

Genfi First Pass

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A first investigation of the GENFI data. The aim is to assess the connection strength of the data.

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gene	gene negative	gene positive	affected
C9orf72	20	17	12
GRN	51	38	6
MAPT	15	13	11

Table 1: Subjects included in the analysis

The spike percentage threshod is set at 10.

So that leaves us with the following subjects included:

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gene	gene negative	gene positive	affected
C9orf72	18	17	11
GRN	47	36	4
MAPT	15	13	9

Table 2: Subjects included in the analysis

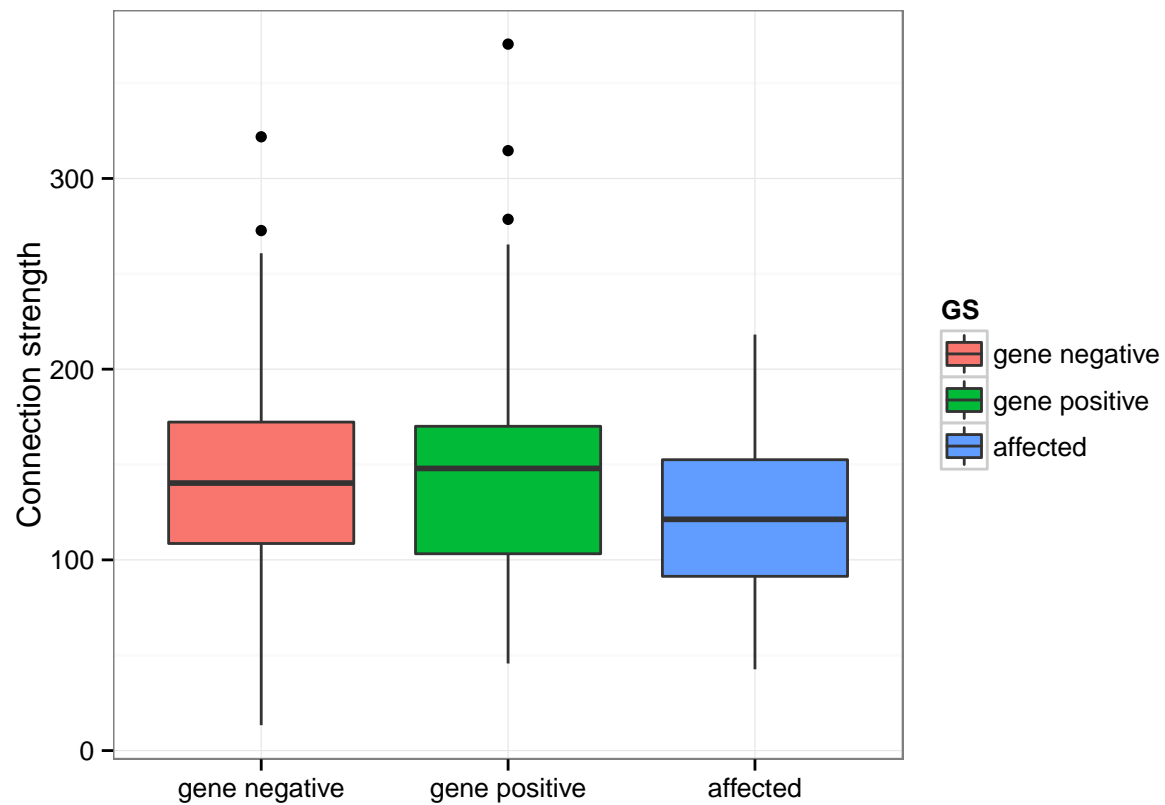
As a first pass, I will examine the connection strength in each of these groups. Firstly, we'll look at the mean connection strength for the whole brain. In order to do this, we'll take the mean connection strength of each individual.

Firstly we'll look at the results for the genes combined.

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gene negative	gene positive	affected
147.1 (55.8)	151 (61.7)	121.8 (48.5)

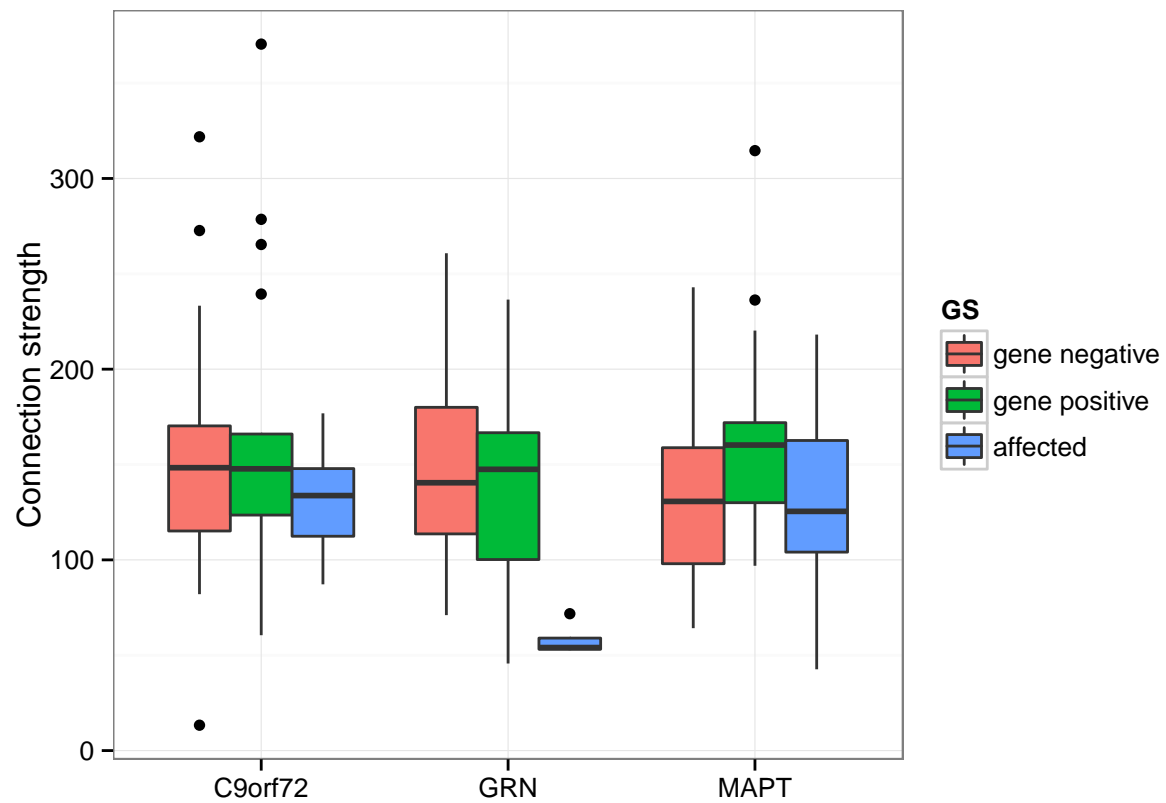
Table 3: Mean and standard deviations for connection strength values in individuals



And now we'll look at individual genes. % latex table generated in R 3.1.2 by xtable 1.7-4 package % Tue Jun 30 06:07:32 2015

gene	gene negative	gene positive	affected
C9orf72	152.5 (72.3)	162.1 (82.5)	131.6 (29.6)
GRN	147.9 (46.9)	140 (48.9)	58.1 (9.1)
MAPT	138 (62.2)	166.9 (61.2)	138.2 (56.3)

Table 4: Mean and standard deviations for connection strength values in individuals



We'll plot the connection strengths against the time from average age at onset.

The correlation coefficient between connection strength and average age at onset for affected and gene carriers is -1.514889, $p=0.1332288$.

For gene carriers the correlation coefficient is -0.1903956, $p=0.8495749$

For affected subjects the correlation coefficient is -0.3057219, $p=0.7625663$.

