

Neuroscience and Type

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15/11/2018, Paris

Why neuroscience with Type?

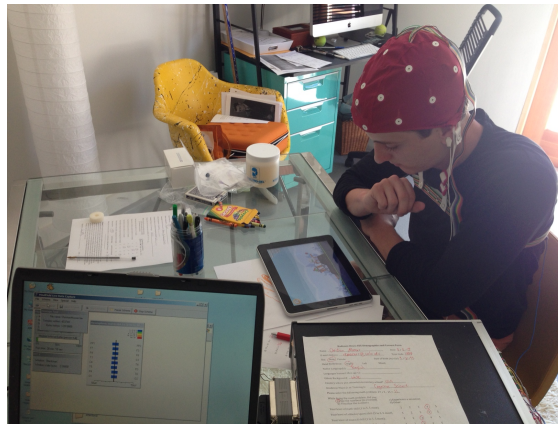
Neuroscience is the study of structure and function of the nervous system (mainly the brain).

We can take a neuroscience approach to better understand how we function and improve wellness.

Let's explore...

We can use EEG technology to take a peek into people's brains.

gaming



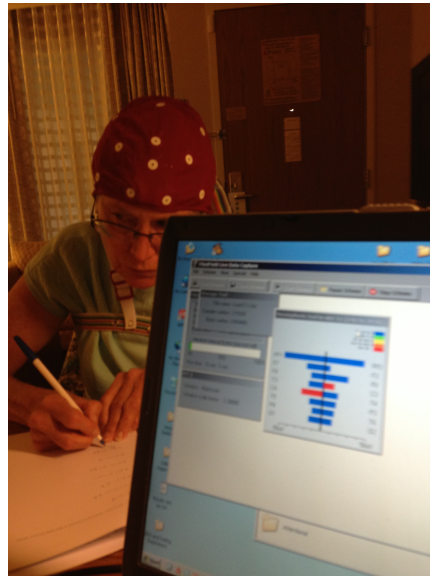
drawing



Participants wear an EEG cap or band and try an hour's worth of tasks that tap many daily activities.



imagining



calculating



communicating

Research is ongoing
with 300+ subjects.

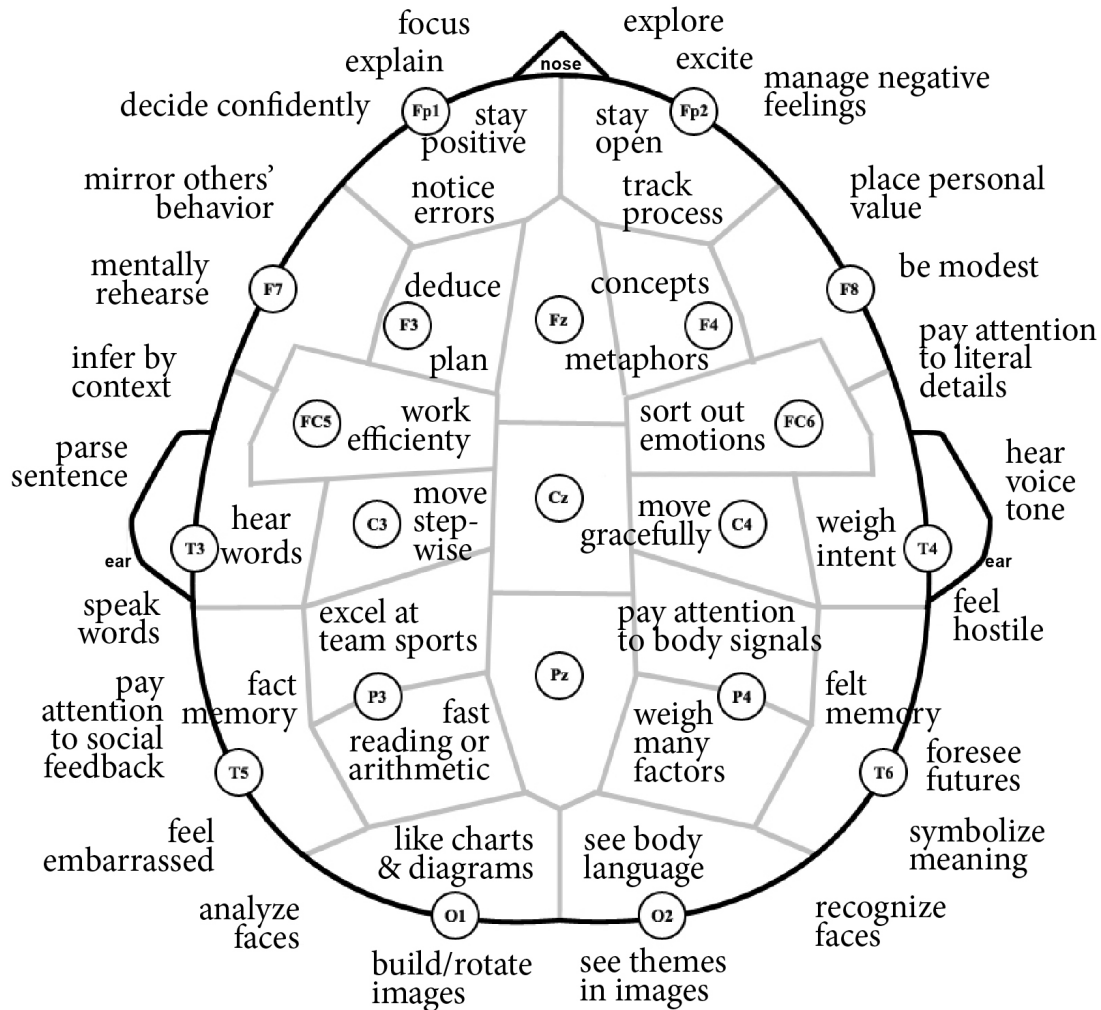
Let's Explore Wellness with the Brain and Type!

- How the brain is organized
- How the brain functions
- Typical correlations with Type
- Ways we can relax our brains
- Live demonstration
- Brain for type and teams

Here are key technical points on wellness with brains and Type.

- My subjects try a set protocol of 20 tasks for ~1 hour, similar to the well-regarded international Human Connectome Project.
- Since 2006, over 300 subjects of all Types, ages, career areas, etc. have participated.
- Since the start, I've studied how people may express or reduce stress, mainly through meditation and music but also other means.
- It is not the same as psychology (psyche) or cognitive science (mind).
- For all subjects, I procure their best-fit Type code using the MBTI® or similar plus a confirmation process.
- I use Type because it focuses on how the person functions internally, not just behavior.
- Everything I say today or in other public presentations I've seen myself and also read others' studies; thus, not controversial.
- Currently, I oversee deep statistical analysis of aspects of the data.

Here is a bird's-eye view of the neocortex, our diverse toolbox*.



* This map is an entre, not technical or definitive. Its many functions result from evolution. The map is based on information in neuroscience textbooks and hundreds of diverse published research papers.

Here is one of the brain's two “executive” regions. *How might it link to Type?*

“Focused Judge” (region Fp1*)

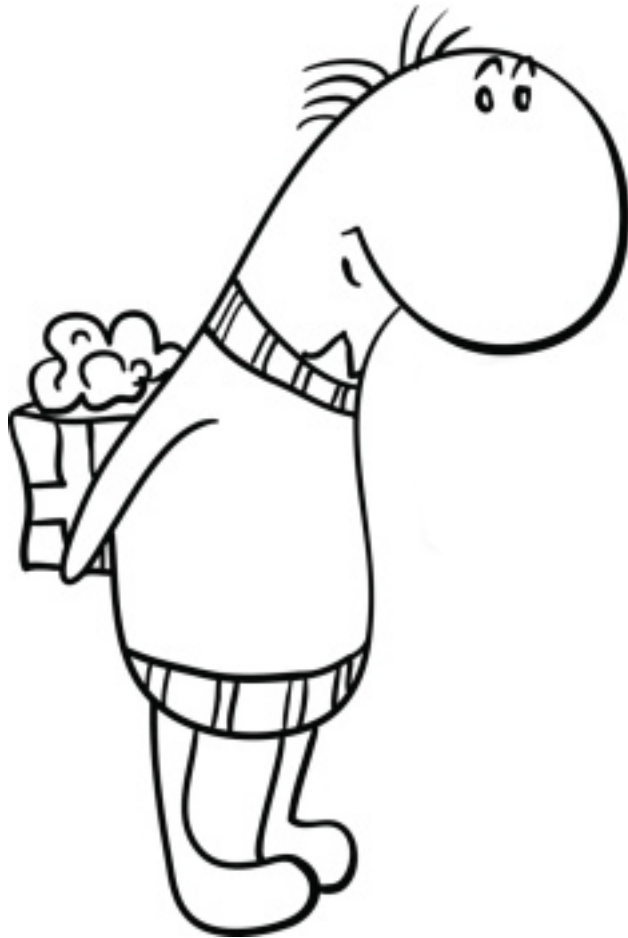


This brain region gets active when we...

Stay focused. Make decisions and select among options. Be results-oriented and sharp. Screen out distractions and criticism. Evaluate situations according to a principle. Notice and correct errors. Clarify needs, goals, and ideas. Get organized. Show confidence. With overuse, may be rigid and closed to input.

* Reference: The brain's left prefrontal area is very well researched and you can find this information in any thorough neuroscience textbook.

Now Type enters the picture...

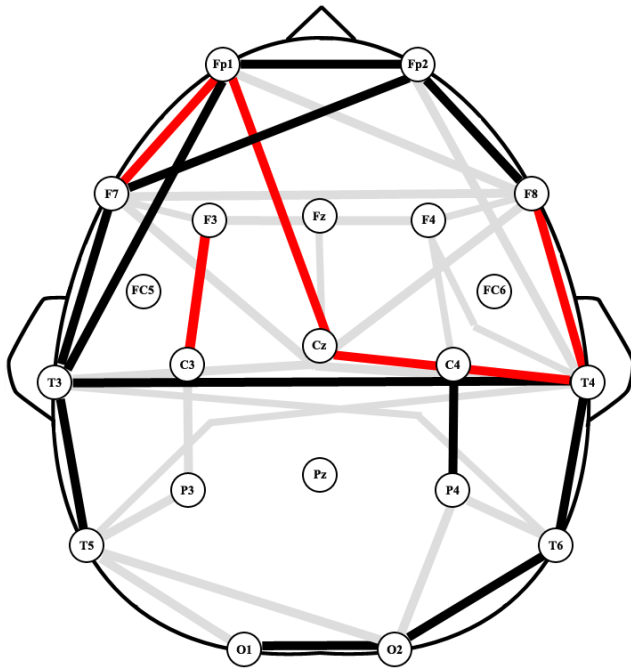


Example ESFP

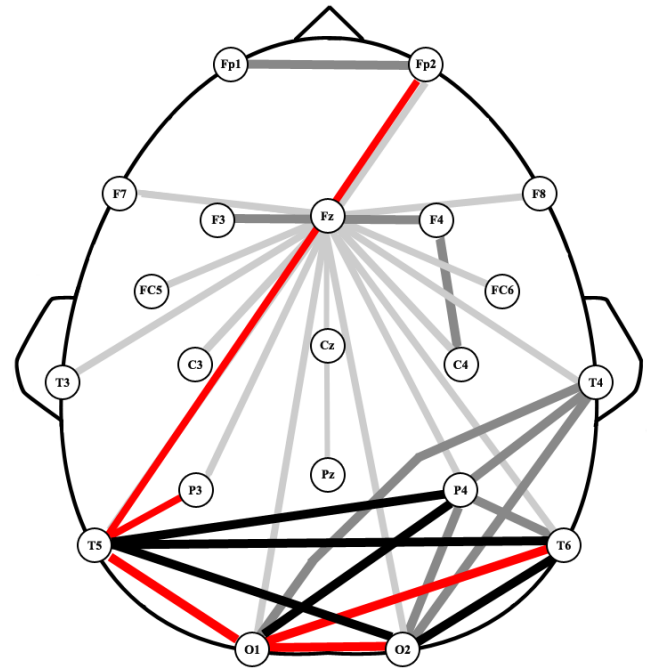


Example INTP

Neural circuits show long-term wiring from years of habits. This wiring hopefully support our Type preferences.



Example ESFP

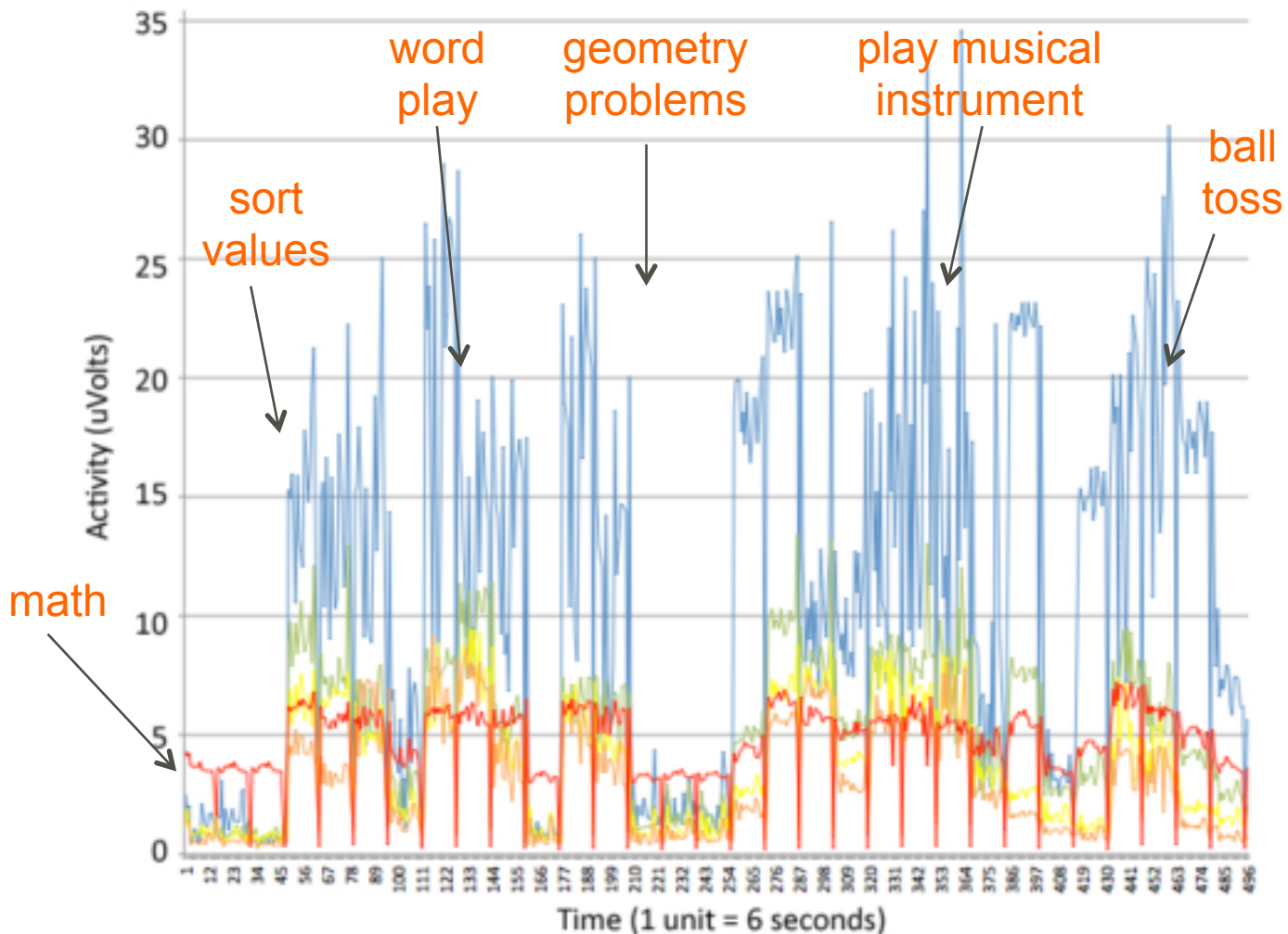


Example INTP

(strongest links are in red and black)

These are typical examples. The link between brain and Type is statistical.
I use a common network-analysis technique.

We can show amount of brain activity using colored bands to show state of mind such as relaxed, anxious or excited.



Blue is relaxed “delta” activity.

Red is excited “gamma” activity.

Here are some specific ways I see people relax their brain.

- Do familiar activities that they enjoy.
- Meditate
- Listen to music (pleasant or dissonant)
- Recall past happy memories or visualize a future success (eyes closed).
- Do physical activity like tossing a ball.
- Subtract stressing people from your environment (boss, spouse, etc.)
- Engage in a “flow” activity, which varies by profession and Type.

Note: There are many published studies about meditation, music, and the brain.

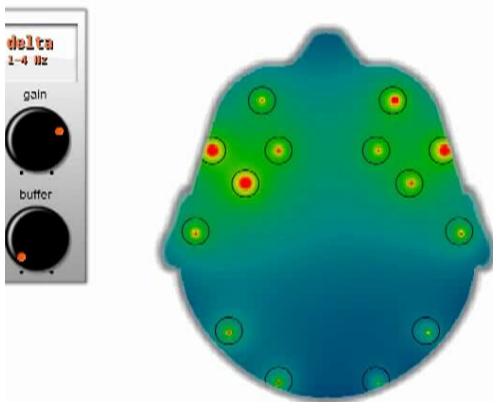
Today you will see a demo
with a consumer EEG device.



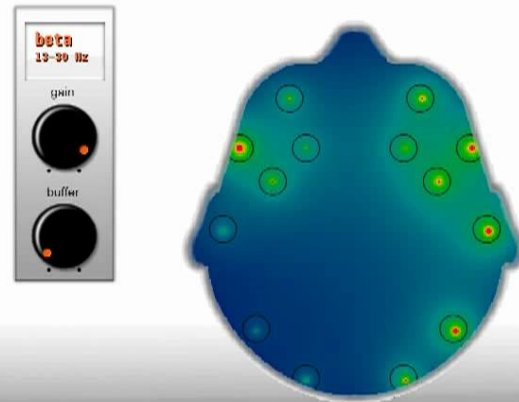
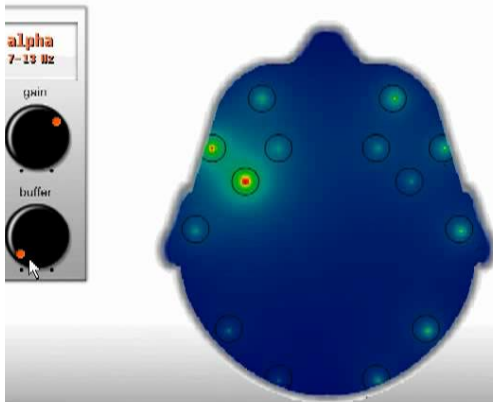
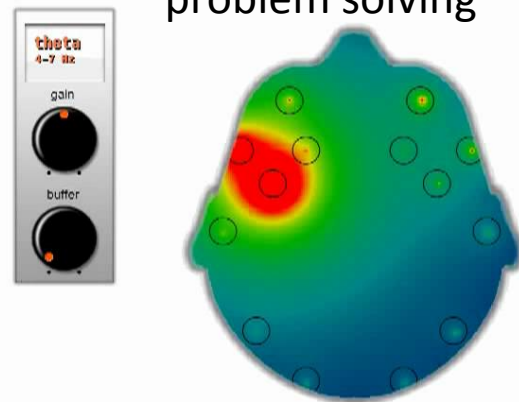
Now, a volunteer will come up
and wear this cap to discover
ways to relax effectively. 😊

The Emotiv EEG shows 4 views, each view is a different frequency band. The lighter colors show amount of activity.

DELTA for sleep



THETA for routine problem solving



ALPHA for limbic and body connection

BETA/GAMMA for insight, excitement, learning

Brain imaging *complements* Type for teams and organizations.

"Using neuroscience and brain imaging, Dr. Nardi showed us how we as team members could work better together. The technology could precisely identify key personality similarities and differences. The personalized individual and group results have been both thought provoking and very useful. We can now refer to brain patterns and more of the science behind what we do and how we try to do it. We do much better today than before and keep developing."

- M. Magnell, Skanska

Thank you!



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To learn more about brain imaging for teams, here are some resources:



Article: *What's Your Team's Brain?*

Workforce Solutions Review •
July 2015

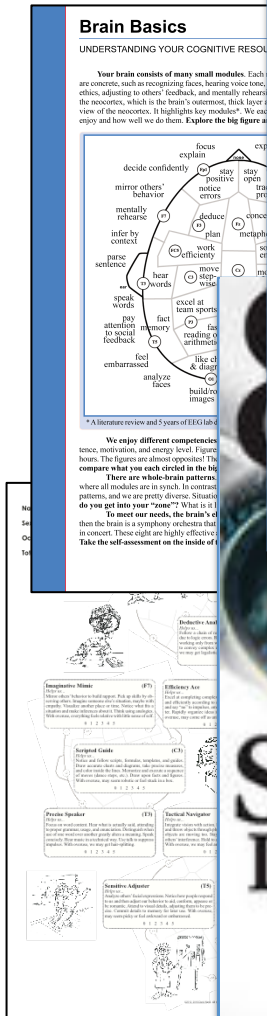
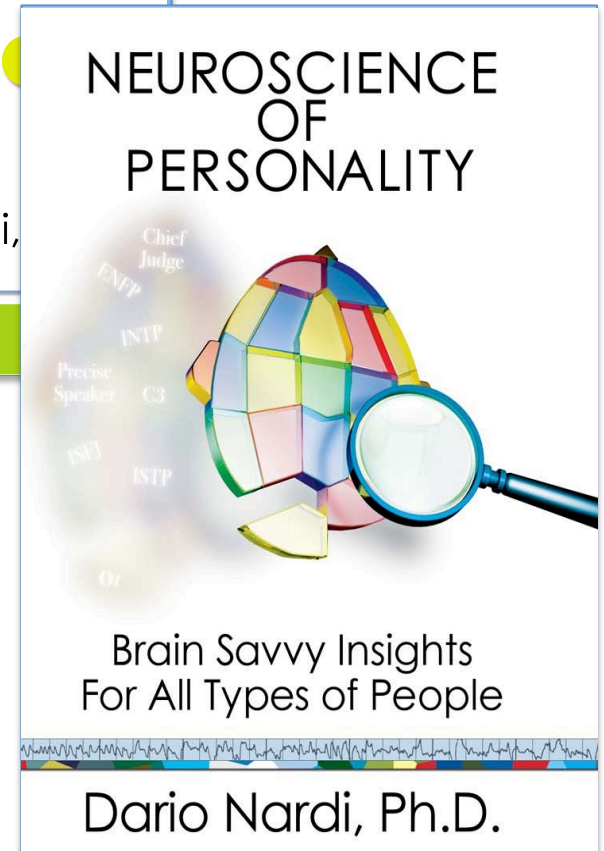
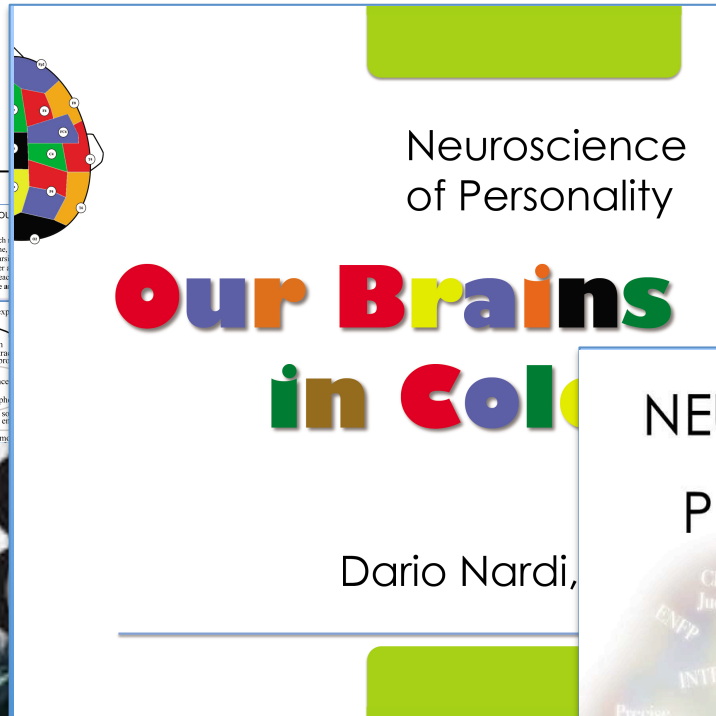
http://www.ihrimpublications.com/WSR_Online_Archives/WSR_July2015_Dario_Nardi.pdf

Companies big and small around the world are starting to get comfortable with using brain imaging.



Visit Radiance House for resources.

dnardi@ucla.edu



www.NeuroPQ.com

www.RadianceHouse.com