

Transcript

Episode 133

Mindi Fried on Teaching & Learning with Aphantasia

The A&P Professor Podcast

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Introduction

Kevin Patton (00:01):

In his book, *The Mind's Eye*, neuroscientist Oliver Sacks wrote, "Lev Vygotsky, the great Russian psychologist, used to speak of "thinking in pure meanings." I can't decide whether this is nonsense or profound truth. It is the sort of reef that I end up on when I think about thinking."

Aileen Park (00:29):

Welcome to *The A&P Professor*, a few minutes to focus on teaching human anatomy and physiology with a veteran educator and teaching mentor, your host, Kevin Patton.

Kevin Patton (00:39):

In episode 133, Mindi Fried joins us to discuss her experience of aphantasia and how that affects teaching and learning, anatomy and physiology.

What is Aphantasia?

Kevin Patton (01:01):

Before we begin our chat with Mindi Fried, I want to go back to episode 119 where I first introduced the idea of phantasia and aphantasia so that we can have that fresh in our minds as we start to listen to what Mindi has to share with us. So here's a brief clip from that episode.

(01:24):

What is the mind's eye? In English, the term mind's eye goes back at least to Chaucer's *Canterbury Tales*, and it's been mentioned in Shakespeare's play, *Hamlet*, and in lots of places in both fiction and non-fiction literature, but the concept of a mind's eye goes way back further than that in human history. What's important for this discussion is that, well, it's a thing among humans, something we talk about and refer to as if it's a real phenomenon and ability to see visual representations of our memories.

(02:09):

Back in the 1880s, Sir Francis Galton published a paper called *Statistics of Mental Imagery*, which was essentially about the mind's eye. Galton defined his main

investigative question as the different degrees of vividness with which different persons have the faculty of recalling familiar scenes under the form of mental pictures. He asked his subjects to think of some definite object. Suppose it's your breakfast table as you sat down to it this morning, and consider carefully the picture that rises before your mind's eye. He was surprised to find out that not everyone has the same ability to picture things in our minds. Some have a distinct mind's eye, and surprisingly to Galton, some don't. And of those who have this ability, it varies a lot from person to person. That is sometimes the picture one sees as big and vivid and detailed and in full color and very clearly seen as an image. For most people, to picture things, it's somewhat less clear and a little less vivid and less detailed but still visible and useful in remembering things.

(03:42):

Aristotle called this ability to see mental pictures phantasia. That's spelled P-H-A-N-T-A-S-I-A, phantasia. You know what? Now is a great time for, yes, you guessed it.

Distorted Voice (03:59):

Word dissection.

Kevin Patton (04:03):

Where we look at the word parts that make up scientific terms just like we do in our A&P class to help students become immersed in their new language of anatomy and physiology. The usual meaning of the word phantasia in English is fantasy, but in the original Greek, it means appearance or look or presentation or display or image. So yeah, that's a pretty apt term for the mind's eye. If you want a word that's not easy to spell or pronounce, which is of course what we look for when coining a new scientific term, right? We can't just call it mind's eye or mental image. Let's come up with something in Greek where it's phantasia but it's not with an F, it's with a PH. Let's do that. And maybe it's hard to remember too because it's not a word that we typically use a lot in conversation.

(05:00):

There are also two related terms that have come into use that I want to mention. If I add the prefix A to form aphantasia, well, I think you know what that condition would be, right? That A prefix means without, so aphantasia refers to a situation where a person does not have that mind's eye ability or maybe it's very weak. And what about the term hyperphantasia? The prefix hyper we all know means more than, and so a person with hyperphantasia has a better than average ability to picture things in their mind.

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Kevin Patton (05:45):

Very few podcasts are as inclusive as most of us are with our teaching media, so it's not surprising that The A&P Professor podcast for anatomy and physiology faculty is one of the few podcasts to provide a searchable transcript and a captioned audiogram of every episode. Kudos go to AAA, the American Association for Anatomy, who have consistently provided funding to support this effort. Check out all the other things they do for us at anatomy.org. Speaking of kudos, I just found out that my friend, Dr. Valerie O'Loughlin, has just received the Outstanding Mentor Award from AAA. You may know Valerie from AAA where she's very active or from HAPS where she serves as president emeritus and other roles or from authoring an outstanding A&P textbook. If you know anything about Valerie, you know that anything she can do to support your teaching, she won't hesitate to help, and her advice will be insightful and brilliant. So cheers to Valerie!

Introducing Mindi Fried

(07:08):

Now that we're all refreshed with my use of the terms phantasia and aphantasia, but before I start my chat with our guest, I want to take a moment to introduce my friend, Dr. Mindi Fried. Mindi became a chiropractor in 2000 and practiced for several years. In 2008, she decided to explore teaching as well, and was hired at a local community college as an adjunct instructor in A&P. After teaching there for several years, she realized that teaching was something that she wanted to do full-time. In 2014, she found the HAPI program. That is the online Master of Science in Human Anatomy and Physiology Instruction from Northeast College of Health Sciences, and that's where I met her as one of my students in the HAPI Program.

(08:00):

Now, calm down. That is not a FERPA violation. She gave me permission to tell you that, so it's okay. Okay.

(08:11):

Shortly after graduating with the HAPI degree, she found herself with two full-time job offers and transitioned to teaching full-time. Mindi is currently teaching at the University of New Haven where she coordinates the A&P series for undergraduates. And guess what? Mindi is working on another doctoral degree. This one is a PhD in Health and Human Performance at Concordia University in Chicago. Mindi has been active in HAPS

for quite a while now, so if you see her in an online or in-person event or in social media, be sure to take a moment to get to know her better, and we can start that process of getting to know more about Mindi right after we come back for our next segment.

Sponsored by HAPI

Kevin Patton (09:03):

The free distribution of this podcast is sponsored by the Master of Science in Human Anatomy and Physiology Instruction, the HAPI degree. I've been on the faculty of this program at Northeast College of Health Sciences from the beginning, over a decade ago. So if you have any questions about the evidence-based teaching strategies that our learners apply directly to all the major topics in the typical anatomy and physiology course, well, just get in touch with me or check out this online graduate program at northeastcollege.edu/hapi. That's H-A-P-I.

Mindi Fried on Aphantasia

Kevin Patton (09:48):

Hi, Mindi. How are you doing? It's been a while since we had a chance to chat. I'm really looking forward to this.

Mindi Fried (09:54):

Thank you for having me on, Kevin. This is going to be a fun conversation and I'm looking forward to telling other people about aphantasia because it's something that I didn't learn about until very late in life, but I always knew that I had something different going on in my head.

Kevin Patton (10:13):

Okay, so just back up a little bit here. You and I have known each other for quite a while on various levels. You're a student of ours in the HAPI Program, and that's where I first got to know you, but you've also been active in HAPS and we've run into each other in various venues there like online small group conversations and things like that, and we also just touch base every once in a while with each other. And in all that time, in all those different kinds of interactions as colleagues in teaching, as me being your mentor in the HAPI program, it never occurred to me that you have a different perception on things with this aphantasia.

(11:00):

So you just mentioned that when that came up and eventually becoming aware of it, what is it? Well, I'm not sure exactly which question to ask, and that is how do you experience that would be one question, but another question would be how did you discover that the way you're thinking about things visually and so on is different than with some other people?

Mindi Fried (11:29):

I remember being back in high school and doing an exercise in a class at one point where we were told to close our eyes and picture something and then write about it. And I looked around at everybody else and I didn't understand how everybody else was closing their eyes and picturing something and writing about it because I close my eyes and I don't see anything. And if you tell me to think about something, let's just say I think about a pencil, I could describe a pencil and I can actually think about a pencil and know that I'm thinking about a pencil but I don't see it visually. It's more in words.

(12:21):

So for a very long time when I was growing up, I'm a very avid reader and as I'm reading through things, I would skim through paragraph long descriptions of the environment that the story is written in because it did nothing for me. And so that was one reason I realized that I was able to read very quickly because I was skipping through half the content, but I was able to read and enjoy the story, I just didn't get when there were character descriptions or whatever or descriptions of the room or the forest or whatever I was reading. I didn't get anything out of that because I would read through it and I would just be like, "Okay, so we're in a forest. Okay, we're in somebody's bedroom or whatever the location was," but I wouldn't get a whole lot of it beyond just basic information.

(13:21):

And I first heard the term aphantasia, it was probably 10 or 15 years ago that I first heard that term, and I realized, I was like, "That's what I experience." I didn't have a way to name it, and I didn't really understand that other people weren't experiencing the same thing. Just to put it into a real life perspective, when I had my first son, I was taking a class and so I would drop him off at daycare, go to my class. And every single time I was on my way to pick him up, I was having a mini panic attack because I couldn't picture his face and I didn't know if I would recognize him when I saw him.

Kevin Patton (14:10):

Wow.

Mindi Fried (14:11):

It never worked out that way. I always walked into the room and was able to figure out who my kid was.

Kevin Patton (14:15):

Sure. Yeah.

Mindi Fried (14:17):

But it was a very real feeling of panic that I couldn't picture him so I wasn't sure if I was going to know who he was.

Kevin Patton (14:28):

Right. Yeah. Wow. Yeah. I wouldn't think of that. I wouldn't think of that issue, but that makes sense that when you can't picture something in your mind's eye, in your imagination, then that would be a concern. Am I going to be able to recognize my son?

Mindi Fried (14:47):

Right.

Kevin Patton (14:48):

Wow.

Mindi Fried (14:51):

People that I've known a long time, I don't have a problem recognizing them. I can't picture them visually but I can picture descriptions of them, if that makes sense. I have a description of people in my mind, but it is one reason that when I am in class, especially if it's a class with 30 or 40 students, which is not a huge class, it's not a small class but it's not huge, but I look around the room and I just see a bunch of faces. I don't recognize who's who.

Kevin Patton (15:26):

Oh, wow.

Mindi Fried (15:26):

It takes me a very long time to do that and I'm lucky if by the end of a semester, I can have names attached to faces.

Kevin Patton (15:33):

Yeah. So I'm just curious. Do your students know that you have issues with that recognition?

Mindi Fried (15:42):

I usually tell students the first day of class that I have a really hard time matching names and faces.

Kevin Patton (15:47):

Okay.

Mindi Fried (15:48):

I will recognize people and I will say, "Oh, I know you're in my class, but names and faces being attached to each other takes a little bit longer."

Kevin Patton (15:58):

I see. Okay. Well, that makes sense too. I have some of those same issues but for a different reason. I just can't remember things well anymore, so there's that. I can usually tell a student like, "Yes, I know which part of the room you usually sit. I know what you said to me the other day. I know all that. But, oh, shoot. What is your name? What's your name?" And then as soon as I guess, like, "Oh, yes, of course. I know that."

(16:28):

Let's rewind the clock a little bit and think about your time in school and so on as a student. Did any of your instructors realize that you were thinking in this way or is that something that was sort of you're still figuring out in your own mind, so of course an instructor wouldn't be able to figure it out? Do you think they were aware of that?

Mindi Fried (16:52):

I do not think they were aware of it because like you said, I was still figuring it out myself, and I knew that I might think about things differently but it still blows my minds that people can visualize stuff. And when we say to students, "Imagine this or picture this," that some people mean that literally, and I still hesitate and I don't get that because I use those terms but it's not literal for me.

Kevin Patton (17:29):

Okay. All right. Yeah. So I guess a person listening to you described something, they would possibly ... I can picture things pretty easily in my mind. Like that pencil, I can picture a yellow pencil and I can see the yellowness in it. It's not like looking at a photograph, but exactly, but it kind of is in a way, and you're not able to do that. But listening to you describe things, I guess I just assume that you're doing it the same way I am, and so it wouldn't occur to me that you're not, that you're thinking more about a verbal description rather than seeing it in your imagination.

Mindi Fried (18:15):

Right. I had a conversation with my mom one time and I said, "Can you just imagine me wearing a hat?" And she said, "Yeah, I can see it right now." I was like, "What? How is this possible?"

Kevin Patton (18:32):

I can see you wearing a hat right now too, believe it or not, and we're not even seeing each other. We're not using video for this recording.

Mindi Fried (18:41):

I know.

Kevin Patton (18:44):

So I wouldn't be able to do that. Yeah. Wow. Yeah. Do you think that ... Okay. So a practical question I have is obviously, given your background, you have taken a lot of courses in human biology of various sorts, including the nervous system course of mine that you were in, in the HAPI program, and, boy, that involves some complex imagery and so on. So you don't have any issues actually seeing the images and recognizing things in the images once you have a chance to look at it and so on. Is that correct or am I getting that wrong?

Mindi Fried (19:28):

Yeah. If I'm looking at a model or if I'm looking at a picture, I have no issues. Even looking at a picture, I don't really have issues thinking about that picture in 3D. It's just not a visual thing. A little bit of a tangent, but I notice a lot of students, if I show them a picture of one thing and then in another image, they're viewing the same thing from a different angle, they have a really hard time connecting those images and realizing that they are seeing the same thing. And that's not an issue for me for some reason. I don't know why. And honestly, actually, it may be because I don't have a fixed image of something that it's a little bit more flexible in my head because I'm looking at things more than just ... I don't know. I'm wondering, that's just occurred to me, but it may be because it's not a fixed image in my head, I have a little bit of an easier time accepting multiple views of something and realizing that I'm looking at the same thing.

Kevin Patton (20:39):

I see. I think I get a glimmer of what you might be talking about and it might be totally off base, but I think I know what you mean by that. That because it's not a fixed image, it's not in a fixed position or you're not looking at it from a fixed angle. So when you see it in this angle and then you see it in that other angle, that's not what you're focusing on. You're not using those as landmarks.

Mindi Fried (21:07):

Right.

Kevin Patton (21:07):

You're just looking at the actual characteristics of whatever it is you're looking at in a more abstract way, I guess, or less visual way I should say.

Mindi Fried (21:18):

Yeah, I think that's a good way to describe it. One of the things that I have always used when I've studied, and I didn't really realize that it may be connected to aphantasia until recently, but one of the things that I've always used when I'm studying is a lot of body movement. I remember trying to study the lifecycle of something when I was in undergrad biology, and my friend and I made up a dance about it, and because of that, I was able to remember the lifecycle. I was able to remember all of the stages of it and what happened in the lifecycle. And even when I'm studying anatomy or studying really anything, I try to use my whole body a lot and that does help me learn things.

(22:09):

So I have discovered in all my years of schooling, I don't think of aphantasia as some a disability. It's just a difference in how I'm studying and how I learn things. But I do think that using my whole body and moving around when I'm studying and learning, I think that really helps.

Kevin Patton (22:29):

Okay. So I'm curious. When you say you use your whole body or use parts of your body in this learning process and remembering process, what kinds of things are you doing? Are you acting out a process or trying to make your body into the shape of a structure or is it a variety of different kinds of movements?

Mindi Fried (22:55):

I would say all of those things are true. I told you about the dance of learning a lifecycle of whatever. Honestly, it was an amoeba of some sort. I don't remember what organism it was. But if I am studying anatomy, and this is on my mind because we just did reproductive anatomy in my class, if I'm looking at the uterus, and we're not on video so you can't see me do this, but if I'm looking at the uterus anatomy, I pretend that my body is the uterus. My arms are the uterine tubes. My fingers are the fimbriae.

Kevin Patton (23:35):

Wow.

Mindi Fried (23:36):

And the ovaries would be in my hands, and I'm assuming that position and pretending the broad ligament would be a cape that I was wearing. And so when I'm trying to study anatomy, I do either embody it physically or try to connect it with things that I know very well, maybe not visually, but I know very well.

(23:59):

It was funny because several years ago, you had an episode, I think it was the Memory Palace.

Kevin Patton (24:07):

Oh yeah, right.

Mindi Fried (24:07):

It was talking about somebody using the room that you were in to remember things. And I got to be honest. I think I laughed my way through that episode because it was so foreign to me. I did not understand how it was possible to link something to a mirror or, you know what I mean?

Kevin Patton (24:26):

Right. Yeah. I guess that didn't of course even occur to me when we recorded that episode. That was with Chase DiMarco. I can't remember the episode number off the top of my head, but yeah, he's an expert in memory for students who were studying in the health careers. That's something that I wasn't that familiar with in terms of how to use it and so on, although I had heard of it before, so I wanted him to explain it in a context of anatomy and physiology education in that. And it didn't even occur to me that there's a subset of our students who just can't do that or it would be super difficult at least to do that.

Mindi Fried (25:08):

I'm not dissing that technique at all because I know that there are people that it works very, very well for. It's just not something that is accessible to me the way my brain works. But on the other hand, if I'm trying to remember a list of things, if I can make some connection between the words in the list, I can remember them that way, which is a similar process. It's just not a visual process.

Kevin Patton (25:34):

Sure, sure. For example, mnemonic sentences and so on, that would work for you, right?

Mindi Fried (25:40):

Yes.

Kevin Patton (25:41):

Okay.

Mindi Fried (25:41):

Mnemonics work very well for me because I can remember them. It's funny because I do notice when I'm teaching that I do tell my students, picture this or imagine this, and inwardly, I giggle at myself every time because I know there's probably students that can't imagine this or maybe they don't understand that I actually can't do what I'm telling them to do.

Kevin Patton (26:07):

Right. Well, unless you make yourself into a uterus, then they don't have to imagine it because there you are in front of the room.

Mindi Fried (26:18):

Kevin, I did that in lab the other day, so pretend I'm a uterus.

Kevin Patton (26:22):

Right. That could work, I guess, for them. I don't know.

Mindi Fried (26:27):

Yeah. And I think the other thing that I do, even during teaching, if I'm telling people to imagine something, a lot of the times, I'm using my whole body when I'm doing that. And I'm trying to come up with a good example. It's alluding me right now, but if I'm saying picture this or picture that, I also do these actions with my body. If we're talking about something like forming cross-bridges, I use one hand and I say, "This is the actin filament," and I have the fist of my other hand being the myosin head, and then I say, "The myosin head binds to the binding spot for myosin on actin, which in this case is my watch." And I say, "The myosin head ratchets," and I can move my arm that way, "and then releases and then binds to a different spot and does the same thing over and over again." So I use my arms and my body in ways to help students visualize things, even if they can't actually visualize it.

Kevin Patton (27:35):

Okay. So trade places with those students for a minute. So let's say I'm doing that and I've learned your little demonstration with the sliding filaments, so I'm acting that out and demonstrating that with my body and you're the student. Is that helpful to you for me to do that?

Mindi Fried (28:00):

I think it is, yes.

Kevin Patton (28:02):

Okay. If I instead just pointed to, let's say I had a PowerPoint slide up with step A frame from the textbook that shows the sliding or the filaments, the myofilaments at rest and then next step, here's what happens. Next step, here's what happens, and just point it out as we go through and ask the students to imagine the ATP coming and binding to the myosin head and then breaking off and now it's ADP but now the myosin head is energized and so on. If I do that sort of thing, is that harder for you, do you think, or would it work much, much better if I was actually acting it out?

Mindi Fried (28:50):

I think for me, it works better if I see it in a couple of different ways.

Kevin Patton (28:55):

Okay.

Mindi Fried (28:55):

So having that image up on the screen and having it described might be a good way to start. But then if I'm trying to figure out how it actually works in motion, doing an actual demonstration or watching a video of something would help me put the pieces together.

Kevin Patton (29:17):

Yeah. Okay. We'll be right back with more of our chat with Dr. Mindi Fried.

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Kevin Patton (29:25):

Marketing support for this podcast is provided by HAPS, the Human Anatomy and Physiology Society, a faculty-centered organization promoting excellence in the teaching of human anatomy and physiology.

(29:39):

I recently registered for the annual HAPS conference. This time, it's held in Albuquerque, New Mexico, and even joined with a few colleagues to present a workshop that I think you'll really enjoy. I'll give you more details about that as we get closer and after I find out if it's been accepted into the program or not. But you can't attend that workshop if you're not there. Find out more about that conference as well as our many regional conferences at theAPprofessor.org/haps. That's H-A-P-S.

More with Mindi Fried

Kevin Patton (30:20):

I knew before we talked today for this recording that you have aphantasia, and you've mentioned just very briefly to me what that means for you, but I really am glad to have this opportunity to ask you more questions about it so I can imagine it a little bit more clearly. I still will never have the experience that you have, so I can't ever appreciate the finer aspects of that completely. So that's great and I already knew that, but I guess a question that has occurred to me since I discovered what phantasia is and that there are more people than we know that have that manner of thinking, what I always jump to then is, okay, so I know I must have had, well, I know I've had, a student with that in a course because you were a student in my course. But beyond you, Mindi, I think I must have had other students over the years because I may have had thousands and thousands of undergraduate students over the years.

(31:15):

And I just wonder, is there anything I could have done differently to engage those students more or maybe more fundamentally to get the message across, whether it's an explanation as part of a discussion or part of feedback in a small group case study activity or whether it's with one or two students in my office answering questions? Putting yourself in the position of that student, are there things I or we, as instructors, might think about adding to our repertoire of things to help out with that?

Mindi Fried (31:57):

I think probably the best answer to that is just using a lot of different modalities when you're teaching. I know there's a lot of research lately that says learning styles are bogus and there's no such thing as that. But I do think students are going to learn things better if we approach the same subject in many different ways. Whether or not learning styles exist, I think going back to just talking about muscle contraction, if I go through, talk through that image that you were talking about on the screen, if I talk through that, if I maybe talk through another image verbally and then if I do the body demonstration that I was talking about and maybe watch a video, I think the more different ways that we can present something, the more that we will reach students.

(33:00):

And I think to be really, really fair in terms of not realizing that there are people with this in your classroom is a lot of people don't even realize that this is something that they have until they're in their 50s, later in life. It's not something that comes up all the time. I've spoken with several people online that didn't realize it until much later and then they have that mind blowing moment of, well, when people say visualize, they actually see something.

Kevin Patton (33:37):

Yeah. Right.

Mindi Fried (33:40):

And so it's funny because we grow up using those terms. They just mean slightly different things to those of us that can't actually visualize.

Kevin Patton (33:49):

Right. So if you said to me picture a yellow pencil, I'm picturing a yellow pencil, literally picturing a yellow pencil. But if I asked you to picture a yellow pencil, that's more metaphorical like, yes, I'm picturing it, but what that means for you is not the same.

Mindi Fried (34:08):

And really what it means for me usually is that I can describe a yellow pencil. I can use all of the words to say, "Oh, it's about six inches long and it's about a quarter of an inch in diameter and it's yellow. It's got sides on it. And the pencil that I'm thinking of is sharpened," all of those things and I can describe it, but I don't actually visually see it in my head.

Kevin Patton (34:35):

Yeah. So I guess just hanging on for just one more second with this idea of mine that I'd like to improve my teaching by understanding this better and what are some practical things. So I guess that leads to a question of is there anything that an instructor has done that you find that is exactly the opposite of what you need or is a barrier to you? The phantasia part of how you're thinking.

Mindi Fried (35:13):

Yeah. Honestly, for me, I can't think of anything.

Kevin Patton (35:16):

Okay.

Mindi Fried (35:17):

I don't know that there is one answer for that though that would hinder everybody with aphantasia or help everybody with aphantasia. Aphantasia can refer to many, many different things. I use it to refer to just not being able to visualize, but there are some people that say if they can't hear things, they can't imagine a song in their head, they also consider that aphantasia.

Kevin Patton (35:49):

Oh, okay.

Mindi Fried (35:50):

So blind in every sense or can't imagine the taste of something or whatever it is. For me though, it seems to be mostly limited to visual information because I can, to a certain extent, hear songs. I don't hear voices, I promise. But I can hear songs in my head and I don't have a problem with having any sort of an inner dialogue. I promise I'm not talking to myself too much, but ...

Kevin Patton (36:26):

That's okay. I think that's a good thing. If there's a problem with talking to yourself, I'm in big trouble. Yeah. Okay. So I get that. I think something that occurred to me as you described all of this in my own thinking about, well, how can I help students and so on, something that occurred to me is thinking to all those conversations I've had with students in the hallway or in my office or hanging around the classroom after the class is over where students are expressing some frustration in understanding some process like the sliding filament thing. A lot of times, I'll either explain it to them usually in a visual way because that's just my approach or maybe draw something on the whiteboard or I always have a pocket full of little three by five cards that I have. So I take my green pen out and draw them a little picture and tell my little story of the sliding filament or the part of it that they're having difficulty with in the sliding filament story.

(37:28):

A lot of times, I'll think it's very clear and I'll even go through it again and try to clarify more and it's still not hooking them. What I learned finally was that when that happens, drop it and find a different way, a whole different approach. Maybe have them, okay, now you three stand up for a minute. You're going to be actin. You're going to be myosin. You're going to be calcium over here. And do it that way.

(37:59):

And so maybe what I was doing without realizing that that's what I was doing is helping students to learn better that way by moving around, moving their body around rather than seeing me draw little squiggles on my three by five card and trying to imagine, because that doesn't look like actin and myosin really. Maybe that's it. And so maybe what we should strive for as instructors is that variety that you mentioned, try to think of another modality you could use to explain something if a student is having difficulty.

Mindi Fried (38:34):

I really, honestly, I think that most effective instructors do that unconsciously. They may not even realize, they may not be able to put into words, oh, I'm using this modality or that modality, and may not be doing it deliberately, but I think most effective instructors are doing some measure of alternating their modalities because that's going to reach the most people.

Kevin Patton (39:05):

Right. Yeah. And this confirms a reason beyond what we generally see in the literature for why we want to do that, that we have a population of folks that have various forms of aphantasia where this is going to be helpful to them. And I think to me also, it really helps me be open to students when they say to me, "I really can't imagine what it is you're talking about. I'm having a hard time with that." I guess in my head, I think, well, how can you be having a hard time? But the more I teach, the more I realize that there are things that my students can do that I can't and vice versa. There are things my students can't do that I can. And we need to appreciate that about each other to make the whole process of education work.

Mindi Fried (40:01):

Yeah, definitely. And the other thing I think sometimes, and I do this as I've been teaching anatomy and physiology for, what, 15 years now, which is not as much as some other people have taught anatomy and physiology, but it feels like a long time. But I think ...

Kevin Patton (40:21):

It is a long time.

Mindi Fried (40:24):

I think there are times though that I forget that material that is old hat for me is not for somebody else. I think sometimes I have to take a conscious step back and say when I first learned this, what did I struggle with or how could I present this better in a way that doesn't assume they already know X, Y and Z? So I think that's for everybody though. I don't think that is specifically just for teaching students with aphantasia. I think always we need to just keep reminding ourselves of that.

Kevin Patton (41:09):

Well, I think this is one of those things that we're just now really, we meaning we, the scientific community and the medical community, are just starting to understand to begin with. So I think down the road, those of us without aphantasia that have a more typical experience of phantasia, I think we're going to probably have a better understanding if we pay attention to what is found, what discoveries are made. But I think for now at least, this just emphasizes the fact that we need to be open to the fact that everyone's brain works differently. We're all unique in the way our brains work.

(41:55):

Wow. I really appreciate you coming onto the podcast and being so open and sharing your own experience and what's going on inside your head in terms of being able to visualize things. Yeah, you can do that but you're not really visualizing them. You're verbalizing them, I guess. I don't know how you would say that. That's amazing. Is there anything else that you think we ought know about phantasia before we wrap things up?

Mindi Fried (42:24):

I think, again, it's important to remember that there are a lot of different experiences of aphantasia. Like I mentioned, some people think of it as being all five senses blind, and some of us, it's just one or another. But I think also there needs to be an emphasis on the idea that it's just different. It's not any sort of a disability or something that is going to necessarily inhibit somebody. They just need to figure out what works for their brain and what doesn't work for their brain. And so often, I find with students that they're still figuring that out in general, especially working at the college level with freshmen and

sophomores, very frequently, they don't quite get themselves yet, regardless of if they have the ability to visualize or not.

(43:22):

I think lastly, the other thing that I would say is there are a lot of different tests online that you can take to say, oh, I have slight aphantasia or I'm completely able to visualize things. I think the easiest mental challenge that I could give somebody is to say imagine that there is a ball on the table and the ball is rolling around on the table and the table has three legs or four legs, whatever, just describing a scene like that and then saying, what color was the ball? Because if somebody was just imagining it probably or just trying to visualize it without images, they're probably not going to be able to give you an answer to that question. Probably going to say it's a ball. It doesn't have a color.

Kevin Patton (44:17):

Yeah, it was silver.

Mindi Fried (44:20):

Yeah, exactly, or is it a wooden table or a plastic table? Those details get glossed over in my head, which is why that when I was reading, I would gloss over those paragraphs too.

Kevin Patton (44:35):

Yeah, that's a really good point because really, the ball I was visualizing was silver and the table was glass and the legs were chrome, silver colored chrome. So I don't know why I picked that, but that wasn't really important to me until you asked the question, what color was it? Oh, yeah, it's silver. But that's a really great way to point that out because I could do that easily and I wasn't thinking about the color of the ball until you asked, but I remembered it being silver. So wow. Yeah.

(45:13):

It's just so amazing to get inside other people's heads for one thing but also to just really appreciate the wide variety of students that we have. When we're speaking to a student, it's not us at that time in our life that we're speaking to. It's them, and they're unique, and we can't assume that they do things the way we did when we were in their position.

Mindi Fried (45:38):

Right.

Kevin Patton (45:38):

Wow. Well, Mindi, this has been great. Well, it's always fun talking to you. I always learn so much when I'm talking to you about different things.

Mindi Fried (45:47):

Thank you, Kevin.

Kevin Patton (45:48):

It never occurred to me that this is something else that you could share with us and open up my imagination to how this works. I can read about phantasia and aphantasia and hyperphantasia, but to imagine it is a little bit difficult, and this has helped a lot, so I appreciate you coming on the podcast.

Mindi Fried (46:09):

Anytime.

Kevin Patton (46:11):

Okay. Well, I hope the rest of your semester goes well.

Mindi Fried (46:14):

All right. Thanks, Kevin. Have a good day.

Staying Connected

Kevin Patton (46:19):

In this episode, episode 133, we revisited a small bit of episode 119, and by doing so, we refreshed our understanding that aphantasia is a way of thinking that does not generally create pictures in one's mind, the so-called mind's eye that most of us use when we remember things or process information. And then we spent some time chatting with my friend Mindi Fried, a person with aphantasia, who has studied and

taught anatomy and physiology with great success. And we learned that even though she doesn't picture things in her mind when remembering them, she has found other ways to remember and process information. And we learned that not all our students think or learn like we do. I don't know. That may be the most important lesson of all, don't you think?

(47:20):

I encourage you to send your colleagues to the audio player and show notes at the episode page at theAPprofessor.org/133. And while you're there, you can claim your digital credential in professional development for listening to this episode. And you're always encouraged to call in with your questions, comments and ideas about aphantasia or any other topic of interest to A&P faculty at the podcast hotline. That's 1-833-LION-DEN or 1-833-546-6336 or send a recording or written message to podcast@theAPprofessor.org. I'll see you down the road.

Aileen Park (48:11):

The A&P Professor is hosted by Dr. Kevin Patton, an award-winning professor and textbook author in human anatomy and physiology.

Kevin Patton (48:23):

The information in this episode is provided with the understanding that The A&P Professor does not engage in rendering professional eye care services.