Unconscious Cerebellum[i] - 17/03/2018

[](https://www.blogger.com/blogger.g?blogID=6776834719361606300#_edn1)

Massimini said that in HBP[ii] they have a lot of information, data and good people on the matters of consciousness, neurons, skull, etc., that need to be put together. He compares our time with the time before Darwin joined the things in the theory of evolution. Thus, even more effort in mining what they have than in collecting new data.

One very interesting thing he said is about the cerebellum[a] and its disassociation with consciousness. With 80 billion neurons, cerebellum does his job unconsciously. Despite of the fact that is does wonderful tasks related to our motor coordination, what is missing in its architecture that can explain it is like a zombie? On the other hand, thalamocortical[b] system is central to consciousness. So, they should be able to compare both of them in their experiments and try to find the answer.

This mystery is a very short problem that HBP has in hands and can that can be investigate deeper in its researches involving neurobiology, neuromorphic, robotics and philosophy. Mixing all these things can put us in the Darwin road shortly.

[a]cerebellum[iii]: it performs everyday voluntary tasks such as walking and writing. It is also essential to being able to stay balanced and upright.

[](https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEiTfSqJ0RykIIeSh0OlK65E8rmIZM2ZuuoofKu3lSZcP822V8wrFMlIa_u-286IaOCHAdJlrzqsD7i72OxMxBjbm1jwSL0F4itIfJL-wwuP7hc-zKX8X10r_8FMENlwkZtZ516niAWoKgU/s1600/cerebellum.jpg)

[b]thalamocortical[iv]: the thalamocortical system constitutes the vast majority of the mammalian brain and has been the subject of extensive neurobiological and computational study. The thalamus and the neocortex are reciprocally connected via pathways of varying levels of topography.

Thalamus[v]: responsible for relaying information from the sensory receptors to proper areas of the brain where it can be processed.

[](https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEgrQEdI8tMEnClpw9Knw0KmDKIiL5ng7OQvU3OA-IRkHFPQoVs2RHz0mt_T6GwcBSf-pr4KQRvN1cjUWGRh9QsvrVJcMk0nMn-P4vEfm7FIt67wVPL5osFA_6Qt0f7aZSiZs82fR6tuIjw/s1600/thalamus.jpg)

Cortex[vi]: Responsible for thinking and processing information from the five senses.

[](https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEh8EaBlwar5_twJq4MxcCHK2pVOZVKsdW8AcsB_iVSfiQMpbwybHbjuhaOxvuEWa5l0mY7xHXuBiTHH2-CQY5KUeRU2elQ9p05AzGRVDoi1c0fqwLw87KERJF3YqfmXsQc5J8YP75lYO7c/s1600/cortex.png)

* * *

[i] Very brief of https://www.humanbrainproject.eu/en/follow-hbp/news/the-quest-for-consciousness/

[ii] The Human Brain Project is a H2020 FET Flagship Project which strives to accelerate the fields of neuroscience, computing and brain-related medicine.

[iii] In: http://brainmadesimple.com/cerebellum.html

[iv] In:
<http://www.scholarpedia.org/article/Models_of_thalamocortical_system>

[v] In: <http://brainmadesimple.com/thalamus.html>

[vi] In: <http://brainmadesimple.com/cortex-and-lobes-of-the-brain.html>