



What's Your Team's Brain?

Brain-Based Assessment for Individuals and Organizations

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On a scale of 0 to 100 percent, how accurately do you know yourself, or the leaders or teams that you work with?

Today, a new technology is on stage: neuro-assessment. Schools, companies, coaches, counselors, and others are exploring the use of *machines* to assess how their brains truly work. This is the century of the brain after all! There is still a lot to learn and refine to make results easily digestible to the public and organizations, with ethics and usefulness in mind, but some people are already forging ahead as pioneers. This article highlights some brain basics, the emerging consumer options, and what you might keep an eye out for – or even try – over the next couple of years.

Leveraging Cognitive Diversity

Is someone well prepared for a new position? What training format would be most beneficial? When moving onto a team, how well will a person mesh, both interpersonally and in terms of skillset? How can we best help those folks who are highly valued, yet unhappy? How will a leader perform in the face of surprises? Does a team have sufficient cognitive diversity to do its job well?

For decades, we've tended to rely on pencil-paper assessments. Some of these like DiSC, the Myers-Briggs Type Indicator™ instrument, and EQ (emotional intelligence), do a decent job of providing a language for people to talk about similarities and differences. They help us recognize people's different gifts – one size does *not* fit all – and we can use them to apply leverage for better results, but these traditional tools rely on self-reflection or opinion and miss key facets of who we are. What should you do with folks

who don't fit a type? Are we getting all the relevant data? How do we sort what's situational from what's lasting? How to assess potential? What do you do when assessment results are wrong?

Brain-based assessment offers some objective and empowering answers. For several years, the Human Connectome Project – an open-source exploration of the brain by multiple institutions – has documented brain functions. I, too, have spent seven years exploring the brain in a similar way. I use brain imaging across a range of individuals around diverse tasks and in social situations. Recently, a group of fellow pioneers with Evolvat, a neuro-technology company, and I led five dozen Florida high school students through a brain-based assessment process. Elsewhere, four dozen coaches and counselors and a few organizations in San Francisco, San Diego, Philadelphia, London, Brisbane, and Prague have also applied those techniques with enthusiasm and positive feedback. It was really rewarding to help people confirm the 50 percent they already felt sure about and then discover new sides of themselves and gain insight into long-standing questions. It's even better when people can use the results to better work together.

Before we get carried away with possibilities, let's get familiar with some of the science, hear what it's like, and consider some potential challenges, such as privacy.

Brain Basics

How does your brain work? Everyone is a little bit different. But, overall, we share the same toolbox. At a basic level, the brain is home to numerous modules that work together in networks. Each module is like a computer circuit, a big cluster of neurons

emotional centers.

In under an hour, Maria is done and resumes her day. The technician uploads the data to a cloud website, where proprietary software generates Maria's personal report. Later, Maria can read through the report at her leisure, maybe with an audio-guide. Preferably, she also attends a facilitated debrief session, either face-to-face or as a webinar. Her report will suggest tips, personalized for her, for greater productivity and engagement.

Privacy is key – The American Psychological Association offers guidelines for the ethical and legal use of assessments. An EEG is no different. In fact, while EEG is not a regulated practice, it is wise to treat EEG data with extra care due to its biological nature. Privacy concerns may seem to limit what we do with teams. Fortunately, HR professionals know smart ways to involve people without sharing assessment results. And, at the end of this article, I promise we will take up the promise of “team brains.”

Brain-Savvy Solutions

There are many ways to analyze and make meaning of EEG data. If you're interested, Figure 4 exemplifies typical EEG patterns and what they indicate. But, there's no need to delve into details. Let's explore a few highlights that are meaningful in the workplace.

Employee engagement is a hot topic, and rightly so. It relates to many facets of work including learning and attention. Conveniently, we can document brain activity as a person tries various tasks. The more activity during a task, the more “engaged” he or she is. It's almost that simple. Wouldn't it be nice to know what really interests someone and maximize his or her engagement?

Behind your forehead are the brain's executive centers. Basically, your “brain company” has two very different CEOs. On the left, that CEO is goal-focused. It gets active when we make decisions, give explanations, set goals and filter out distractions. It helps us stay confident and on track. On the right, that CEO is open-ended. It lacks filters and gets active when we brainstorm, self-reflect, and navigate our way through an open-ended process. As you might imagine, these two CEOs need to coordinate well as they manage the whole rest of your brain. And, most of us have a preference for one over the other. This bias



Figure 3. Consumer-friendly EEG headsets.

impacts everything we do, especially when we act as leaders. On top of this, if we consider extraversion/introversion, the result is four executive styles that look a lot like the four social styles offered by tools like DiSC. What's different about the brain results is that they are based on machine measurement. In fact, when I compare people's self-assessments versus actual brain scans, the faculty that people are most likely to misjudge about themselves is their executive style.

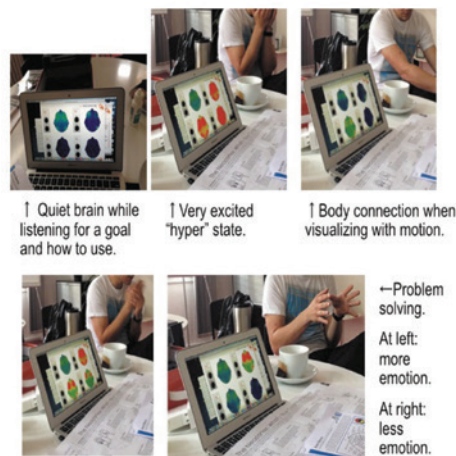


Figure 4. The EEG monitor shows how people's brain respond.

How about skills assessment? Yes, we can do it also through an EEG! We can look at brain networks. Specific networks point to capacity for outside-the-box thinking, social rapport-building, goal-focused planning, and many other areas, down to very specific variations such as likely preference for talk or email. The results can be broad or detailed depending on client needs and how many biosensors an EEG headset offers.

Another topic we can delve into is “flow.” When do you get into “flow” or “the zone?” What is this near-mystical mode anyway? Flow shows in the brain when we utilize our entire neocortex all at once, at maximum capacity, and with a very relaxed feeling. Sounds nice, right? Two criteria seem necessary; expertise in the task and the need to

improvise. For example, a professional musician likely shows flow when composing a new song on the fly for an audience, drawing upon all of the brain and mastery of music. Five years ago a student came to my EEG lab for career advice. His parents wanted

him to go to dental school. But, he loved music, and the EEG monitor showed that rare mode of flow when he delivered an impromptu rap. This profound knowledge allowed him to make a smarter decision after graduation, to at least consider a different path.

What does an EEG *not* say? Is it a lie detector? No. Can it tell us about a person's values or character? Yes and no. Often, people hold expectations about others and the world that mirror their own cognitive preferences. For example, if you are adept at the abstract use of language, you may assume or hope that others are similarly adept; you may get frustrated or feel a little lonely if others don't share your brain wiring there. But, that's as far as it goes. Looking at the brain tells us how people process their experiences. It can't tell us (yet) the private thoughts or content of a person's mind.

Brain-Savvy Teams

What about teams? Can we help people better understand and actualize a team's potential? It's actually pretty easy with an EEG. I call the solution your "team brain." It's a composite of everyone's results. When my colleagues and I at Evolvat held our first executive retreat, most of our members did brain imaging to better inform ourselves. What did we find?

Team Strengths and Weaknesses – Here's where we work well together or have redundancies. Do we always need these strengths for our task? Do we need to overcome the weaknesses? For example, our team had a bias toward the "open-ended" CEO, with lots of potential for out-of-the-box thinking and

perhaps not enough focus on fulfilling goals. Fortunately, two absent team members have helped filled that void.

Blind-spots – The team tends to neglect these areas. We needed to ask, what important role was left under-addressed? Should we bring on someone else to the team? Often, like the Myers-Briggs types, the blind spots are the mirror image of the strengths.

Polarities – Here's the fun! Here's where the team is split down the middle. This showed up very clearly during our days together. Two members needed to break every 90 minutes for vigorous and verbally challenging games of ping-pong, preferably using the windows and ceiling along with the official table. Those of us who didn't need these wild breaks might have rolled our eyes. But, with brain scans in hand, I wasn't surprised, and honoring cognitive diversity is what it's all about. In fact, those breaks repeatedly led to vigorous work afterward.

A "team brain" approach should keep people's data private and keeps members focused on the team – its shared goals, needs, and values – rather than on personalities of individual members. An over-focus on individuals may lead to rivalries, blaming, alliances, and other dynamics that are the realm of future brain research.

You Can Start Today

To sum it all up, to meet our needs, the brain's elements work in concert. As an analogy, if a brain module is a musical instrument, then the brain is a symphony orchestra that affords complex performances. Sometimes, a few musicians are asleep, off-key, or don't show up. We have favorite instruments and favorite songs. And, like that neat app, Shazam, which rapidly identifies just about any song, brain imaging is coming on stage to deliver similar magic for identifying our skills and personality profile.

Knowing about the brain makes a positive difference. And, with new wireless, consumer-friendly technologies, the brain can, and likely will, play an important role in helping people find their best fit at work, in school, and maybe everywhere.

Resources

BOOKS

Dario Nardi, *Neuroscience of Personality: Brain-Savvy Insights for All Types of People*, Radiance House, 2011.

Dario Nardi, *8 Keys to Self-Leadership: From Awareness to Action*, Radiance House, 2005.

WEB LINKS

DarioNardi.com

Evolvat.com

RadianceHouse.com

Facebook.com/NeuroTypes

humanconnectome.org

EEG HEADSETS

"EpoC+" by Emotiv (emotiv.com),

"NeuroSky" by NeuroSky (neurosky.com)

"Muse" by InteraXon (choosemuse.com)

About the Author



Dario Nardi, Ph.D., is a world-renowned author, speaker and expert in the fields of neuroscience research and personality. He holds a current position as

senior lecturer at University of California (Los Angeles), where he won UCLA's Copenhaver Award for Innovative Use of Technology in 2005 and UCLA's Distinguished Teacher of the Year award in 2011. His books include *Neuroscience of Personality* and *8 Keys to Self-Leadership*, among other titles, and he is the creator of the Personality Types and Love Therapy app for the iPhone. Since 2007, Nardi has focused his time on conducting hands-on brain research, utilizing insights of real-time EEG. He regularly keynotes international conferences and facilitates workshops teaching health professionals in multiple countries the art and science of the brain. For more information, please visit DarioNardi.com.