What Your Brain Thinks Of Productivity

Tan Le Forbes Councils Member
Forbes Technology Council
COUNCIL POST | Membership (Fee-Based)

Jan 9, 2023,06:15am EST

Founder and CEO of EMOTIV, a bioinformatics company advancing understanding of the human brain using electroencephalography (EEG).

GETTY

Humans can get pretty obsessed with productivity. After a great day of work, some people even experience a physical sense of well-being. On the other hand, many of us feel guilty about a day without accomplishment. Hustle culture aside, why does it feel so good to be productive and so bad when we are bored or under pressure?

When we work on a mental task, an area of our basal forebrain called the nucleus accumbens becomes active. The nucleus accumbens is thought to be involved in fine-tuning

reward behavior. And when we solve a problem, it rewards us with an influx of a brain chemical called dopamine. We feel a rush of joy and relief. It's the same messenger involved with other reward processes like food, money or sex. Getting our desired outcome after a period of hard work literally feels good.

Our brains are also using other chemicals that affect our emotions about work. Dr. Paul J. Zak is a researcher who has advanced the concept of "neuromanagement"—the idea that neuroscience can be used to enhance organizational management practices. His research has yielded evidence that a brain chemical called oxytocin produces what his team calls an "I want to help" effect that can form the basis for more effective cooperation within organizations. Zak's team's studies have shown that oxytocin increases trust among teams and makes work more productive. It's the same chemical involved in romantic love.

But work doesn't just yield love and pleasure chemicals. When working hard, our brains give us extra help to concentrate, but they sometimes stress us out in the process. Especially for those in knowledge worker roles, humans process many layers of information at once. A thin area of our brain called the reticular activating system (RAS) sorts through thousands of messages per second to determine what's worth our attention. It speeds up and makes us more alert as our stress levels increase, releasing a chemical called cortisol to cause the RAS neurons to fire more rapidly. A moderate amount of cortisol improves performance, but excessive cortisol makes us feel extremely anxious and degrades performance.

Animals rely on cortisol, too. For them, stress is usually temporary and recedes as soon as a threat disappears. Humans, on the other hand, tend to dwell on perceived threats. An

unhappy manager expressing dissatisfaction with our work could stress us out for months and negatively affect our performance. Chronic stress weakens immune systems and even promotes heart disease. And coping mechanisms like overeating or alcohol abuse can further degrade performance and productivity.

New Ways To Measure Workplace Stress

According to Gallup, workplace stress reached another all-time high in 2022, with 44% of the world's workers feeling the burden of daily stress. Too often, companies monitor stress by looking at its effects, examining absenteeism, asking specific questions at exit interviews, conducting annual employee satisfaction surveys and tracking the number of employee grievances and dips in productivity. But by then, it's often too late.

Managers may look for individualized stress signs like facial expressions, inappropriate language and tension, but detecting stress in others can be tricky and subjective. Stress is very personal.

Increasingly, organizations are encouraging employees to focus on managing personal stress. The American Psychological Association recommends that individuals track their stressors for a short period in journals for further reflection, and rather than using alcohol or food for comfort during stressful times, focus on exercise and sleep. Creating work-life boundaries and taking time to recharge and relax are also essential tips.

Companies are helping workers proactively manage workplace stress by providing employees with virtual wellness classes, apps that keep a pulse on workplace well-being or furnishing wearable fitness devices to gamify good health practices.

Numerous studies have shown the association between workplace stress and productivity. While pinpointing and describing the specific brain waves or brain regions involved in stress and productivity are complicated, machine learning algorithms can turn these complex signals into easy-to-understand "performance metrics." Increasingly, companies are looking toward new technology that can help spot signs of workplace stress in time to head off anxiety—and they're putting it in the hands of employees. By using tools to

proactively measure and manage their own stress levels through quantitatively proven technology, people can recognize the harbingers of productivity decline before it occurs.

Companies have been investigating ways to directly measure whether our brains are in the "productivity zone," or that sweet spot for attention and cognitive load. Studies indicate promising approaches to measuring users' brains' productive zones in real time using wearable EEG devices.

Increasingly, companies are putting them in the hands of everyday workers to allow them to track their own productivity objectively. Even for those who are successfully managing stress, wearable wellness devices are drawing significant interest from those seeking high performance within their roles and careers. It's providing compelling evidence for what type of work engages each worker's brain most efficiently, and where, when and how they should do it. Underpinned by neuroscience, these devices are helping people define and monitor their own key workplace performance metrics, including engagement, interest, excitement, focus and even relaxation, all of which correlate with productivity.

While it may once have been seen as a hallmark of a professional to ignore or otherwise learn to handle certain stressors in the workplace, it's becoming clear that eliminating them may be key to clearing the way to productivity. By learning the signals that tell us our attention has declined or that spending more time working is actually becoming counterproductive, we can adjust our work in an individualized way. With the right data and insight into what works best for each of us as individuals, we can break bad habits and optimize performance comfortably.