Sentiment Analysis on Consitutions

By **Athina Panotopoulou**[1]

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labMT

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We denote with **h(w)** the estimate of average **happiness** for each word **w** $\in$ *labMT*.

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Example

Use words the have happiness ranking between 7 and 9, highlights the positive aspect of a text.

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We denote by $h_{avg(c)}$ the **happiness ranking of each constitution**.

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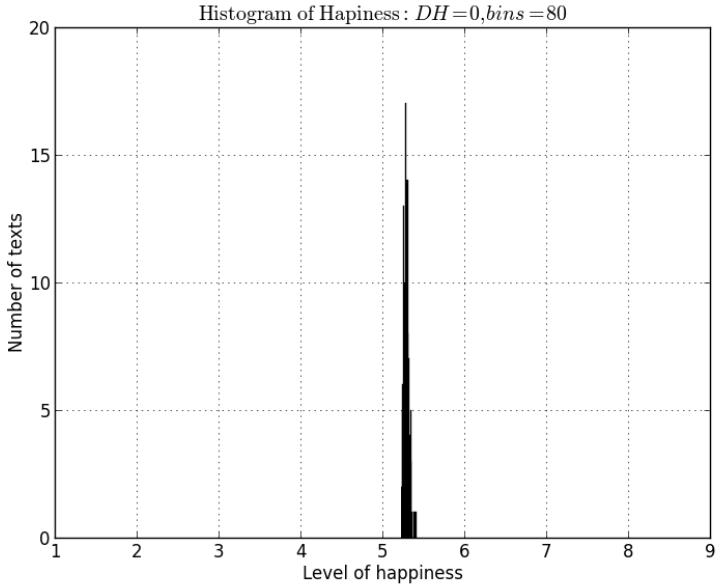
Histogram of Hapiness : $DH = 0, bins = 80$
Number of texts
Level of happiness
0
5
10
15
20
1
2
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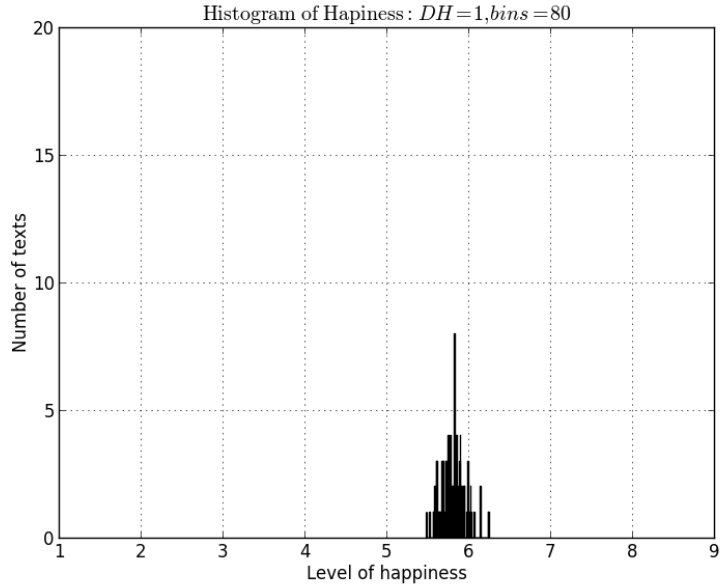
5
6
7
8
9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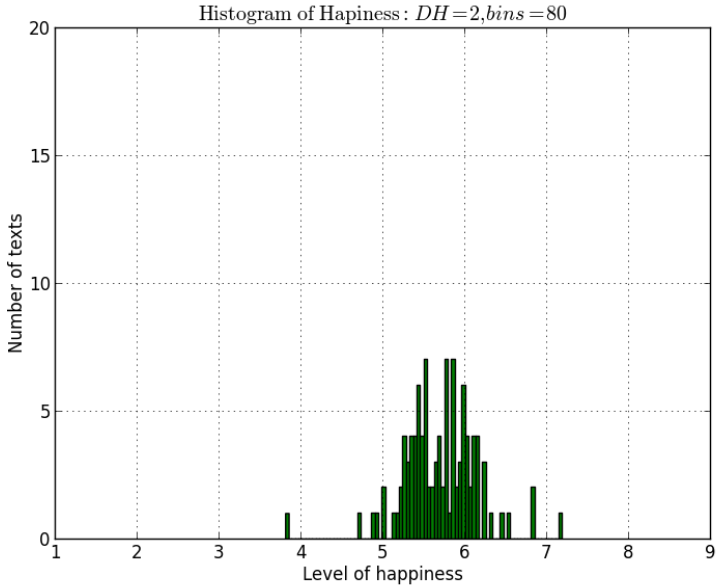
Histogram of Hapiness : $DH = 2, bins = 80$
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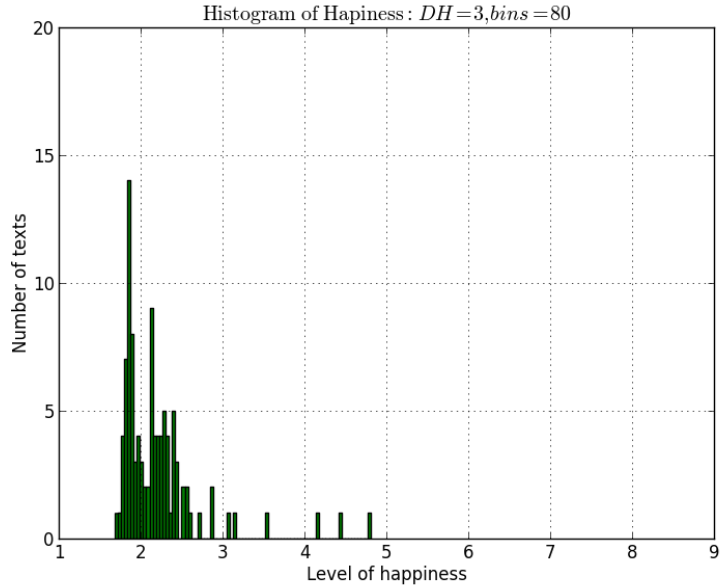
Histogram of Hapiness : $DH = 3, bins = 80$
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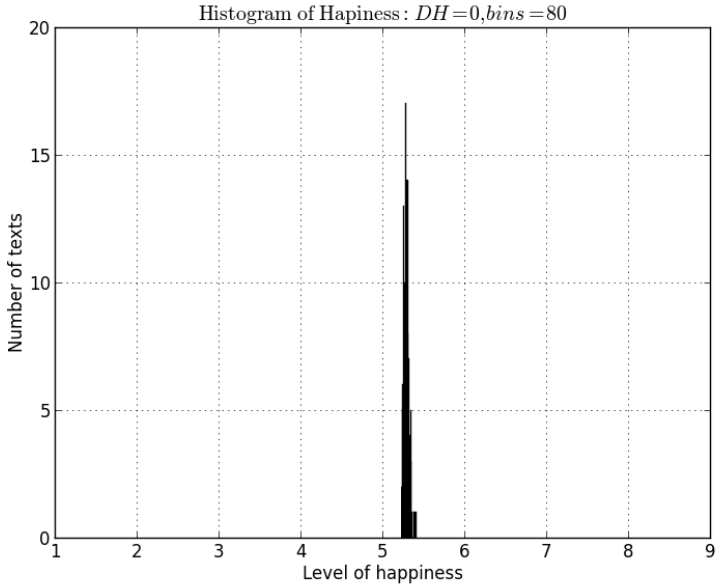
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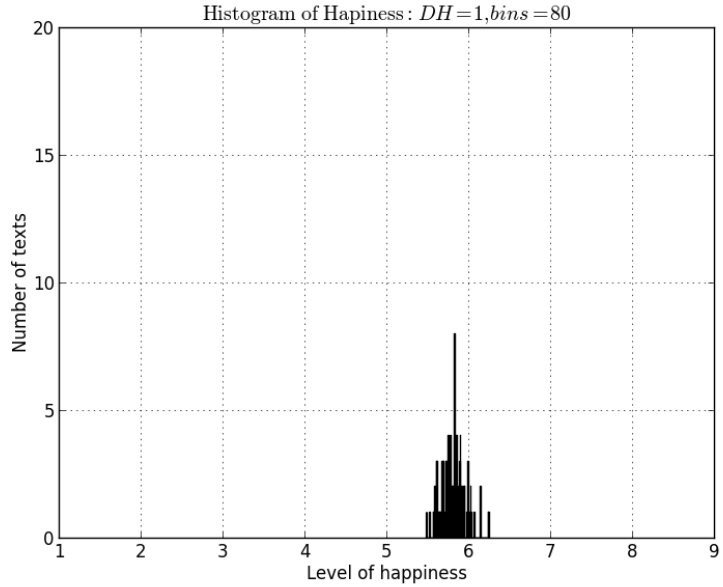
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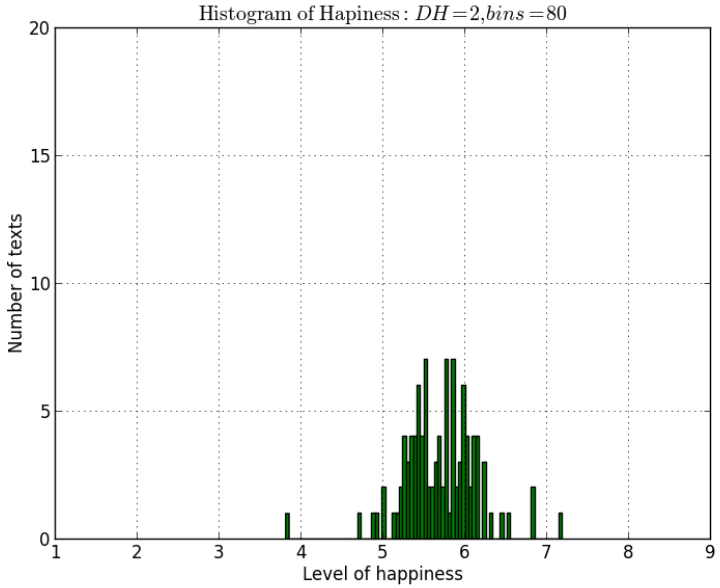
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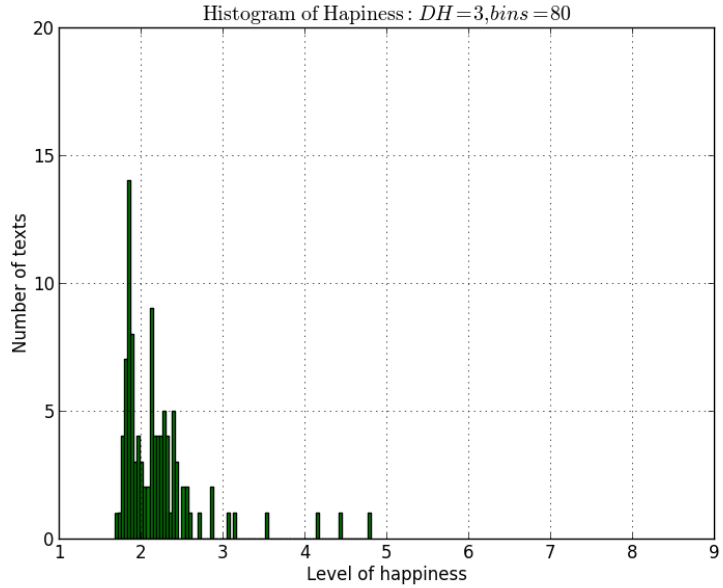
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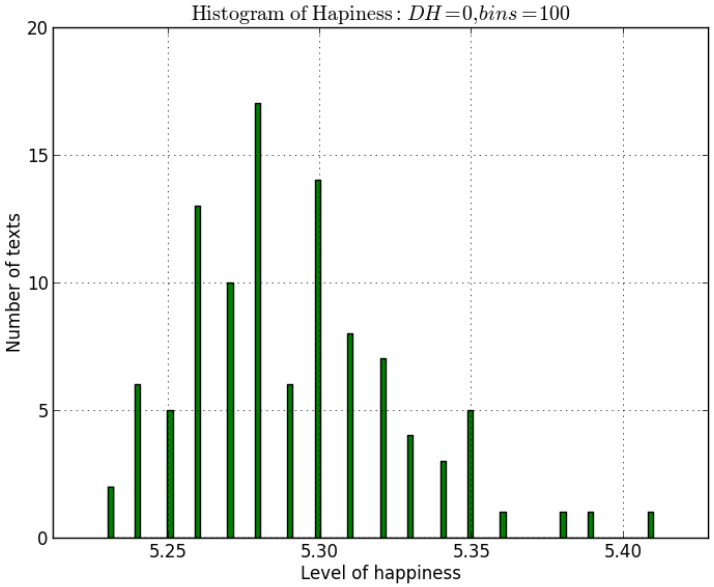
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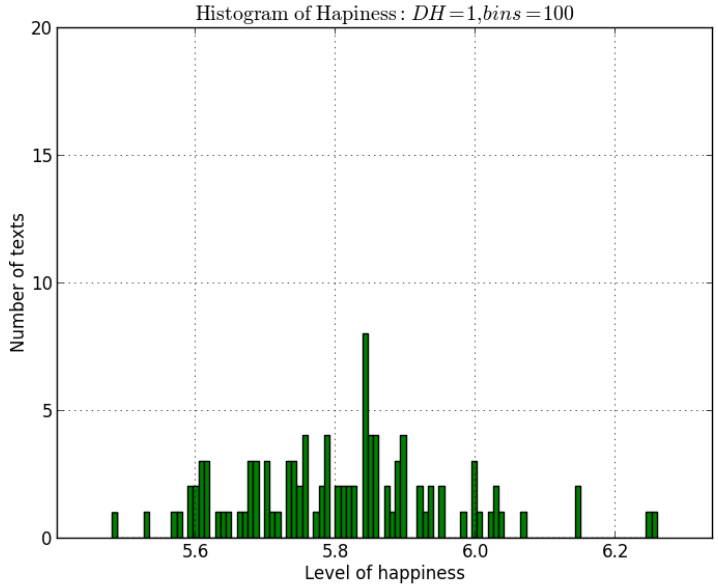
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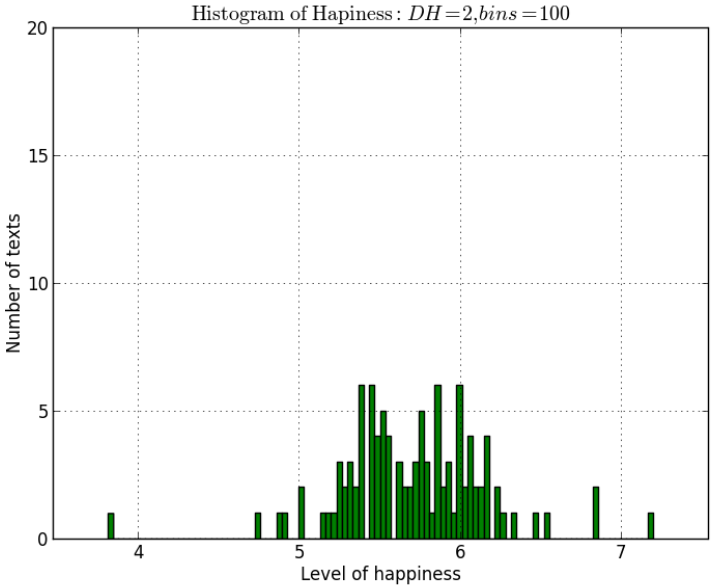
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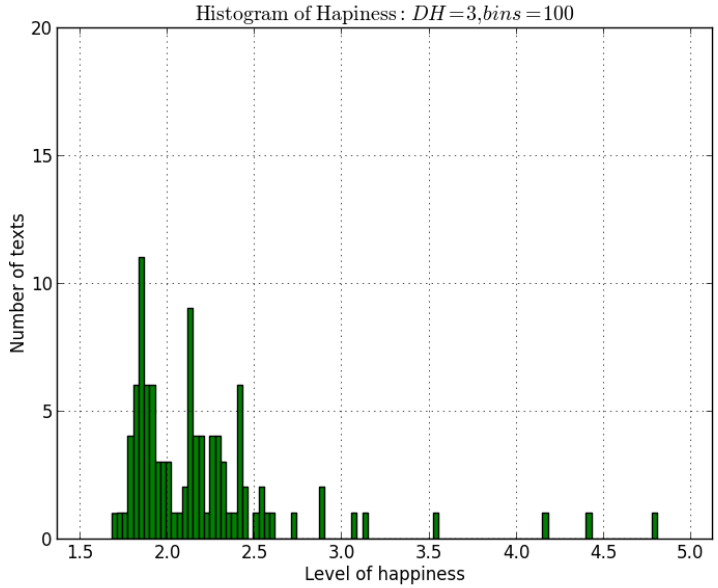
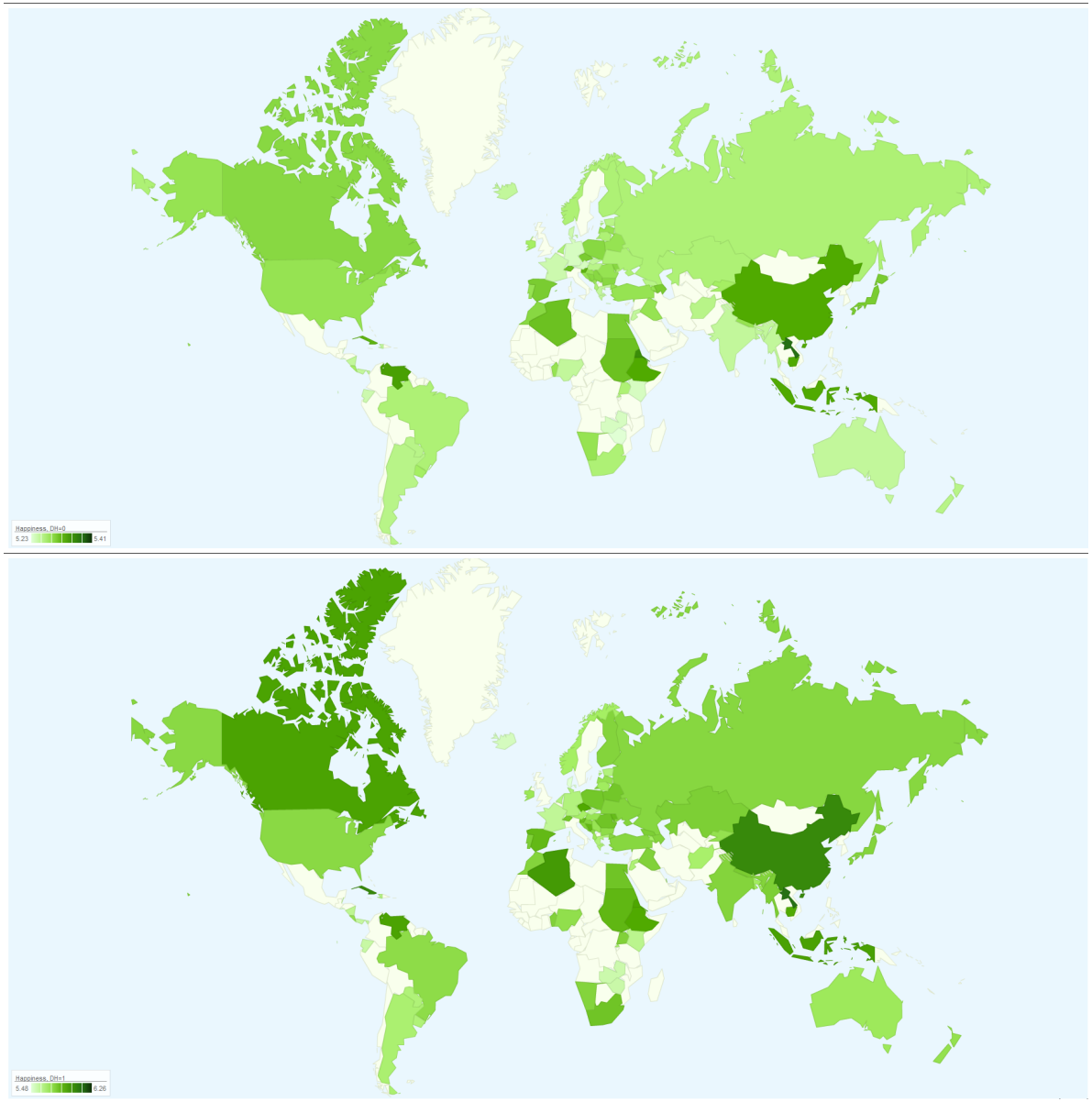
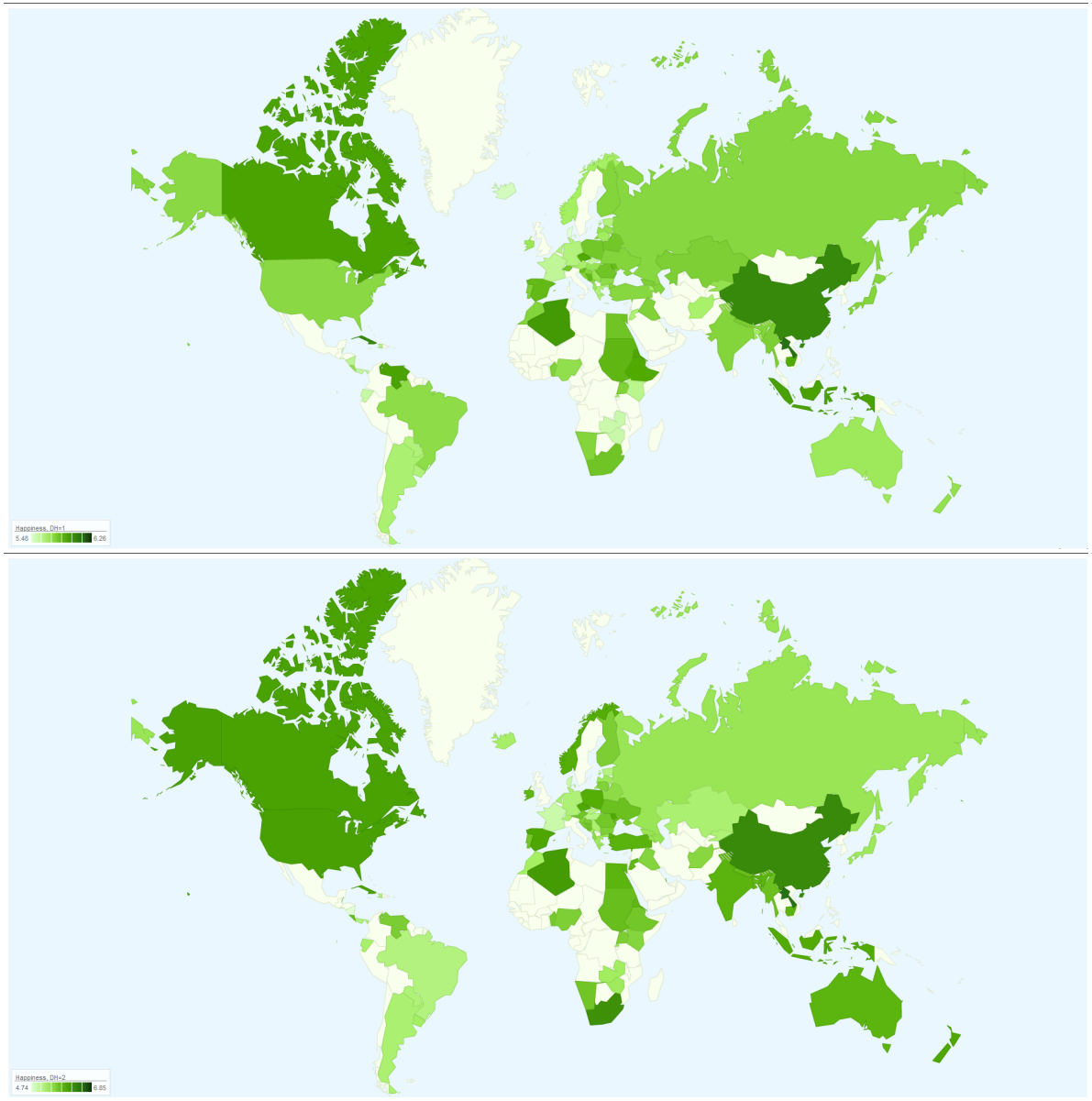
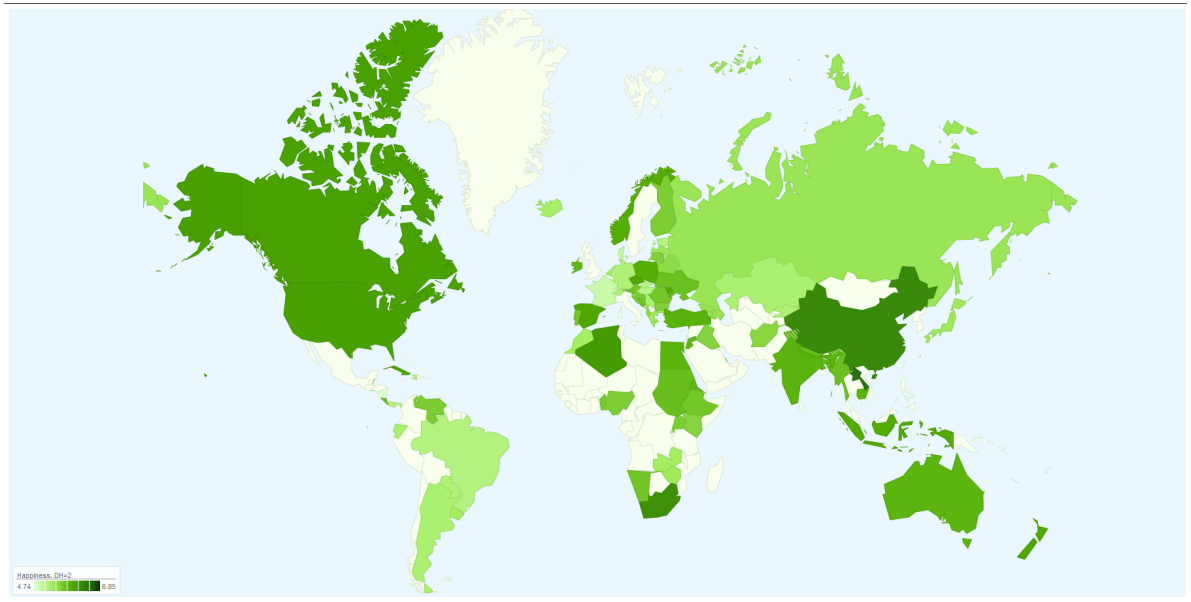
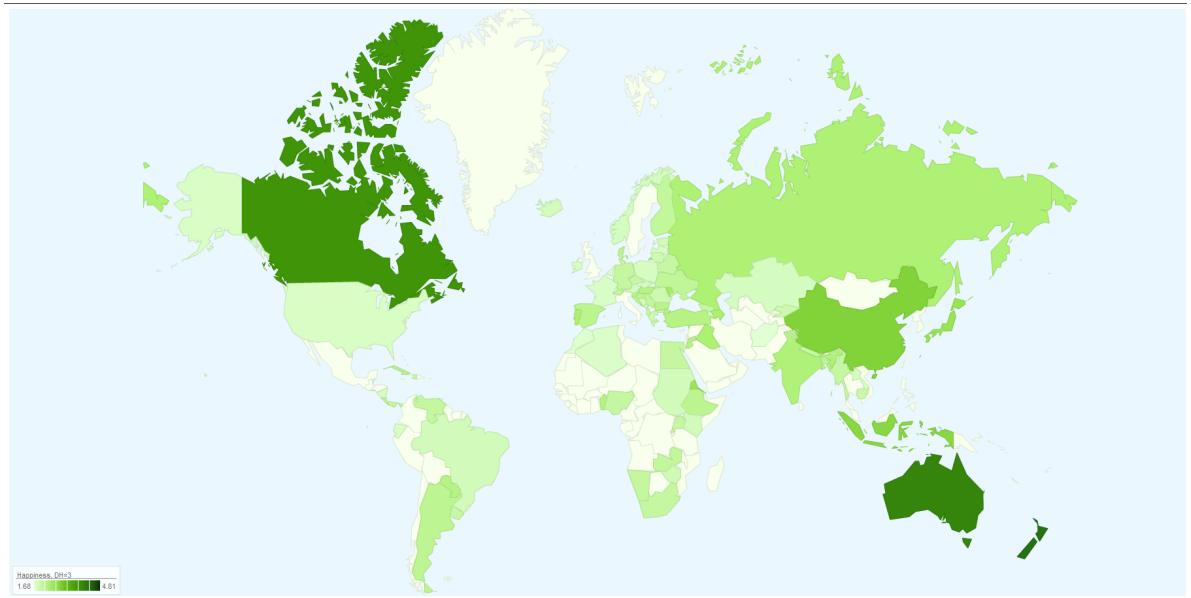
6
7


Histogram of Hapiness : $DH = 3, bins = 100$
Number of texts
Level of happiness
0
5
10
15
20
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


Happiness, DH=0
5.23
5.41
Happiness, DH=1
5.48
6.26


Happiness, DH=1
5.48
8.26
Happiness, DH=2
4.74
8.85


Happiness, DH=2
4.74
6.85


Happiness, DH=3
1.68
4.81

Pearson Correlation

Factor	ΔH=0	ΔH=1	ΔH=2	ΔH=3
Limited Government Powers	-0.13	-0.15	0.09	0.24
Absence of Corruption	-0.10	-0.15	0.01	0.26
Order and Security	0.06	0.01	0.03	0.20
Fundamental Rights	-0.11	-0.16	-0.03	0.16
Open Government	-0.11	-0.16	0.04	0.30
Regulatory Enforcement	-0.19	-0.21	-0.04	0.27
Civil Justice	-0.18	-0.19	-0.03	0.20
Criminal Justice	-0.07	-0.02	0.1	0.20

What it means:

Correlation	Negative	Positive
None	-0.09 to 0.0	0.0 to 0.09
Small	-0.3 to -0.1	0.1 to 0.3
Medium	-0.5 to -0.3	0.3 to 0.5
Strong	-1.0 to -0.5	0.5 to 1.0