

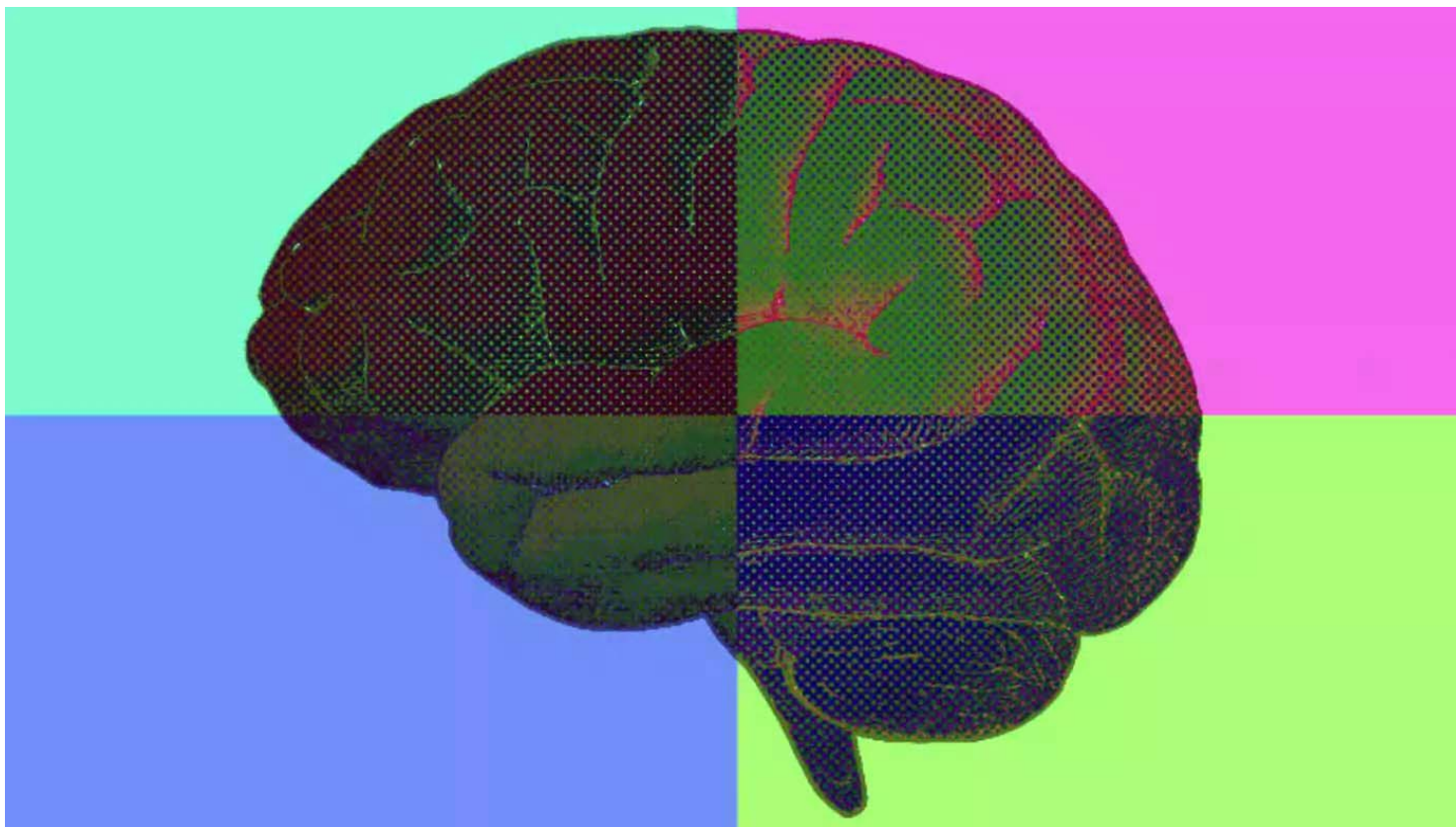
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08.13.18 | WORK SMART

There are 4 types of motivation—here's what each does to your brain

We can't always engineer motivation, but by understanding the forces behind it, we can learn to identify how we work best.



[Animation: Jolygon/iStock]

BY JOSHUA KRAUS—ZAPIER

7 MINUTE READ

Motivation is hard to come by. There's always another task, another project, another objective—and any motivation you manage to scrape together for one thing is absent for the next.

But motivation isn't a resource—at least not in the way the language surrounding motivation suggests. Motivation is a response to stimuli, and that response isn't always the same. Different stimuli trigger different parts of the brain and motivate us toward productivity in different ways. So instead of wishing for motivation or hunting for more motivation, it might be more helpful to think about the different types of motivators we experience, and what's going on in our brains when we experience them.

THE BASIC SCIENCE OF MOTIVATION

Over the years, neuroscientists and psychologists have established that we generally experience motivation when dopamine—a neurotransmitter that relays signals between brain cells—is released and travels to the nucleus accumbens. The nucleus accumbens is an area of the brain that mediates reward behavior: So when dopamine reaches the nucleus accumbens, it solicits feedback on whether a good thing or a bad thing is about to happen. As [Kimberly Schaufenbuel](#), program director of UNC Executive Development, explains, this prediction prompts us to respond in ways that either “minimize a predicted threat (the bad) or maximize a predicted reward (the good).”

So if you get an email from your boss with a new assignment, dopamine hits up the nucleus accumbens to form a prediction of what will happen if you do the assignment or not, or if you do it well or poorly. With that prediction in place, you'll either act to increase the probability of reward (payment, praise, sense of accomplishment) or decrease the probability of punishment (demotion, yelling, sense of failure).

Let's look at our four motivators for productivity and see what truly drives us.

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CREATIVE EXPRESSION

In writing this blog post, I'm motivated by creative expression. It gives me an opportunity to flex my creative muscles and express myself through prose and storytelling. But what's happening in my brain while I'm writing?

When you're motivated toward productivity via creative expression, it's likely that one of two things is happening:

1. You're "in the zone"

This is the colloquial term used to describe an uninhibited creative flow, in which it seems as if you're not even thinking about what you're doing. When you're in the zone, a region of the brain called the dorsolateral prefrontal cortex (DLPFC) becomes less active. Research conducted by neuroscientists [Dr. Charles Limb](#) and [Dr. Allen Braun](#) connects the DLPFC to planning, inhibition, and self-censorship, which makes sense considering that those qualities are almost antithetical to uninhibited creative flow. When mediating a rush of ideas, there's no time to analyze or organize. Planning and censoring only get in the way.

2. You're "methodically sculpting"

Most creativity is hard, tedious work, and during these pre- or post-zone creative sessions, activity in the DLPFC can actually ramp up, especially if you're reviewing or editing. That's because creative expression usually involves a balance of uninhibited flow and methodical sculpting. Similar to the famous piece of writing wisdom, "Write drunk, edit sober," a good book or moving song is often the product of both stream-of-consciousness inspiration and meticulous craftsmanship.

Takeaway: Being motivated by creative expression can result in an organized delivery of new, unexpected, and imaginative ideas.

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FINANCIAL INCENTIVE

It would be dishonest to say that I'm not also motivated by payment. Our brains look very different when motivated by financial compensation. And just as different types of creative expression are associated

with different neurochemical processes, so are different types of financial incentives, namely salary versus added incentive.

1. Motivation from salary

Money can certainly motivate us toward productivity—anyone with a job can tell you that. But extrinsic motivators like salary work best when paired with other, more intrinsic motivators. Edward Deci, a psychologist at Rochester University, says that we have [three psychological needs that help supplement financial motivation](#): autonomy, competency, and the sense of feeling connected to others. Salary alone doesn't motivate us, Deci says. In fact, he argues, "Overemphasis on financial reward undermines autonomy and therefore intrinsic motivation."

2. You're "methodically sculpting"

Many employers offer added financial incentives like commission and bonuses: If you perform to X level, you get Y extra cash. Even if you're already motivated by a healthy balance of intrinsic and extrinsic factors, things change when these performance-based financial incentives are introduced.

In [a study](#) led by Dan Ariely of Duke University, researchers asked participants to play games that tested memory, creativity, and motor skills. They would each receive a financial reward based on their performance, but one group was offered a small reward, another a medium reward, and another a very large reward. The study found that participants who were offered the largest amount of money performed the worst.

Ariely concluded that while performance-related rewards generally increase activity in areas of the brain involved in motivation, there comes a tipping point. When the potential reward is too large, it can undermine performance by making people overly focused or mentally aroused.

Takeaway: Being motivated by an excessively large financial incentive can result in a mistake-riddled product, while a reasonably-sized financial incentive (paired with intrinsic motivators) can result in something more thoughtful and polished.

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CURIOSITY/LEARNING

Curiosity and the desire to learn are purely intrinsic motivators. According to [Domenico and Ryan](#), we're motivated toward productivity by curiosity/learning when we encounter new types of stimuli "that present optimal challenges or optimal inconsistencies with one's extant knowledge." We want to investigate things that we don't understand or things that run counter to our experiences. This explains why, for example, somebody might hear a ringing payphone and answer it.

So what's going on in the brain here? Dopamine, as with nearly all types of motivation, plays a key role when motivated by curiosity/learning, and dopamine neurons tend to exhibit two modes of activity: tonic

and phasic.

When dopamine is in tonic mode, neurons fire at a steady rate, reflecting what Domenico and Ryan call the “general strength of animals’ exploratory seeking tendencies.” When we’re in tonic mode, we might be walking around smelling things, looking at things, listening to things. You know, normal human stuff.

In phasic mode, neurons experience short bursts of activity or inactivity in response to specific stimuli, leading to an increase or decrease of dopamine, usually lasting several seconds. Whereas in tonic mode you might be compelled to glance at an unusual looking tree, a weird noise from its branches might trigger phasic mode—and suddenly you’re inching toward that tree, eager to discover the source of the noise.

Takeaway: Being motivated by curiosity and learning can result in a more thorough investigation of ideas and a more fleshed out final product.

FEAR

What if I woke up thinking this post was due in to my editor tomorrow only to realize the deadline was in two hours? Fear would ensue. And that fear would motivate me to do whatever it took to minimize the likelihood of that bad thing happening.

Fear typically drives you toward productivity because you want to avoid a threat or punishment. And while a “due in two hours!” fear may not reach the level of fear you experience when a grizzly charges at you, it does trigger a similar neurochemical response: The amygdala, a part of the brain critical in the formation of memories, processing emotions, and making decisions, goes haywire. Once it detects danger, it sends your body into fight-or-flight mode, during which survival is prioritized above all else.

But just because you’re being productive in this moment of fear doesn’t mean you’re producing something of quality. When fear kicks in, most of the brain’s resources are diverted from their usual tasks to perform that survival function. So when fear hijacks your brain, it can compromise your decision making.

Fear might motivate you to work harder or work more, but when fear is the dominant motivator, intrinsic motivation is nowhere to be found. There’s no room for creative expression or curiosity and learning. And without those, there’s no urge to seek out new information or let ideas flow through you naturally. So while the work might be completed, it won’t be as well-rounded. More likely, it will simply reveal your urgency to just get it done.

Takeaway: Being motivated by fear can lead to a lower-quality—albeit promptly delivered—product.

Each of these motivators has the power to propel you toward productivity, but the outcome of that productivity won’t always be the same. But if we recognize why we are motivated toward productivity, we might be able to identify how we work best, and what kind of motivation produces the best results.

A version of this [article](#) originally appeared on [Zapier](#) and is adapted with permission.

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