

Project 2 – The World Values Survey and D3JS

Giacomo Giudice

giacomog@kth.se

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Analitic Trail

Extracting Data After playing around with the online visualisation tool of the *WVS* (World Values Survey), I decided which data I wanted to focus on: the answers to the question *who do you not want as a neighbour?* The categories you could answer with were different among the different waves of data collection, but there were some in common. I therefore decide to focus on the following categories of responses: *Different Race*, *Heavy Drinkers*, *Immigrant/Foreign Workers*, *Drug Addicts*, *Homosexuals*.

The data collection proved to be way more laborious than expected, as after many attempts to process the raw data files and understand how the information was stored, I still didn't have a useful dataset.

Manipulating Data I decided to use the raw data that could be seen on the online visualisation tool. After some tedious work on a spreadsheets software and some perl scripting, I finally had some data to work with (see fig. 1).

	A	B	C	D	E	F	G	H	I	J	K
1		Race		Drinkers		Immigrants/Foreign Workers		Drug Addicts		Homosexuals	
2	Country	Mentioned	Not Mentioned	Mentioned	Not Mentioned	Mentioned	Not Mentioned	Mentioned	Not Mentioned	Mentioned	Not Mentioned
3	Algeria	237	963	945	255	336	864	1.010	190	697	503
4	Azerbaijan	582	420	855	147	407	595	957	45	946	56
5	Argentina	10	1.020	381	649	29	1.001	680	350	114	916
6	Australia	74	1.403	1.033	444	156	1.321	1.386	91	198	1.279
7	Bahrain	373	827	229	971	372	828	510	690	212	988
8	Armenia	350	750	1.013	87	203	897	1.058	42	1.020	80
9	Brazil	29	1.457	579	907	39	1.447	1.192	294	166	1.320
10	Belarus	355	1.180	1.347	188	513	1.022	1.463	72	1.107	428
11	Chile	56	944	618	382	76	924	741	259	257	743
12	China	241	2.059	1.636	664	281	2.019	2.219	81	1.211	1.089
13	Taiwan	104	1.134	1.059	179	250	988	1.180	58	505	733
14	Colombia	49	1.463	808	704	71	1.441	1.147	365	523	989
15	Cyprus	248	752	641	359	355	646	646	354	349	651
16	Ecuador	415	787	586	616	416	786	650	552	466	736
17	Estonia	390	1.143	1.211	322	575	958	1.332	201	725	808
18	Palestine	440	560	797	203	399	601	854	146	653	347
19	Germany	303	1.739	1.437	608	437	1.599	1.356	687	459	1.587
20	Ghana	308	1.244	1.043	509	314	1.238	1.217	335	1.236	316
21	Hong Kong	188	812	693	307	211	789	759	241	335	665
22	India	647	934	857	724	843	738	841	740	665	916
23	Iraq	332	868	1.037	163	468	732	1.103	97	964	236
24	Japan	544	1.899	-	-	886	1.557	-	-	-	-
25	Mexico	222	1.622	1.022	612	417	1.622	1.622	122	1.122	622
+ 2010-2014 2005-2009 2000-2004 1995-1999 1990-1994											

Figure 1

Then I proceeded in encoding this data to a JSON-style format that could be read by the web app(fig. 2).

```

1  define({
2    categories: {
3      "Different Race": {pos: 0, color: "#e74c3c"},
4      "Heavy Drinkers": {pos: 1, color: "#f1c40f"},
5      "Immigrant/Foreign Workers": {pos: 2, color: "#27ae60"},
6      "Drug Addicts": {pos: 3, color: "#3498db"},
7      "Homosexuals": {pos: 4, color: "#9b59b6"}
8    },
9    waveLabels: ["1990-1994", "1995-1999", "2000-2004", "2005-2009", "2010-2014"],
10   countrycodes: { 0: {code: "ALB", name: "Albania"}, 12: {code: "DZA", name: "Algeria"}, 16: {code: "ASM", name: "American Samoa"},
11   colorscheme: {defaultFill: "#bdc3c7", 0: "#27ae60", 1: "#2eaa85d", 2: "#36a25a", 3: "#3d9c58", 4: "#459655", 5: "#4d9052", 6: "#548a50"},
12   ratios: [
13     {
14       32: [0.02694610778, 0.4530938124, 0.02095808383, 0.5, 0.3892215569],
15       76: [0.04601571268, 0.4124579125, 0.03815937149, 0.5836139169, 0.3019079686],
16       112: [0.1674876847, 0.8167487685, 0.1704433498, 0.8226600985, 0.7981477833],
17       152: [0.1066666667, 0.518, 0.1193333333, 0.5486666667, 0.5746666667],
18       156: [0.119, 0.575, 0.127, 0.76, 0.719],
19       203: [0.2084545455, 0.737012987, 0.3268398268, 0.7987012987, 0.5324675325],
20       356: [0.3409, 0.9068, 0.366, 0.926, 0.914],
21       392: [0.1058350061, 0.5825914036, 0.1661721868, 0.9080118694, 0.6854599407],
22       410: [0.5707378104, 0.1662669864, 0.5330728217, 0.0415667466, 0.0415667466],
23       484: [0.1645983018, 0.5571521881, 0.1757021555, 0.692357936, 0.6022207707],
24       566: [0.3116883117, 0.7222777223, 0.2627372627, 0.7652347652, 0.7642357642],
25       643: [0.1070882203, 0.8164201938, 0.1177970423, 0.8602753697, 0.8852014278],
26       703: [0.356223176, 0.7317596567, 0.3669527897, 0.821888412, 0.6931330472],
27       724: [0.117218543, 0.3986754967, 0.1092715232, 0.5291390728, 0.2635761589],
28       756: [0.02357142857, 0.2285714286, 0.01571428571, 0.3164285714, null],
29       792: [0.3398058252, 0.8708737864, 0.2825242718, 0.9203883495, 0.9174757282]
30     ],
31     {
32       8: [0.07807807808, 0.8298298298, 0.625, 0.8414634146, 0.6996996997],
33       31: [0.1223776224, 0.8541458541, 0.4231884058, 0.9651022864, 0.9065934066],
34       32: [0.04541241891, 0.4365152919, 0.908819133, 0.6081242533, 0.2734012975],
35       36: [0.0478515625, 0.5971679688, 0.8977149075, 0.7834803528, 0.2465820313],
36       50: [0.1731147541, 0.8958819672, 0.262295082, 0.879705401, 0.8373770492],
37       51: [0.192, 0.8635, 0.386855524, 0.9137026229, 0.833],
38       100: [0.1725746209, 0.4225746209, 0.7075310866, 0.7125984252, 0.4076492537],
39       112: [0.05019120459, 0.7209617591, 0.8059259259, 0.8419922714, 0.6338432122],
40       152: [0.12, 0.537, 0.7982758621, 0.6802773498, 0.414],

```

Figure 2

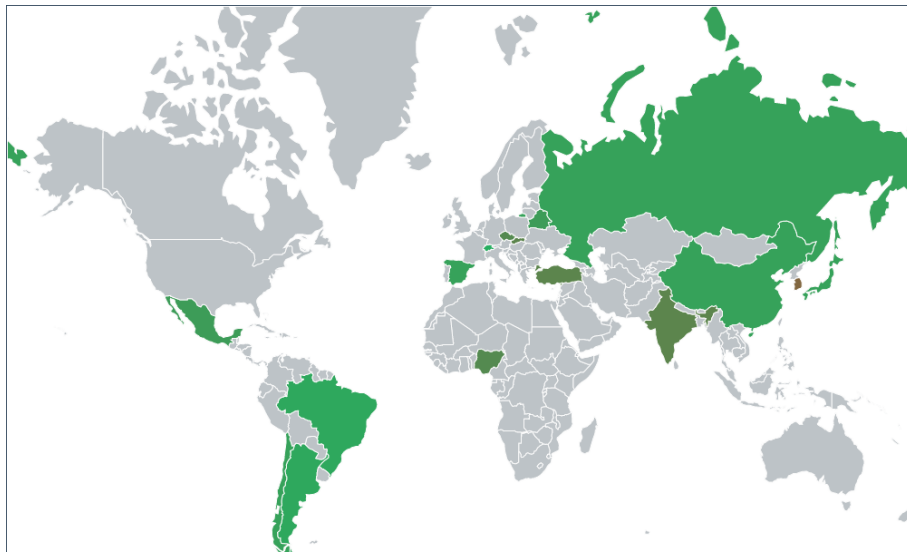


Figure 3

Coding Now for the webpage. First thing was to learn my way around D3. After a little playing around I finally loaded a map (fig. 3) and color the countries with different colors. Yay! Decided that a mercator projection was the easiest for the user to select states in Europe, sorry map geeks.

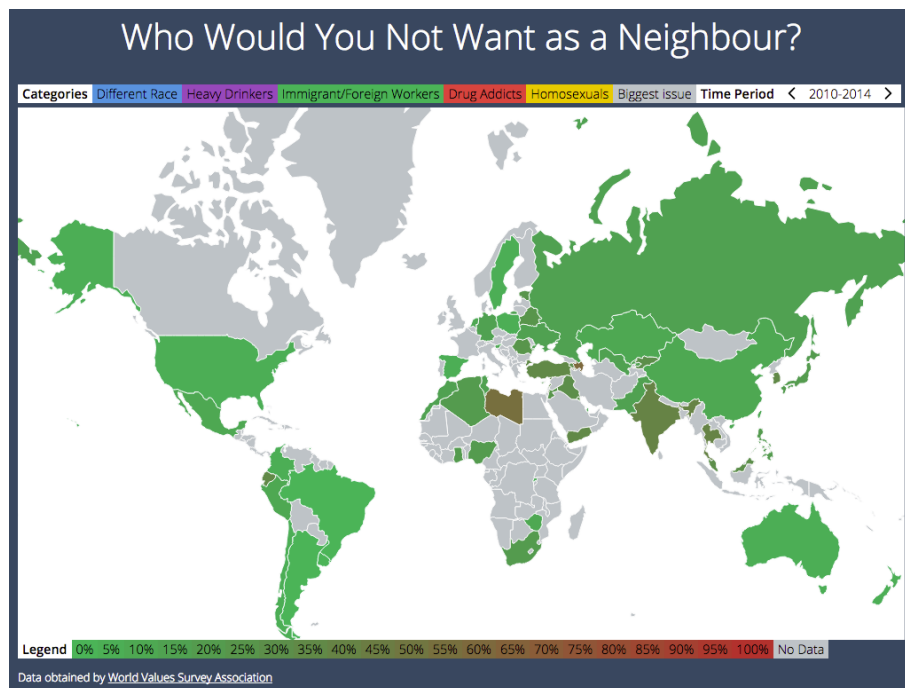


Figure 4

Now for adding some interaction: a control bar was added to change between the different categories and change the time period(fig. 4).

Finally the last feature added was a bubble chart depicting the size of each category when the user clicked on a country(fig. 5).



Figure 5