## **Peak Mind**

Tags: #mindfulness #neuroscience #listening

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# **Dialogue**

Title: How to Pay Attention to What Is Happening

What is attention?

#### Attention is:

- 1. Powerful
- 2. Fragile
- 3. Trainable

The Art of War, traditionally accredited to Sun Tzu in the fifth century BCE, offers advice on what we should do when we are not in a fair fight—when we are plainly overpowered and outmaneuvered: 'To win one hundred victories in one hundred battles is not the acme of skill. To subdue the enemy without fighting is the acme of skill.'

What is working memory and what's so critical about understanding it with attention?

Example: what people think about at rest in the fMRI machines.

Everything your brain does now becomes calibrated to what's on your whiteboard. It isn't just that it seems as if you're experiencing whatever you're thinking about instead of what's right in front of you. It's that neurally, that's exactly what's happening.

Your working memory is a great tool for memory, and also a major point of vulnerability—if it's occupied with other content besides the experience you want to encode or the information you're trying to learn, there won't be effective memory-making.

Tactic: stay in play

Tactic: be aware of what's in your working memory -- and what to not rewrite:

In the lab, we find that people who display better performance are better able to drop the distractions. They are able to allow the ink to fade when it's appropriate for it to do so, selectively making the decision: "I'm not going to rewrite that."

Tactic: forgetting is a good thing

Tactic: we need white space

### Reserve

When our attention is deployed:

1. Familiarity

2. Salience

3. Our own goal

Example: card game for working memory.

Point: taking photos makes it more likely to forget the moment

To make a memory:

1. Rehearsal

2. Elaboration

3. Consolidation

## **Quotes**

Highlight [6]: First, attention is powerful. I refer to it as the "brain's boss," because attention guides how information processing happens in the brain. Whatever we pay attention to is amplified. It feels brighter, louder, crisper than everything else. What you focus on becomes most prominent in your present-moment reality: you feel the corresponding emotions; you view the world through that lens. Second, attention is fragile. It can be rapidly depleted under certain circumstances—circumstances that turn out, unfortunately, to be the ones that pervade our lives. When we experience stress, threat, or poor mood—the three main things I call "kryptonite" for attention—this valuable resource is drained. And third, attention is trainable. It is possible to change the way our attention systems operate. This is a critical new discovery, not only because we are missing half our lives, but because the half we're here for can feel like a constant struggle. With training, however, we can strengthen our capacity to fully experience and enjoy the moments we are in, to embark on new adventures, and to navigate life's challenges more effectively.

Highlight [8]: The Art of War, traditionally accredited to Sun Tzu in the fifth century BCE, offers advice on what we should do when we are not in a fair fight—when we are plainly overpowered and outmaneuvered: To win one hundred victories in one hundred battles is not the acme of skill. To subdue the enemy without fighting is the acme of skill. In other words: Don't waste your energy trying to get better at fighting the pull on your attention. You cannot win that fight. Instead, cultivate the capacity and skill to position your mind so you don't have to fight.

Highlight [45]: The neuroscience literature points to three main factors that determine when our attention is deployed: 1. Familiarity. The first time I clicked, it was because I'd heard the company name before. My attention was immediately and powerfully biased by prior history. That familiar name leapt out and pulled my flashlight like a magnet. 2. Salience. The second time I clicked, I was sucked in by the physical features of the ad. The color, the flashing, the size of the text—all of these physical features of the ad were screaming LOOK AT ME! Salience (novelty, loud noises, bright lights and colors, motion) yanks us toward that stimulus—we can't resist. Salience is tailor-made for each of us—seeing my name, "AMISHI," got me—which is precisely why so many apps ask us to customize our profiles. We are gripped by personally relevant stuff. Our attention moves—fast and ballistic. It is easily captured. 3. Our own goal. Finally, our attention can be "goal-driven," biased by our own chosen goal. Mine was to find highquality, affordable pans, so I finally restricted my online search terms to show only those options. This is exactly how attention works when we have a goal in mind: it restricts our perception based on that goal. But my pan-hunting example also highlights a weakness: our goals are the most vulnerable of all these "attentional pulls." Familiarity and salience were easily able to pull me away.

Highlight [128]: Working memory, as we've discussed, is a dynamic cognitive workspace you use every waking moment of every day. Don't get thrown off by the word memory: this isn't only about the storage of information. It's a temporary "scratch space" that is, by necessity and evolutionary design, impermanent and fleeting.

Highlight [144]: In short: STRESS- RELATED MENTAL TIME TRAVEL YANKS THE ATTENTIONAL FLASHLIGHT AWAY FROM OUR PRESENT-MOMENT EXPERIENCE AND INCREASES THE CLUTTER ON OUR MENTAL WHITEBOARD. When it's present-centered, attention can encode and refresh the contents of working memory with task-relevant information. And in turn, working memory is able to successfully meet present-moment task demands. In other words: MINDFULNESS TRAINING HELPS TO DECLUTTER THE MENTAL WHITEBOARD, SO THAT WORKING MEMORY WORKS BETTER.

Highlight [147]: Let's break that down. Why was this an intriguing finding for us? Well, it told us that working memory performs the same type of "top-down" biasing that your attention system does: everything your brain does now becomes calibrated to what's on your whiteboard. It isn't just that it seems as if you're experiencing whatever you're thinking about instead of what's right in front of you. It's that neurally, that's exactly what's happening. Your brain is perceiving a face internally, even as your eyes are staring at a gray blob.

Highlight [150]: I used to think mindfulness was about hitting the "pause" button, which to me always felt artificial or idealistic. Life has no pause button—why pretend it does? But when we're talking about stabilizing attention and developing a peak mind, what we're actually looking for is a play button. We need to stop holding down the

rewind or fast-forward buttons and stay in play, to experience every note in the song of our lives, to hear and take in what's happening around us.

Highlight [152]: An important point: I am absolutely not suggesting that the contents of your whiteboard should always match the contents of your immediate task-at-hand. Like the fallacy of having a "perfect unbroken focus," that's neither possible nor desirable. There's nothing inherently bad about having stuff on your whiteboard other than what's right in front of your nose. It's neither bad nor good—it's simply how the brain works. It happens. Spontaneous thought arises. We use working memory to work something out that has nothing to do with the present moment—puzzle out a logistical problem, figure out how we feel about something, or make a plan or a decision. There are plenty of situations where it's absolutely best to have the content of the whiteboard be information about the past or future—and in those moments, the present moment becomes enriched with the content that time traveling provides access to.

Highlight [154]: Ultimately, having a strong working memory is not about always using it for your goals and plans, every minute; or about always being in the present moment —this is neither realistic nor desirable. Instead, it's about becoming aware of what your working memory actually contains. It's about recognizing and heading off any interference (such as mental time travel) when there is a task to be done. It can even be about basking in the "nowness" of a refreshing morning shower. In the lab, we find that people who display better performance are better able to drop the distractions. They are able to allow the ink to fade when it's appropriate for it to do so, selectively making the decision: "I'm not going to rewrite that."

Highlight [166]: Forgetting is a good thing. It's a feature, not a flaw in our biological makeup. We need it—we rely on it, just as we rely on other "features" of memory, like negative experiences' becoming more salient, for survival, learning, and decision making. Another reason we have memory is for learning—for guiding us in how to act in the present moment and in the future. For that to work, it's every bit as important that we forget as it is that we remember. The mind works the way it does for good reason—we wouldn't want to fundamentally change any of these "features" of memory. And yet there are vulnerabilities within the system, and we do run into certain issues because of them.

Highlight [178]: Your working memory is a great tool for memory, and also a major point of vulnerability—if it's occupied with other content besides the experience you want to encode or the information you're trying to learn, there won't be effective memory-making. Simply being physically present for something doesn't mean you'll absorb it. You need to intentionally place your focus (flashlight) on what you want to encode. And further: you need to make sure both your mind and body show up for the stuff you want to remember.

Highlight [183]: We need white space in order to reflect on what we hear and experience. For those in leadership roles, this can feel like a challenge, but also a

chance to do something innovative. Memory-making and learning are benefits of mindfulness training, yes, but you need both: to be mentally present in the moment, and then to have space to let the mind roam free, unconstrained by any task or demand. Is the answer to take more showers? Well, sure, if you can spare the time and water! But now that you know, you can create micromoments and even nano-moments for unconstrained spontaneous thought throughout the day. Try this: Leave your phone in your pocket or purse. If you are up for it, leave it hidden in the car. At work, walking from one meeting to the next, feel your feet walking and let whatever comes to mind come and go. Remind yourself that these unconstrained mind moments are valuable—more valuable than filling every second with tasks.

# References