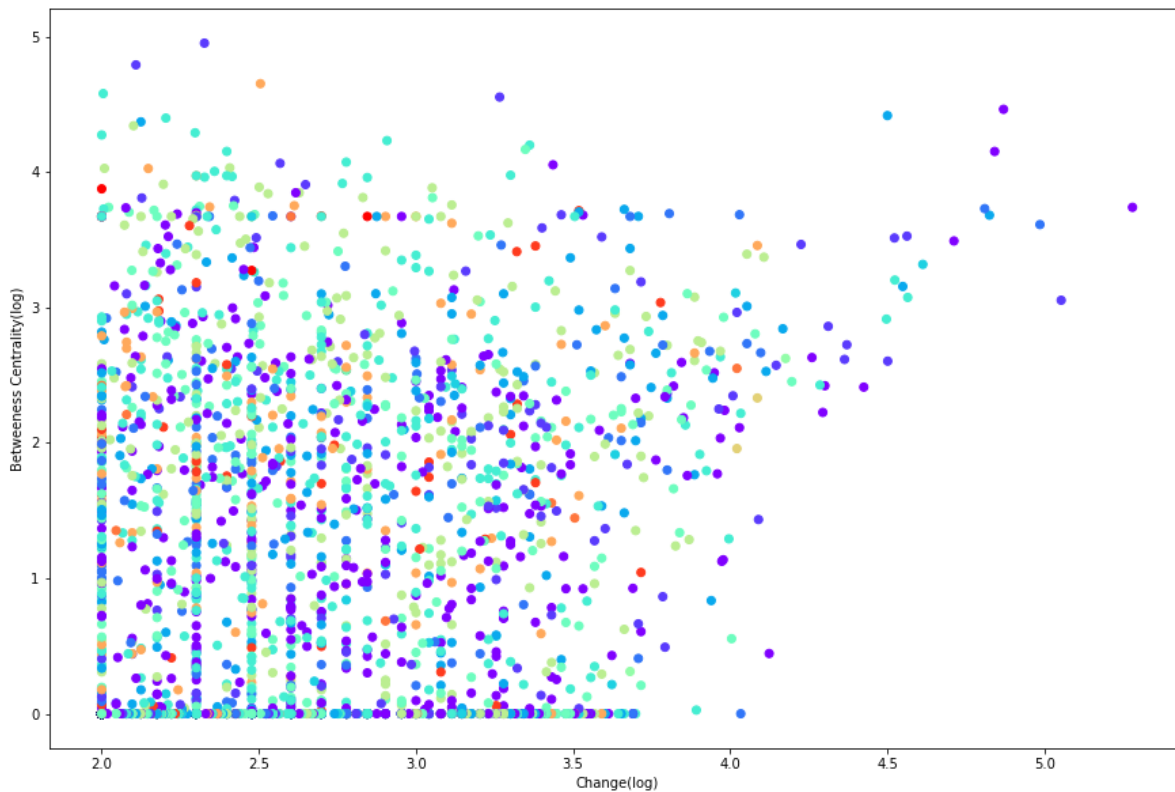
In [7]:

```

1 class_colors = plt.cm.rainbow(np.linspace(0,1,len(df['0'].unique())))
2 color_dict = {group:color for group, color in zip(df['0'].unique(), class_colors)}
3
4 colors = [color_dict[group] for group in df['0'].values]
5
6 x = np.log10(df['1'].values-100)
7 y = np.log10(df['betweennesscentrality'].values+1)
8 # Plot
9 plt.figure(figsize=(15,10))
10
11 plt.scatter(x, y, c=colors, alpha=1)
12 plt.xlabel('Change(log)')
13 plt.ylabel('Betweenness Centrality(log)')
14 plt.show()

```

/Users/skenderi/.conda/envs/dl/lib/python3.6/site-packages/ipykernel_launcher.py:6: RuntimeWarning: invalid value encountered in log10



In []:

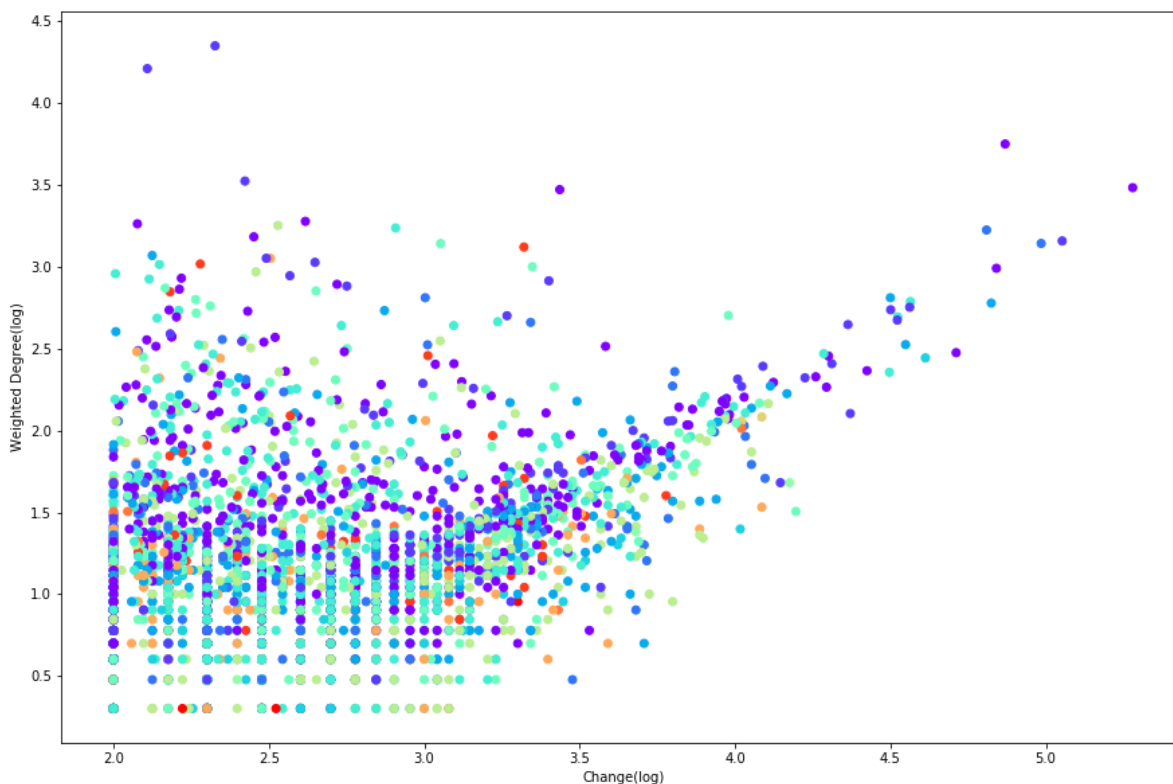
1

Weighted-Degree vs Popularity-Change

In [8]:

```
1 class_colors = plt.cm.rainbow(np.linspace(0,1,len(df['0'].unique())))
2 color_dict = {group:color for group, color in zip(df['0'].unique(), class_colors)}
3
4 colors = [color_dict[group] for group in df['0'].values]
5
6 x = np.log10(df['1'].values-100)
7 y = np.log10(df['Weighted Degree'].values+1)
8 # Plot
9 plt.figure(figsize=(15,10))
10
11 plt.scatter(x, y, c=colors, alpha=1)
12 plt.xlabel('Change(log)')
13 plt.ylabel('Weighted Degree(log)')
14 plt.show()
```

/Users/skenderi/.conda/envs/dl/lib/python3.6/site-packages/ipykernel_launcher.py:6: RuntimeWarning: invalid value encountered in log10



In []:

1

