

Opposites attract. I have sat through many weddings and have heard how the bride or groom is so Type A and their partner is the opposite. It makes a lot of sense. How crazy would it be if both partners were uptight! Even worse would anything ever get accomplished if both partners didn't care about the details?

The Yin and Yang are perhaps the most well-known idea of opposites working together. It symbolizes the duality of light and dark or positive and negative. The beauty of the Yin and Yang is that they are actually complementary and interdependent instead of just opposite much like how the differences in a marriage combine to create something better than the individuals.

I teach my students that one muscle has to extend in order for the other to contract. Everyone loves to show off their biceps but we don't appreciate the extension of the tricep has to occur in order for that to happen. We all love to go flying down a mountain on skis or a snowboard but how many people appreciate the slow ascent on the ski lift or gondola in order for that to happen?

This brings me to the idea of mindfulness. We hear about it all the time. At its core mindfulness is being aware of the moment. Too many times we lose focus and let life pass us by. The great Neila Steele states, "Life is a gift that is made even more precious when we bring the right attitude, awareness, and attention to our daily lives." Why wouldn't we want to be aware of the moment? It's almost like we let life pass us by if we don't focus on the time we are spending. There are times in my life that I remember vividly attempting to pay attention to every detail because I knew that I was experiencing something special.

If we agree that mindfulness is great, which it is, does the idea of duality still apply? Is there something equally beneficial that is the opposite of mindfulness? What is the Yang to mindfulness's Yin? The opposite of mindfulness would be the Default Mode Network. Most of us know it by its more common monikers such as daydreaming, zoning out, being in la la land, or taking a brain trip somewhere. One of my favorite examples of this occurs when I am listening to music with a great guitar solo. My mind wanders off. I am still listening to the music on some level but I am not concentrating on the notes being played.

In [neuroscience](#), the default mode network (DMN), also default network, or default state network, is a [large scale brain network](#) of interacting brain regions known to have activity highly correlated with each other and distinct from other networks in the brain. The default mode network is most commonly shown to be active when a person is not focused on the outside world and the brain is at [wakeful](#) rest, such as during daydreaming and [mind-wandering](#). But it is also active when the individual is thinking about others, thinking about themselves, remembering the past, and planning for the future. The network activates "by default" when a person is not involved in a task. ([link](#))

In short the Default Mode Network is the exact opposite of mindfulness. Instead of paying close attention to every detail that is occurring around us we let our mind wander. This idea

of mindfulness and the default mode network working together first occurred to me when I was reading this fantastic book called [The Chaos Imperative: How Chance and Disruption Increase Innovation](#) penned by Ori Brafman and Judah Pollack. In the book the authors tell us a story about Dmitry Mendeleev.

“After three nights of staying awake working on the underlying order of the elements, Mendeleev couldn’t keep his eyes open. Reluctantly, he put his head down and started to drift off to sleep. As he did so, his default mode network kicked in. And suddenly Mendeleev was able to see the elements arranged in perfect order. When he woke up he started writing furiously. His insight was to arrange all the elements according to their atomic weights. All at once everything clicked.” ([link](#))

That was how the periodic table of elements was created. Would Mendeleev been able to come up with that answer if his mind didn’t kick into default mode? We will never know. What we do know is that when he was being mindful and concentrating on the issue of how the elements work he did not find his answer.

Another example of the default mode network working for someone was none other than the great Albert Einstein. Einstein was so fed up with figuring out how time and energy worked together that he admitted defeat!

“Einstein experienced a similiar Eureka moment in May 1905 when he looked at his friend Michele Besso, threw his hands up, declared defeat when it came time to solving the riddle of time and energy, and when home to sleep. When he woke up the next morning, everything had fallen into place, and he began to write his special theory of relativity.” ([link](#))

Granted neither Einstein nor Mendeleev would have come up with these breakthroughs if they did not spend so much time being mindful and working on a problem; however, the answer came to them when they finally relaxed and let their default mode network take over. Hence the Yin of mindfulness coupled with the Yang of the default mode network worked together to solve the problem.

We can all relate to this I am sure. How many times have you had great ideas in the shower or while you were driving? Dr. Sarah Thomas calls them shower moments. We mull a problem around staring at it from every angle almost willing an answer to come out. You give up on it promising to revisit it later. Next thing you know the answer pops out during one of your mind trips!

The next time you are planning a lesson, trying to figure out how to reach that student, or attempting to put a twist on a classic game and you are stymied take a break. Let your default mode network take over. Give your brain a chance to figure it out when there is no pressure on it. You might just be surprised that a solution pops out!