



Embracing Uncertainty: The Importance of Context, Choice, and Connection

Mays Imad • October 28, 2024

One of the courses I am teaching this semester is a senior-level course titled Autonomic Nervous System Regulation. In this class, we examine the [autonomic nervous system](#) (ANS), which is the part of our nervous system that governs involuntary physiological processes, such as our heart and respiratory rates, digestion, and pupillary response. Imbalance in the ANS can lead to [dysautonomia](#), where the body's ability to regulate these functions is impaired, affecting overall health and well-being.

One of the articles we read is about the physiology of the [vagus nerve](#) and the polyvagal theory, which emphasizes our biological predisposition for safety, connection, and social engagement. Briefly, the [polyvagal theory](#), developed by Stephen Porges, posits that the vagus nerve, a major component of the ANS, supports three different branches of autonomic response that function according to a hierarchy: the oldest form, which governs shutdown and fainting behaviors; the sympathetic nervous system, which activates fight or flight responses; and the newest form, which supports social

engagement and calming behaviors. The theory highlights three principles: hierarchy, where the newest system can override the older ones; [neuroception](#), the body's unconscious ability to detect safety or danger; and [coregulation](#), the process by which our nervous system attunes to another's, facilitating emotional and even physiological stability.

When I first learned about the polyvagal theory, I wondered how I might be able to use its principles to improve my teaching. (Actually, I first wondered how this theory can help me heal my traumas, but that's for another article!) The more I read about the science, the more I began to make connections for teaching and see how the theory can help me understand how my students' nervous systems influence their readiness to learn and interact in class. In other words, this theory provides insights into why students may react differently under stress or during social interactions, and these insights ultimately can enable me to create more supportive learning environments. For example, looking at the three principles of the theory, we see the following:

1. The hierarchy of autonomic responses explains that students' behaviors can reflect their nervous system's state. For example, a student might seem withdrawn or disinterested during a lecture not because they don't want to learn but because their nervous system is in a state of "shutdown" as a defensive response. Recognizing this has helped me tremendously because my go-to interpretation is not judgmental (they don't care, they don't show respect, etc.) but rather curious (I wonder what's going on with their nervous system). In fact, this understanding and subsequent pivot have helped me see such behaviors as calls for help rather than a lack of effort or engagement.
2. Neuroception is the nervous system's way of assessing threats subconsciously. If a classroom feels unsafe or intimidating to the student, their ability to learn can be compromised as their system is more focused on looking out for danger. Recognizing this has helped me become more intentional to inquire about what makes the classroom or my interaction with students feel safe and working to actively create a safe and inviting classroom atmosphere.
3. Coregulation shows us that teachers play a significant role in helping students manage their emotions. Recognizing this has helped me pay more attention to my nervous system and how grounded I am even before I walk into the classroom and to why it is so important to have a practice before each class that enables me to have a calm and connected presence. For instance, I noticed that when I pause and use a reassuring tone and nod during a stressful lecture, it helps my students manage their anxiety about an upcoming assessment.

Relatedly, I have the students read [Deb Dana's](#) book [Anchored](#) because it serves as a practical guide to applying polyvagal theory in everyday life. Dana aims to "translate Polyvagal Theory . . . so that anyone can have access to its core concepts and experience its many benefits for living and navigating life with greater ease." I appreciate her work because her approach democratizes complex scientific ideas, making them accessible and useful for managing stress and improving well-being. As Dana begins her book, "We are wired for connection. Our nervous systems are social structures that find balance and stability in relationship with others." This fact underscores the impact of social connections and relationships on the health of our ANS and, by extension, our overall health. In other words, healthy relationships can foster a state of safety, leading to better emotional regulation and resilience. Conversely, the absence of supportive connections can lead to states of chronic stress or dysregulation, profoundly affecting our physical and mental health.

Early in the book, Dana outlines three elements of well-being: context, choice, and connection. These components are essential for helping the nervous system find anchors in safety and regulation,

fostering a sense of well-being and stability. I will briefly explain each element below and how it applies in the classroom:

- *Context* refers to the understanding of a situation or environment. It encompasses knowing the how, what, and why behind actions and interactions. When we have context, we have clear and direct cues that help us understand our surroundings and our roles within them. This clarity reduces ambiguity and uncertainty, which can trigger stress responses. For example, if a student understands the expectations, goals, and reasons behind a classroom activity, they are more likely to feel secure and focused rather than anxious or confused.
- *Choice* is about having the autonomy to make decisions about one's actions and responses. It allows us to feel control over our environment and interactions, which is crucial for regulating the nervous system. When we perceive that we have options, we are more likely to engage positively with our environment and less likely to experience stress responses associated with feeling trapped or powerless. For instance, offering students a choice in how they wish to demonstrate their understanding (e.g., through a test, presentation, or project) can help them feel more empowered and less anxious.
- *Connection* involves forming meaningful relationships that provide emotional and physiological stability. This element recognizes that we are inherently social beings who rely on interactions with others for coregulation of our nervous systems. Strong, supportive relationships—whether with peers, family, or community members—can help us manage stress and bounce back from adversities. In educational settings, fostering a sense of community and belonging among our students can help mitigate the stress associated with academic pressures and personal issues.

These elements contribute to a holistic approach to well-being that supports the body's ability to maintain balance and respond healthily to challenges.

I am sharing all this information so I can tell you what happened in my class last week where all three elements—context, choice, and connections—were challenged.

Each semester, I try to invite one or two experts in the field to talk about their research and engage the students in a dialogue about the practical applications and implications of their findings in real-world scenarios.

Last week, I had arranged for a guest speaker to go into sleep health and its connection to autonomic health. The students and I had already explored several scholarly articles on the topic and were eager to deepen our understanding. The speaker, an expert in sleep health, began by outlining the typical patient journey at his clinic—from initial consultation to treatment initiation.

Prior to the session, I had met with the speaker to discuss our course content and provided a rough outline of topics we hoped he would cover. But once he started his presentation, he quickly veered off course and began discussing psychological trauma and its impact on sleep health. The shift was understandable (trauma affects our sleep, which affects our ANS) but unexpected. Our speaker shared intense, vivid stories of trauma, which lasted about 20 minutes. I found myself in a difficult position, unable to interrupt him yet acutely aware that this content could be deeply triggering for the students. It was triggering for me. I felt stuck. I was dying!

Once the speaker concluded, I sensed the need for a break. I gave the students a 10-minute break—our class is three hours long—and nearly everyone left the room. Needing a moment myself, I headed

to the restroom to splash some cold water on my face, a quick way to stimulate the parasympathetic nervous system. In the hallway, I could hear the students discussing the intensity of what had just occurred. I chose not to engage or make eye contact; instead, I retreated to my office (across the hall from the classroom) to take a few minutes alone to gather my thoughts.

When I returned to the classroom, I skipped my usual cheerful and light-hearted entrance. I usually walk in singing or humming or saying something silly like “Hey, hey, hey, superstars.” Instead, I solemnly remarked, “Oh my, we have a lot to process.” This shift in demeanor is probably what led one of my students to ask, “Are you mad at us?”

I was initially surprised when she asked whether I was angry. Reflecting on it, I realized that my behavior might have inadvertently conveyed disapproval. During the speaker’s session, I had asked the students to prepare questions, but most remained silent, likely overwhelmed by the content. My subsequent actions—my withdrawn demeanor in the hallway, my quick exit to the restroom, the abrupt closing of my office door, and my somber return to the classroom—might have made it appear that I was upset with them, leaving them without the necessary *context* to understand my true feelings.

Moreover, the students lacked *choice*. Had anticipated the speaker’s shift into traumatic narratives, I could have prepared the students better, offering them the opportunity to step out if they felt uncomfortable. Instead, like me, they were caught off guard, which likely contributed to their silence and disengagement.

Feeling dysregulated, upset, and guilty, I struggled to connect. My preoccupation with whether the students were all right hindered my ability to engage effectively. The lack of context and choice for the students only compounded the issue, making it difficult for them to speak up or engage, which in turn affected our *connection*.

All three Cs—context, choice, and connection—were compromised, and as a result, meaningful learning was stifled during that session.

Here’s how I attempted to address the situation.

First, I paused. After being asked whether I was angry, I quickly reassured the class with a simple “of course not.” I was tempted to ask, “Why would you think that?” but instead, I chose to pause again. I acknowledged that the guest lecture had been intense and assured them that we would take time to discuss it thoroughly. Knowing that they had built rapport with their classmates—many of whom I had taught in various courses—I encouraged them to talk among themselves and discuss the lecture. I even said, “Vent if you must.”

Taking a moment to breathe, I recognized there was more material to cover, but the immediate need was to address the emotional climate. Now more composed, I suppose, I decided to adjust the schedule and dedicate the remainder of the class to processing the experience.

Acknowledging my own reactions, I admitted, “That was a lot,” and when a student asked whether I was alright, I responded with honesty: “I’m going to be.” I aimed to model vulnerability, acknowledging that I wasn’t okay and apologizing for the unexpected nature of the lecture, saying, “I’m sorry that wasn’t very trauma informed.” This opened the door for students to begin sharing their experiences. Quickly, I could see and feel the connections being reinforced, not just with me but among their classmates as well.

One person cracked a joke, and we all laughed. We laughed some more, and I could feel my adrenaline and cortisol levels gradually declining. Then, someone chimed in, “Well, the research was interesting!” Encouraged by this, I took a deep breath and ventured, “Should we talk about the science?” I wanted to give them a choice. The response was a resounding yes. For the next 15 minutes or so, I barely got a word in as the students enthusiastically discussed the science, the articles they had read, and how it all connected to our speaker’s research. I felt a glimpse of being lost in that beautiful learning journey with my students. It reminded me of Thomas Merton’s words about [losing and finding ourselves in art](#); in that class, I experienced both the losing and finding within our learning community.

So, I want to leave you with a few thoughts. I won’t dwell on guest speakers because I thought I had prepared for that, but sometimes, unexpected things happen.

I will say that when things happen, try the following suggestions:

1. **Pause and breathe**—Take a moment to stop and try to listen to your heart beating. Bear witness to the rhythm of your breath.
2. **Give yourself grace**—Be kind and forgiving to yourself, acknowledging that it’s okay to make mistakes or not have all the answers.
3. **Show vulnerability**—Be open about your feelings and uncertainties, which can help build trust and authenticity in your relationships.
4. **Context matters and you have options (choices)**—Understand the circumstances surrounding your interactions and remember that you often have multiple paths or methods to approach and resolve issues, including doing pausing.

If connection with others is challenged, take a moment to pause and reconnect with your own heart and the beauty in the world you’ve experienced before. In other words, try to anchor yourself so you can reestablish connections with others, like your students, through a renewed sense of presence and engagement.

I want to go back to that day. As the guest lecture drew to a close, I felt a palpable tension in the air, probably mirroring the tightness in my chest. In that moment, uncertainty clouded my thoughts—I worried I might have inadvertently caused harm, and my heart raced with a disquieting blend of anxiety and responsibility. I felt utterly stuck and tempted to end class early. It would have been easy to do so. In my office I have several paintings of Rumi’s poetry, one of which is about fear, and I remembered the last time I turned to [Rumi’s writing](#)—teaching us not to move the way fear makes us move—and decided to continue class. I leaned into the vulnerability of not knowing, trusting in the healing power of the collective hearts and minds in that classroom. It was not about mastering the moment but about navigating it together, about the messy, beautiful process of failing and learning and (re)connecting.

Mays Imad, PhD, is an associate professor of biology and equity pedagogy at Connecticut College. Previously, she taught for 14 years at Pima Community College, where she also founded the teaching and learning center. She is a Gardner Institute Fellow for Undergraduate Education, an AAC&U Senior STEM Fellow, a Mind and Life Institute Fellow, and a research fellow with the Centre for the Study of the Afterlife of Violence and the Reparative Quest (AVReQ) at the University of Stellenbosch.