

Audiobook Mixtape 3: Gift Ideas from the Ologists' Brains

Ologies Podcast

November 29, 2023

Crackin' open a cold sodie-pop. You ready for this? This is a fun one, this is a weird one. It's an Audiobook Mixtape for you. Let's get into it.

Oh hey, it's the librarian who smells like vanilla extract and never judges you for your queries, Alie Ward. Come take a seat fireside for this. This is our third-ever Audiobook Mixtape wherein we read you excerpts from books written by beloved ologists you already know. So, the holidays are upon us, gift lists are full of bullshit, so maybe get a loved one the magic of knowledge, perhaps about how to build a bat house, or Indigenous thoughts on animal crossings, if you have ADHD, the flies that make your birthday cake even better, strapping machines to your brain, the dark secrets that America is built on, and how to cultivate hope for the future.

But before we crack the spine of these impressive works of nonfiction, just a quick caution for Apple Podcast users. I just found out that the new iOS 17 update unsubscribes people if they haven't listened to an episode in more than two weeks. So, please make sure that you hit the follow button next to *Ologies* or else you're going to miss out on some real quality stuff that we've got coming around. So, tell your friends. Also, if you'd like to become a patron, sign up for as little as a buck a month at Patreon.com/Ologies, you can submit questions for ologists, we also have discussion threads every week that I chime in on. You can also support the show with *Ologies* merch at OlogiesMerch.com or by leaving us a review such as this new wet-winged one from LizFan67 who wrote:

Delightology. I present as a grumpy unwashed 56-year-old cis straight white male, but this show brings out my inner rainbow butterfly and I flit about giggling the whole time I listen. So informative, so funny, absolutely adorable.

LizFan67, you've never looked better. Thank you very much for that and everyone who left reviews. And again, if you listen on Apple, make sure that you stay subscribed, check that button, it really matters a lot and a lot of podcasters, quite frankly, are pissed about this update because people are missing episodes. So, spread the word.

Okay, I love making these appetizer platters of books for you so onto this wonderful *mélange* of book excerpts to whet your appetite, fill your shopping list, and expand your brain a little bit as I read some to you with my mouth. [*It's like I'm reading a book.*] Tuck in and open your ears for Audiobook Mixtape 3.

Alie: Okay, this first one is from an episode that was clearly fascinating in its transparency and intrigue. So, what if you could cruise through life and subway turnstiles without anyone detecting you? How far are we from that? And can it happen soon so that I can be a stowaway on a first-class flight to an island? Get a gander at the writing of our Invisible Photology guest, Dr. Greg Gbur, who wrote the 2023 book, *Invisibility: The History and Science of How Not to Be Seen*. So, he chose this snippet for me to read:

The announcement in the year 2000 of the perfect lens made of artificial materials not found in nature, now called metamaterials, could be said to mark an entirely new era in optical physics. For the entire history of natural inquiry, scientists and natural philosophers had been asking, what is light, and what can light do? With the introduction of metamaterials,

researchers are now asking, what is light? And what can light do? With the introduction of metamaterials, researchers were now asking, how can we make light do whatever we want it to do? Many of the rules that optical scientists had labored under for years now turned out to be more like guidelines. This naturally led many researchers to wonder, what else can we do with such materials? One answer as we now see was design a cloak of invisibility.

So, that was from Dr. Greg Gbur's *Invisibility: The History and Science of How Not to Be Seen*, and unlike its topic, you can see it and buy this book. [*"I'll do that."*]

Now, if only a moose could lope into a Bass Pro Shop and buy an invisibility cloak, although honestly, when it comes to cars and collisions, some wildlife does not need invisibility tech because we're watching TikToks as we drive. So, we had a recent episode on roadkill with author Ben Goldfarb who wrote *Eager*, which is your favorite book about the beaver, and his new one is called *Crossings: How Road Ecology is Shaping the Future of Our Planet*. We got to talk to him a few weeks ago but we missed so much of what's in his book so I'm going to read a little bit to you about bears, boneyards, how roads bisected wetlands, how dedicated passages are helping, and how this man started researching and describing and smelling road kill as a job. He writes:

My own introduction to road ecology came in 2013, the year that I embarked on a trip across the continent to write about an extraordinary scheme called The Yellowstone to Yukon Conservation Initiative. The goal of the Yellowstone to Yukon, or Y2Y, is boggling; its advocates envision a network of connected habitats that would permit animals to wander unhindered along the spine of the Rockies, a region that spans five American states and four Canadian provinces and territories. Such a corridor would preserve migration routes for elk and caribou, permit far-ranging creatures, such as wolves, to mingle and mate, and help sensitive animals like wolverines flee northward as climate change nips at their heels. The initiative's emblem is the grizzly, whose expansive requirements make it a useful proxy for other forms of life. An ecosystem that can support bears is probably healthy enough for everyone else.

To the uninitiated, it sounded far-fetched. Soon after Yellowstone to Yukon's inception, The West Wing parodied it as the "Wolves Only" roadway, the vanity project of humorless tree-huggers who get laughed out of the White House. But the show's writers, like most of Y2Y's critics, misunderstood the concept. Y2Y wasn't a discrete pathway, it was a continental jigsaw, riddled with missing pieces, most of them at the fragile margins where wildlands and settlements collided. The mission of Y2Y and its many partners was to plug those holes, to help bears and other animals safely navigate the Rockies, without running afoul of humans. In British Columbia, I toured protected grain fields that grizzlies use to commute between mountain ranges at night. In Montana, I sniffed awful in an electric-fenced paddock where ranchers were composting their dead cows rather than permitting them to fester in bear-enticing boneyards. Few travelers, human or ursine, can resist fast food.

Yet Y2Y's deepest cuts remained mostly unhealed. The region was riven by enough numbered roads to fill a sudoku puzzle; I-90 and Highway 3 and Highway 20, routes 95, and 40, and 12, and 212, spiderwebbed otherwise wild lands. I drove highways that ended lives. I lost track of how many elk littered the shoulder on Crowsnest Pass and others that cleaved grizzly populations into lonely clusters. Roads, I began to realize, were not merely a symptom of civilization but a distinct disease.

Among the roads within the Y2Y corridor's ambit was US-93 which traverses Montana on its 1,300-mile jaunt from Arizona to the Canadian border. Like so many highways, US-93 had been built heedlessly in the 1950s, plowing through wetlands, elk meadows, and a vast reservation belonging to the Confederated Salish and Kootenai tribes. When in the 1990s state

and federal agencies sought to expand US-93 from two lanes to four, tribal officials demanded the chance to provide input on the reconstruction. A wider, faster road might be safer for drivers, but it would also slaughter more deer, elk, bears, and other animals foundational to the tribe's culture. "The road is a visitor," the tribes insisted, "that should respond to and be respectful of the land and the spirit of place." The Salish and Kootenai flexed their legal and moral muscles and when US-93 was finally reconstructed, engineers included around 40 wildlife crossings, a network of underpasses, tunnels, and culverts that allowed animals to slink beneath the highway unimpeded. Roadside fencing kept creatures off the highway and guided them toward the passages. The project's flagship structure was an elegant bridge designed principally for that avatar of wildness, the grizzly bear. In aerial photos, the overpass looked at once futuristic and anachronistic; a green parabola that vaulted over the highway with Middle Earthish grace. If roads were a disease, wildlife crossings seemed like a treatment.

So, our darling, dashing, and vulnerable critters need you to maybe slow down, especially during this time of year when collisions with wildlife are most common. So, be especially vigilant at night because you don't want animals to have a funeral because of you or your relatives to have your funeral... Not to get too dark. But yes, you can see the Road Ecology episode for more.

So, let's move along to two kid-friendly books for the wee ones on your list. So, the first comes to you from Georgia, written to you by wildlife biologist, Mr. Al Troutman, who you may have heard in 2020's BlackAFinSTEM episode about Black Birders Week. Al has written numerous field guides, for kids and adults, of places like Wisconsin, Massachusetts, Florida, Michigan, Minnesota, Colorado, New York, and now Georgia. So, Al, Alex, is just a wonderful guy. He's hilarious and kind and a dedicated nature nerd with a really warm heart and his latest release is just a few months old, *Critters of Georgia: Pocket Guide to Animals in Your State*, which features photos and really fascinating info of local fauna. So, here's a bit from that, which I think you will like. He writes:

My passion for nature started when I was young. I was always amazed by the sunlit fiery glow of the red-tailed hawks as they soared overhead when I went fishing with my family. The red-tailed hawk was my spark bird, the bird that captures your attention and gets you into birding. Through many encounters with red-tailed hawks, and other species like garter snakes and coyotes, I found a passion for nature and the environment. Stumbling across conservationists like Steve Irwin and Jeff Corwin and Jack Hanna introduced me to the field of wildlife biology as a career and gave birth to a dream that I was to accomplish and live out serving as a fish and wildlife biologist for government agencies, as well as in the private sector.

My childhood dream was driven by a desire to learn more about the different types of ecosystems and the animals that call our wild places home. Books and field guides like this whet my thirst for knowledge. Even before I could fully understand the words on the pages, I was drawn to books and flashcards that had animals on them. I could soon identify every animal I was shown and tell a fact about it.

I hope that this edition of Critters of Georgia can be the fuel that sustains your passion, for not only learning about wildlife but also for caring for the environment and making sure that all are welcome in the outdoors. For others, may this book be the spark that ignites a flame for wildlife preservation and environmental stewardship. I hope that this book inspires children from lower socioeconomic and minority backgrounds to pursue their dreams to the fullest and be unapologetically themselves. By profession, I'm a fish and wildlife biologist and I'm a nature enthusiast through and through. My love for nature includes making sure that everyone has an equal opportunity to enjoy the outdoors in their own way. So, as you use this book, I encourage

you to be intentional in inviting other people to appreciate nature with you. Enjoy your discoveries and stay curious, Alex Troutman.

He writes of Georgia:

Georgia is famous for its warm climate, rich history, and its many peach orchards. For more than 12,000 years, Georgia has been home to many groups of Indigenous people from the Paleo-Indian period, 12,000 to 8,000 years ago, to familiar groups such as the Cherokee, the Creek, Chickasaw, Choctaw, the Appalachia, and many others. The first Europeans to visit Georgia were Spanish conquistadors, including Hernando de Soto, who visited in 1540.

The British claimed Georgia as a colony in 1732, making it one of the original 13 colonies. It was named for the king at the time, King George II. After the Revolutionary War, Georgia became an American state and the US government forcibly removed many of the Indigenous people on the Trail of Tears, a forced march to reservations in Oklahoma without adequate food or clothing, leading to the death of thousands of people. Georgia was later the site of many important events in US history from famous Civil War battles to the Civil Rights movement and today the state is well known for high-tech industries, as a popular filming location, and of course, for its agriculture.

Georgia has several different biomes or large areas with different plant and animal communities. In the northwest is the Appalachian Plateau which has a 2,390-foot-tall Lookout Mountain. The Blue Ridge Mountains are found in the northeast with the highest point being 4,784 feet. The area also includes forests of poplar, oak, and hickory trees, many of which are covered in the creepy yet cool Spanish moss. The southern part of the state is home to the Atlantic coastal plain, with rivers, swamps, and the Atlantic Ocean.

Georgia is home to part of the Okefenokee Swamp, one of the largest swamps in North America. These many types of environments shelter a huge variety of animals and plants. The state is home to more than 80 different kinds of mammals, more than 400 bird species, and more than 170 species of reptiles and amphibians. This is your guide to the animals, birds, and reptiles and amphibians that call Georgia home.

So, that was from *Critters of Georgia*, written by Alex Troutman, who has an incredible name for somebody who looks at fish and mammals and reptiles, doing his dream job.

So, from the wetlands, beaches, and forests of Georgia, we head to the jungles, which are the focus of fieldwork for Dr. Tara Stoinski who you may remember from the Gorillaology episode. She wrote a book called *The Fantastic World of Monkey and Apes and More - An Educational Children's Primate Book Featuring Gorillas, Lemurs, Orangutans, Baboons, Chimpanzees, and more - A Wonderful Primates Book for Jungle-Loving Kids*. Dr. Stoinski is the President and the CEO of the Dian Fossey Gorilla Fund which is a gorilla conservatory in Africa, and she's authored over 90 scientific publications and books, she got her PhD from the Georgia Institute for Technology. So, here are some monkey and ape facts that you can tell your coworker over the holiday party punch bowl when you've exhausted the topic or whether it will snow tomorrow or not. Here we go, some fun facts:

So, mandrills are the largest monkeys and one of the most colorful primates. Males have vibrant colors of red, blue, and purple on their face with golden-yellow beards, and the more colorful they are, the more attractive they appear. Males also have red and blue butts to attract mates and be more visible in the forests. Male mandrills will lose color as they lose status in social groups... Which has got to hurt. They're, like, as big as a baseball bat but chunkier and they live in the middle of the continent of Africa.

But heading to Japan are Japanese macaques, they're also known as snow monkeys and they're famous for using hot springs to bathe and warm up when the weather gets cold. Young Japanese macaques roll up snowballs just for fun and then they shed their thick winter coat in the summer when the temperatures rise. Overall though, their fur is much thicker to keep them warm in snowy environments. They're, like, as big as a car tire.

Moving onto bonobos and chimpanzees, they are our closest living relatives. But unlike chimpanzees, the bonobo society is matriarchal, where females are dominant over males even though males are like, 100 pounds and four feet and females are like 65 pounds. Bonobos are capable of laughing as a display of emotion and playful behavior and they have dark skin on their face and hands and feet. They're a little smaller than chimpanzees but they have longer legs and they're more comfortable walking upright than chimpanzees are. They live in the Democratic Republic of Congo. And her book doesn't say this, but I hear that they're very horny.

So, there's a book that gives you a peek into what it's like to howl from a tree and display your butt to your family, and maybe eat bugs off the scalp of your best friend and play around with snowballs because as a monkey, you sometimes get to hang out in a spa and have snowball fights.

How can you be a human ape and play forever? I don't know, ask Genicular Traumatology guest and orthopedic surgeon, Dr. Kevin Stone who fixed Jarrett's shredded ACL a few years ago. He's a well-regarded wizard of sports injuries and creaky knees and his book is called *Play Forever: How to Recover From Injury and Thrive*, and he gives us a gently kick in the pants to stay active for fun and for our mental health, and also to reduce the costs of fixing a shredded ACL. [*"I'm just going to lay down and read my book."*] I wish we had this book sooner, to be honest. Let's hear some. He writes:

The obvious lesson, we defeat ourselves far more often than our opponents defeat us. Unforced errors in tennis are not just the problems of novices, they pervade sports. Despite the best coaching, phenomenal physical training, fitness, vast sums of money, and even decades of experience, we often remain our own worst enemies. The patterns that serve or obstruct even great athletes are often learned on children's playgrounds, on youth teams, and through parenting. The phenomenal success of players, such as Roger Federer, Tiger Woods, and Serena Williams, are brought to a stop by psychological weaknesses; distractions that cause them to lose their swing, their temper, or their confidence, despite seeming at the top of their game. Federer, Woods, and Williams were coached to stunning physical success but left mentally exposed. Consistently, the one weakness that is most difficult to fix in athletes lies in the mind itself.

Mental conditioning, the approach to an injury and its recovery, the overcoming of psychological blocks that prevent a physical superstar from being a winner, these are so ingrained that they remain the most difficult weaknesses to fix. Yet, it's not impossible to change. We can work on these issues and many doctors and mental empowerment coaches are successful at it.

The first step, a simple but crucial one, is to understand that the body and mind are irrevocably linked. This doesn't only apply to competitive athletes but to everyone, whether they're dealing with a changing body, playing amateur sports, or simply living, a brain is attached to each body I repair. This is obvious but in treating the whole patient, I'm cognizant of the importance of mental processes as they relate to treatment. The mental health of an injured patient brings another dimension both to their healing and their ability to excel. In short, our daily mental health defines what our body is able to achieve. Naomi Osaka

poignantly brought this to light in her refusal to undergo the ritual press conference drilling in the 2021 French Open.

Over decades of practicing medicine, I have identified particular mental qualities that enable people to shine, not just athletically but in all they do. This is a good place to start this book, in the unseen and often under-appreciated aspect of fitness and health that can ensure you play forever and play well. These eight mental fitness objectives are competitiveness, grit, attention, fantasy, patience, acceptance, grace, kindness, and competency. While these qualities are what take supreme athletes to the top, they're applicable to all aspects of your life. So, pay attention to your own mental game on the court or the playfield or the racecourse and in day-to-day interactions and work and home. Strengthening each of these qualities is the cornerstone of fitness.

So, don't ignore your noggins, people.

Now, on the topic of playing but maybe in a less active way, like when you're done rowing for the day. Dr. Jane McGonical is a ludologist and, in her episode, we chatted all about video games and what they do for our brains and friendships. So, if you're looking for a dose of hope from someone who has a PhD in it, she recently came out with a book called *Imaginable: How to See the Future Coming and Feel Ready for Anything – Even Things that Seem Impossible Today*. In it, she writes:

Before we start your imagination training, I want to ask you three questions that will give you a baseline sense of your future mindset.

Question #1: When you think about the next ten years, do you think things will mostly stay the same and go on as normal? Or do you expect that most of us will dramatically rethink and reinvent how we do things? Rate your outlook on a scale of 1 to 10. 1 is almost everything stays the same, 10 is almost everything will be dramatically different.

Question #2: When you think about how the world will dramatically change over the next ten years, are you mostly worried or mostly optimistic? Rate your outlook on a scale of 1 to 10. 1 is extremely Worried and 10 is Extremely Optimistic.

Question #3: How much control or influence do you feel like you personally have in determining how the world and your life changes over the next ten years? Rate your outlook on a scale of 1 to 10. 1 is almost no control or influence, 10 is almost complete control or influence.

So, these three questions give you a good idea of the kind of imagination training we're going to do in this book. In fact, each of the three parts of this book is specifically designed to increase your score on one of these questions by at least one point. First, we're going to focus on the opportunity for rethinking and reinventing. Why rethinking and reinventing? Well, it's easy to prepare for futures that are similar to today, it's the dramatically different stuff that catches us off guard so it's important to spend time getting ready for the futures that will feel stranger and less familiar. Focusing on rethinking and reinventing also puts us in a better position to help decide how the future will be different. Having lived through the COVID-19 pandemic, each of us will know for the rest of our lives that almost anything can change virtually overnight for worse or for better. We know that it's absolutely possible to make radical changes on how we live, work, learn, and care for each other, and to make those changes fast. This gives us a collective power of imagination, unprecedented in human history. We need to use this moment strategically and creatively.

Second, I want to help you create a more balanced mindset between hopes and worries for the future. At The Institute for the Future, we call this using your positive imagination and your

shadow imagination. Positive imagination asks the question: What is something good that can happen? It builds confidence that the future will be better. Shadow imagination asks the question: What's something bad that could happen? And it builds readiness to face future challenges. So, whatever your instinctive feelings are about the future right now, you'll benefit from cultivating at least a little bit of the flip side feeling.

So, I'll teach you imagination techniques that help you see both sides of the future, the risks that it makes sense to worry about, and the opportunities that are cause for optimism. Just know that wherever you are right now in your outlook on the future is fine, whether you're super worried, super optimistic, or somewhere in between, be ready to stretch your imagination in the opposite direction so you can hold both hopes and worries in mind at the same time.

As you develop your positive and shadow imagination, you might be surprised to find seeing risks more clearly and defining your worries more concretely can actually help you feel more hopeful. As you get better at anticipating global challenges, you'll feel more optimistic overall. There's a good reason for this paradox. You're increasing your awareness, not just of what might go wrong but also of the bold plans and innovative solutions that are already being envisioned and implemented. Deep down you know that you're putting yourself in a stronger position to help yourself and others by seriously imagining a future crisis instead of denying that it could ever happen.

Finally, we'll focus on building your confidence in how much influence you have to help determine how the future turns out. So, this book is more than just anticipating the future, it's about acting to create the future you want. Happier, healthier, safer, or just more sustainable, more beautiful, more equitable.

So, that is a book on how to hope for the future by Dr. Jane McGonical.

What else is in store for us in the future? Maybe some wearable tech that reads our dang minds. So, Dr. Nita Farahany of the Neurotechnology episode, which was the AI and brain tech episode, wrote this book called *The Battle for Your Brain: Defending the Right to Think Freely in the Age of Neurotechnology*, and she tells us about wearing a brain scanner device, just casually connected to a phone. Oh hi, the future, I didn't realize you were standing right there. She writes:

I'm trying to get the birds to sing. If I can calm my mind just enough, they will sing. Though I've tried to convince my children otherwise, I don't have magical powers, I'm wearing a simple headband embedded with electrodes that detect my brainwave activity and send it via Bluetooth to an application on my iPhone. Brainwaves, the oscillating electrical voltages in your brain are small in size, just a few millionths of a volt but they reveal a lot about the inner workings of your mind. When I relax into a meditative state, my alpha brainwave activity rises, and the app rewards me with the sound of singing birds. This neurofeedback technique has proven powerful in preventing the migraine attacks that have dogged me since childhood.

Having used the device a number of times, I know how to increase my alpha waves, the pattern of electrical activity produced by the brain when you're feeling calm and peaceful, and reduce my beta wave activity, the higher speed brain waves that occur when you're wide awake and thinking. I focus on a happy memory. My eldest daughter, Arastella, is just three years old and we are hiking as a family to a waterfall in the mountains of North Carolina, the season is late fall. Afternoon sun glistens through the trees, still dotted with red and orange, as we crunch through the fallen leaves beneath our feet. I can almost feel the sun on my face and hear the water gurgling over water-worn rocks. In my mind, I hear Arastella's peals of laughter as she

paces a leaf downstream against one tossed in by my husband, Thede. "Chirp, chirp!" The app confirms that my brain is responding.

Whether we're meditating, doing a math calculation, recalling a phone number, or browsing through our mental thesaurus for just the right word, neurons are firing in our brains, creating minuscule electrical discharges. When a mental state like relaxation or stress is dominant, hundreds and thousands of neurons are firing in characteristic patterns that can be measured with an electroencephalogram or EEG. Scientists used to have to place electrodes directly on the periosteum, the inner layer of the scalp, to pick up brainwaves and the procedure required surgery under anesthesia and carried risks including fever, infection, and leaking brain fluid. Today, the electrodes can be placed externally on the forehead or the surface of the scalp. EEG devices detect and record brainwaves in terms of cycles per second, known as hertz. Alpha waves, for example, clock in at the 8 to 13-hertz range. Had I wanted to, I also could have placed electrodes over the muscles on my body to measure the signals I sent to them while I was meditating.

Our brains are constantly transmitting signals to our peripheral nervous system, the parts of the nervous system beyond the brain and the spinal cord. Electromyography or EMG can be used to detect the electrical activity in response to a nerve's stimulation of the muscle in millivolts, ranging from 0 to 10 millivolts. Together, EEG and EMG give us a window on what our brain is up to at any given moment including the instructions it is sending to the rest of the body.

Our use of EEG and EMG draws on discoveries made by two Italian scientists in the late 1700s regarding the electric battery and bioelectric activity in the body. More recent technological leaps in neuroscience and artificial intelligence have converged to give us consumer neurotech devices, a catch-all term for gadgets that connect human brains to computers and the evermore sophisticated algorithms that allow those computers to analyze the data they receive. At first, neuroscientists rightly dismissed all these consumer devices as inaccurate and unvalidated, little better than toys. But as both the hardware and software improved, consumer neurotech became more accurate and harder to dismiss. The average tech-savvy person can now see their emotions and arousal and alertness and track how efficiently they are meditating.

Personal neurotech devices are just one part of the growing category of wearable tech, which allows the average technophile to quantify their bodily functions. The category is so popular that as of 2020 nearly one out of every five Americans was using one. There are more than 300,000 different mobile health apps available worldwide, a number that's doubled in just five years, with an estimated market value surpassing 100 billion dollars. Globally, the market for neurotechnology is growing at a compounded annual rate of 12% and is expected to reach 21 billion dollars by 2026. Consumers can see graphic displays of their brain activity in real-time; delta which is dreamless sleep; theta, deep relaxation daydreaming, inwardly focused; alpha, very relaxed, taking a break, meditating; beta, aroused, engaged, stressed; and gamma, concentrating waves; and gamma, concentrating waves; as well as patterns of blood flow in their brains, and even bioelectric changes in their muscles. Self-tracking is far more than a fad, it's a new way of living and thinking about ourselves.

So, that was from Dr. Nita Farahany's, *The Battle for Your Brain: Defending the Right to Think Freely in the Age of Neurotechnology*.

And on the topic of your brain and mine, let's learn a little more about ADHD, shall we? Y'all loved the Attention-Deficit Neuropsychology episode with global ADHD expert, Dr. Russell Barkley, who

has written so many books on the topic, most notable perhaps is the updated edition of *Taking Charge of Adult ADHD: Proven Strategies to Succeed at Work, at Home, and in Relationships*. But how do you know if it's ADHD? That is the biggest question I feel like I hear from listeners. So, Dr. Barkley gives some examples of the patients he might see.

There's a funny thing about ADHD, perhaps because its impact on achievement is so well-known, many people blame the disorder when they don't meet their own standards for accomplishment. Do any of these people sound like you?

Joe decided to become a doctor when he was in high school. So, he chose a college with a great biology department and a high rate of admission to medical schools. He got into that university only on the waiting list but at least he got in. Once he was there though, every science course was a struggle for him. By junior year, his GPA was hovering under 3.0 and he'd already taken organic chemistry three times without passing. Joe started to wonder what in the world was wrong with him; he worked so hard, he wanted this so badly, and he was just as intelligent as the next guy, wasn't he? By the time Joe had graduated from college and taken the MCAT with disappointing results, he was convinced there was something really wrong with him. An awful lot of his fellow students seemed to have glided along the path that Joe had carved out for himself, yet he was stalled. It was looking like he might never get into medical school. So, Joe decided to have himself evaluated for ADHD. The more he read about it the more he thought this explained his whole problem. The evaluator disagreed, so did the one from whom Joe sought a second opinion, and then a third.

Carrie fell into a similar trap. Identified as gifted when she was young, she had been brought up to believe that she should be gifted in doing just about everything in life. When Carrie started hopping from one type of job to another after college, she and her family decided she might have ADHD, which was the only explanation they could come up with why she kept failing at jobs that should, according to her IQ, be a snap for her. As it turned out, ADHD wasn't the problem, but anxiety was. Carrie didn't like to admit that she found herself almost paralyzed by fear when she started a new job and that this made it really hard for her to concentrate on her work. Fortunately, the evaluator from whom she sought a diagnosis of ADHD discovered the real problem and was able to refer her to a therapist who specialized in anxiety disorders. This therapist offered not only treatment and coping strategies but helped Carrie accept her diagnosis without shame.

Cal didn't have any particular reason, such as an IQ score or comparison to a peer group, for believing that he had ADHD other than that he was currently in a dead-end job, changed jobs often and impulsively, and had very few friends and no girlfriend. He believed his life should be different and apparently cast around over the years for an explanation for why it wasn't. My colleagues and I have seen numerous people like Cal who simply feel like if they're not getting what they want out of life, there must be some psychological deficit at work. None of us can explain this phenomenon, it's almost the opposite of the TV singing contest shows where the contestant clearly can't stay on key and yet believes, rigidly, that she's destined for vocal stardom. In this case, the person believes he cannot perform well in life when in fact, he does perform as well as most people, even if it's not up to his own internal standard.

To adopt a standard for defining the term impairment other than comparison with a true norm is like something out of Alice in Wonderland where nothing is as it seems, and words can have whatever meaning one wishes to give them. Saying that a person functioning as well as or even better than the average or typical population yet can still be impaired makes a

mockery of the term disorder and does a disservice to those struggling with really not being able to function as well as the norm.

If the professional says you do not have ADHD, any of the following could be responsible for ADHD-like symptoms like being over the age of 5 or perimenopausal when increased forgetfulness, distractibility, and disorganization are normal; recent medical problems such as thyroid dysfunction, sleep disorder or apnea, or strep throat, though this particular connection is rare; excessive recreational drug use like marijuana, alcohol, cocaine, methamphetamine and so on, which can result in attention, memory, and organizational problems; unusual stress, though the ADHD-like symptoms would then be temporary; or injury to the regions of the brain responsible for sustained attention, behavioral inhibition, working memory, and emotional self-control. Any of these possible causes should have been uncovered by the evaluation and the practitioner should refer you to the appropriate professionals to follow up on them.

So, those are explanations for why people may not have ADHD but get yourself to the three-part episode we did on ADHD, which is linked on our website, it'll be at AlieWard.com/Ologies/Bookworm3, but you do not have to remember that, it's linked in the show notes. So, see those episodes about what it's like to have ADHD, where it comes from, therapies, and all kinds of studies on that with Dr. Russell Barkley. His book is *Taking Charge of Adult ADHD*. So, if that's adding up, see a doc.

Speaking of addition, hey, is math real? It's not a not-smart question, so says Dr. Eugenia Cheng of the Abstract Mathematology episode. She wrote this book, *Is Math Real?: How Simple Questions Lead Us to Mathematics' Deepest Truths*. Let's just shoot out of the gate with an excerpt from her introduction in which I learned that we have the same hairstylist. She writes:

When I was in school, one of my favorite classes was the one in which we made stuffed animals. I made a fluffy poodle and a sleeping puppy with soft, velvety ears. I loved the whole process from cutting out the pieces, seeing how they miraculously fit together to make an animal, and sewing them together, to the magical moment of turning the whole thing inside out and the joy of stuffing it so that it seemed to come alive.

Why make a stuffed animal when you can just buy one? Why make anything yourself when you can just get it readymade instead? Sometimes it's because the ones we make ourselves are better. I find homemade cakes much more delicious than store-bought ones. But sometimes the things we make ourselves aren't objectively better. I enjoy playing the piano although I can hear much better performances if I put on a recording or go to a concert. I even enjoy occasionally making my own clothes although they're far from perfect. Sometimes it's because it's cheaper. It's much cheaper for me to cut my own hair, so I do, even though a professional haircut would look better. But often it's just satisfying to make something yourself. This is true for me for food, music, clothes, but different people find different things satisfying.

Another variation on this theme is the idea of climbing a rock face just with your bare hands. No thanks. Climbing Mount Everest without oxygen, also not for me, or rowing across the Atlantic. I'll pass on that too. Or perhaps it's like going on a camping expedition where you carry everything on your back including your food and your tent so that you can spend a little while being self-sufficient out in the wild.

For me, math is also about making something myself. It's about making truth myself, it's about being self-sufficient, out in the wild world of ideas. This, to me, is an immensely exciting, daunting, awe-inspiring, and ultimately joyful experience and this is what I want to describe. I

want to describe what math feels like in a way that's quite different from how it's often thought of. I will describe the expansive side of math, the creative, the imaginative, the exploratory, the part where we dream, follow our nose, listen to our gut instinct, and feel the joy of understanding, like sweeping away fog and seeing sunshine. This is not a math textbook, nor is it a math history book, it's a math emotions book.

Math inspires rather different emotions in different people and unfortunately, for some people, it mostly represents fear and the memory of being made feel stupid. I would like to show math in a different emotional light. Some people love math, and some people hate it and unfortunately, the way the math lovers talk about it makes the other people hate it even more. The thing is that there are two very different reasons people love math. Some people like it because they think it has clear right and wrong answers, they find it easy to get the answers and this makes them feel smart. Some people dislike it for more or less the same reason but the other way around; it has clear right and wrong answers, but they find it hard to get the answers, and this makes them feel stupid or, most likely, they're made to feel stupid by people who get the answers more easily and they don't even like the idea of clear answers. They see the subtle nuances of life and they don't think that something so black and white can capture what they find more interesting about life. However, this image of a rigid world with clear answers is a very limited view of what math is like.

Abstract math really doesn't have such clear right and wrong answers especially not at a research level but only a small proportion of people ever make it to that stage to see what it's really like. The extraordinary thing is that those mathematicians often love math for the same reasons that math-phobic people dislike it: they're interested in subtlety and nuance to express and explore what is most interesting about life. Deep down, math isn't about clear answers but about increasingly nuanced worlds in which we can explore different things being true.

So, there is this curious effect, research mathematicians and math-phobic people have some similar attitudes toward math it's just that for the former group, those attitudes are nurtured and celebrated but for the latter, they are met with disdain or even ridicule and the latter people may never find out how close their thoughts and feelings are to those of a research mathematician.

So, you are smarter than you think, and your brain works more like smart people when you ask not-smart questions, verified by a mathematician. And yeah, sometimes DIY offers gratification that buying things with one single click just can't unless it's a book by one of my favorite guests of all time.

Chiropterologist Dr. Merlin Tuttle is a legend in the world of bat experts, see the two-part Chiropterology episode to fall in love with his bat-filled brain and his giant heart. So, in his 2022 book, *The Bat House Guide*, Merlin Tuttle affirms DIY aspirations so long as it helps our furry, flying, little friends. He writes:

Bats are essential but populations are in alarming decline nearly everywhere, often due to loss of natural roosts. Countless colonies have lost their homes as forests have been cleared, caves have been converted for human use, and fearful humans have killed or evicted those attempting to take refuge in buildings. However, by simply providing accommodations, you may help dozens, hundreds, or even thousands of destitute bats. As many Americans are discovering, bats provide safe pest control, unique entertainment, and outstanding educational opportunities.

Attracting bats may be easier than you think. Thousands of little brown myotis and big brown bats are relying on bat houses as they slowly recover from more than a decade of massive losses from white-nose syndrome. Private citizens are helping some of the hardest-hit species recover. Dramatic recovery has often been achieved through provision of artificial roosts, or restoration and protection of damaged roosts. Rapid growth of colonies in bat houses strongly suggests that roost shortage is a key impediment to their recovery. The Florida bonneted bat, believed to be extinct for more than a decade was rediscovered in 1978 living in a backyard bat house. This species is now recovering in small, easy-to-build bat houses. The more you can learn about bats, the more you can help. Share your personal experience with friends and neighbors. Helping people overcome needless fear of bats is key to their survival.

Now, getting started. The nearer you live to a river, a lake, or a wetland, especially where natural vegetation remains, the greater the odds of attracting bats. Such areas are prime breeding grounds for reliable and diverse insect prey that can sustain colonies at times when yard or crop pests are not available. But bat houses are least likely to attract occupants in areas of intense urbanization or industrialized agriculture. Depending on the bat species where you live, there may be a variety of options for bat house success. Bats attempting to live in buildings or other human-made structures are a good indicator of suitable feeding habitat nearby. Well-built and located bat houses are more than 80% successful, rising to 90% where colonies have been excluded from buildings.

So, what kind of bat house? Single chamber bat houses have long been viewed as minimally attractive to bats, in part because vendors have frequently sold ones that were destined to fail due to poor construction or inadequate instructions. When painted different colors, or located in different amounts of sun, two or more single-chamber houses may meet as well as test bat needs better than one multi-chambered house and thus prove more attractive. Providing varied options roughly doubles the odds of success. Multiple houses allow bats to move in response to changes in weather or to escape parasites or predators.

Now, DIY. If you choose to build your own, providing a bat house for bats may require no more tools than a saw, screwdriver, and paintbrush. Depending on your level of interest and available mounting locations, you might consider two or three easy-to-build single-chamber houses. The detailed bat house instructions we provide are simply intended as starting guides. Most houses can be substantially enlarged or improved once you understand bat needs. We also introduce a wide range of options from around the world and strongly encourage testing of new materials, designs, and ideas.

So, build a little bat house for your soul and get Dr. Merlin Tuttle's book. Again, that's Dr. Merlin Tuttle of Austin, Texas, Mr. Bat Man himself, from the Chiropterology episode. So, if you want a book on how to make bats your friends and your neighbors, *The Bat House Guide*. It's a great gift, especially if you're embarking on a building project with a loved one. Who doesn't love the smell of coffee and sawdust as you make some mems?

Okay, let's take a quick pause to donate to a charity, and an apt one this week is 826LA which is a nonprofit supporting students aged 6 to 18 with free programs to develop their creative and expository writing skills and helping teachers inspire their students to write. If you'd like to get involved, they could always use volunteers to serve as tutors, mentors, and role models for students, to lead writing workshops and support publishing projects, to illustrate student-written books, and guide students through the storytelling process. So, if you want to be a volunteer you can learn more or donate at 826LA.org, they have programs all over the US as well. That donation was made possible by sponsors of the show.

[Ad Break]

[“Here are some other books that you might like but you don’t have to take my word for it.”] Well, I guess you do because I’m the one reading them but y’all loved the Oneirology episode on dreaming so here are some select bits hand-chosen by author and oneirologist, Dr. G William Domhoff because yes, you can be a research scientist with, I guess, the ultimate dream job because it’s about dreams. And then you can write a pile of books about it such as his latest, *The Neurocognitive Theory of Dreaming: The Where, How, When, What and Why of Dreams*. And here’s what he chose for me to read to you:

The neurocognitive theory of dreaming is first and foremost based on a synthesis of neuroimaging and lesion studies of both the waking and sleeping brain. It also draws on studies of the development of dreaming from preschool to adolescence and on quantitative content analysis of dream reports collected in both laboratory and non-laboratory settings.

The neurocognitive theory of dreaming explains the major findings on dream content as well as the unexpected findings on what does not appear very often in dreaming. In addition, the long-standing findings on dream content can be combined with more recent neuroimaging and developmental findings to suggest that dreaming has no adaptive evolutionary function. Instead, it seems more likely that dreaming is a byproduct of the rapid selection for waking imagination, sociality, and an enhanced self-system over the past 50 to 300,000 years, which have enormous adaptive advantages.

Dreaming is a unique form of spontaneous internally generated thought that shares features in common with mind wandering, even more with daydreaming. But dreaming is far more intense than daydreaming because dreamers experience themselves as being in real-life hypothetical scenarios that almost always include other human beings and/or animals. In addition, the other human beings and animals are usually interacting with the dreamer in the context of vivid sensory environments.

Dreams are first and foremost characterized by panhuman dimensions on the one side and by large individual differences on the other. The few gender, cross-national, and cross-cultural references, although real and often replicated in the sense of gender, pale in importance then to a character networks in dream series, which were discovered by mathematical psychologists with expertise in waking memory, provide indications that dreaming in general may be rooted in the same principles governing waking memory to a greater extent than is usually realized.

So, dreams! Ah, certainly food for thought.

But books are not going to fill your belly, nobody knows that better than Dr. Psyche Williams-Forsen from our Black American Magirology episode about food, race, and culture. She wrote a 2022 book *Eating While Black: Food Shaming and Race in America* and she wanted me to read this passage to engage your mind and your literary appetite.

The notion of wholesomeness along with the requirement of the healthiness of the food are the twin weapons for issuing shame and culinary policing. Because we all operate out of our own experiences, we can often miss the nuances of how shopping in places like the dollar store and other budget outlets enables those who do the shopping to accomplish more than just purchasing food.

For example, once I was in the company of a food advocate who strongly believed in agricultural education and outreach. As we were talking, she began extolling the virtues of her work and why her message was a necessary one for helping communities of people relieve

hunger. At one point during our conversation, I told her that farmer's markets were not necessarily a feasible shopping option for many people. She sharply responded, "Everyone deserves fresh food." "Absolutely," I said. "But that is not my point." How we obtain foods is of interest and importance to me. It is critical for me that we not insist that there is only one correct way of obtaining food. We continued to banter while driving to our destination.

Along the way, we happened to pass a busy shopping center that had a variety of stores including a Walmart, a Rainbow, an urban-centered clothing store for women and girls, and a Dollar Tree. I could not help but think of the many errands that I had to run when I returned home and the number of tasks I could accomplish in one hour or so just by going to the three stores we just passed, or even one of them. Alternatively, the thought of needing to figure out the time and location of the next farmer's market and how it would fit within the scope of the many other things I had to do was daunting, to say the least. I explained to my companion how I, as a middle-class Black woman, would find relief in the option of large stores with varied merchandise. After I said this, we rode in silence for the rest of the trip, each of us lost in our own thoughts, perhaps thinking about the privileges of our own lives.

I was not angry with my driving companion so much as I was frustrated and tired by the need to share continuously this kind of information in order to help people check their privileges. I am perpetually amazed by the freedoms enjoyed by so many who choose to tell Black people how we should practice our food cultures. It is clear they most often have little or no clue about our cultural history, heritage, sustainability, or even how we managed life on a day-to-day basis. These advocates are determined in their zeal to impress upon me the need to acquire fresh food and they feel justified by their outrage to impress upon me that I, as a human being, have a right to have this freshness in my life. Yes, of course I do. But what my companion and others seem to miss is that it is also my right to acquire food and other goods in ways that work best for me even if that means going outside the confines of what others consider acceptable.

But some people get this. In the article, "The Buck Shops Here" Ronnette King explains that not only are dollar stores now being frequented with incomes greater than \$70,000 but also that they appeal to customers who might not want to traipse across a huge store and its accompanying parking lot just to pick up a few items. This is especially the case when you're busy with families or live alone. It's absolutely true that everyone deserves to have fresh food and it is absolutely true that people need to be able to eat what they want and get their food from where they need while they're in the meantime of their lives, that is, while they're waiting for things to change or improve.

So, when you sit down to holiday meals, *Eating While Black* is a great one to have under the tree and gift to someone, or yourself. And before you hurl your fresh leftovers in the trash, consider the work of the wonderful Dr. Robin Nagle of the Discard Anthropology episode all about garbage. She's an NYU professor and a one-time New York City Sanitation worker and author of the book *Picking Up: On the Streets and Behind the Trucks with the Sanitation Workers of New York City*. Now, on the topic of grubbing and also grubbiness, she selected this passage for you:

A Buddhist prayer of thanks said at the start of a meal acknowledges that "The food about to be consumed is the work of many hands and the sharing of many forms of life." So is the accumulation at a garbage dump. The garbage here and at every other dump the world over reflects lives lived well, or in desperation, or too fast, or in pain, or in joy.

Even without the status of worth or a claim of possession, each bag stuffed with trash, each wad of spent tissue, every shred of shrink wrap, every moldy vegetable and maggot-covered

turkey leg hints of countless stories. Archaeologists of contemporary household waste have demonstrated this. Indeed, insights that the field has given us about our own past, often rest on analysis of nothing more than the garbage of civilizations long dead. We understand such artifacts to be treasures. Less tangible and more metaphysical is the sense that all these unloved things hold traces of their former owners. Marcel Mauss, an early 20th-century sociologist, proposed that even when an object has been abandoned by the giver, it still possesses something of him. The original notion referred to gift exchanges in small-scale or tribal societies, but the point can stand for anything that has passed through a life and been cast off.

Imagine if we were capable of a form of empathy that lets us know one another by savoring the aura we leave on the things we've touched. We could go to a dump to get drunk on one another's souls. But we haven't yet evolved such sensitivities, we generate our dregs, we create their hazards, and then we invent the dump as one of the places to which we banish them so that we can pretend they won't harm us. But who plays the role of Charon, ferrying our deceased belongings out of our daily lives and across that River Styx into the imagined safe zone of the dump? Or to put it more bluntly, who keeps us safe from ourselves?

[“Not me!”] So yes, do pick up *Picking Up: On the Streets and Behind the Trucks with the Sanitation Workers of New York City* by Dr. Nagle to get a whole new appreciation for where your garbage goes from a sack on the street to the great beyond.

But what's under the streets and also in the great beyond? Oh, a bunch of human bones, if you're in Paris. I got a chance to chat with Dr. Erin Marie Legacey in the Metropolitan Tombology episode and record my own creeping around the Paris Catacombs. As a rare expert in this field, Dr. Legacey wrote the book *Making Space for the Dead: Catacombs, Cemeteries, and the Reimagining of Paris, 1780-1830*, and here's an excerpt from her:

In December 1785 the dead moved from Paris' heart into what Victor Hugo would later call its intestines. Shadowy figures entered the city's oldest and largest cemetery, the Cemetery of the Holy Innocence, and began to dig. Inhabitants of neighboring buildings watched, some from the windows, some from the street, as these men working by torchlight began the lugubrious and unprecedented process of emptying this historic burial space of its sacred contents. These city workers spent the next year digging human remains out of the cemetery's deep mass graves and collecting the millions of bones that had accumulated in the charnel houses around its perimeter. They then systematically transported carts full of bones and human remains to an underground quarry on the city's southern periphery; a newly designated municipal ossuary that would soon be better known as the Paris Catacombs.

This radical relocation was a culmination of a long campaign to end urban burial in the French capital. More specifically, it was a consequence of a 1780 royal ordinance that declared the Cemetery of the Innocence to be an intolerable and illegal threat to the city, owing to the stinking vapors that constantly seeped from its muddy enclosure and endangered the health and wellbeing of anyone living in the neighborhood. The famous 18th-century chronicler of Parisian urban life, Louis-Sébastien Mercier, characterized the cemetery as “An imminent danger whose cadaverous miasmas threaten to poison the atmosphere of Paris.” He further alleged that “Wine, milk, and bouillon served in the vicinity of the cemetery soured within hours,” and warned that the “Cadaverous humidity that clung to the nearby walls had lethal effects. Yes,” he explained, “to absentmindedly place one's hand against a wall impregnated with this moisture was to the effects of venom.” [“Ew! No!”] In this ancient space, the dead were quite literally deadly.

So, venture underground with her book which will be linked on the website. You can also listen to the Metropolitan Tombology episode to hear more about that.

Now, do you want to read less about death and more about dolphin sex? I thought so. Or rather, Dr. Justin Gregg of the Delphinology episodes on dolphins did. He wrote *Are Dolphins Really Smart?* in 2013, but his latest title is *If Nietzsche Were a Narwhal*, which just came out in paperback and makes an excellent and entertaining airport read or a gift. Now, he told me, "Here are some dramatic paragraphs that might be fun to include in a mixtape." From *If Nietzsche Were a Narwhal*:

The conclusion here is that humans, through our complex capacity for moral thinking, have taken something that does not constitute a normative problem for any other species and turned it into an issue for which we can justify marginalization, criminalization, execution, and even genocide. This is, I argue, a case of animals having a far superior, that is, less violent and destructive, normative system for dealing with difference than almost all human cultures. Homosexuality is quite clearly not just normal in the animal world but entirely non-destructive, maybe even beneficial for maintaining animal societies.

Why then are humans uniquely homophobic? It's a mystery that can only be solved if you understand how we can reason ourselves into a corner via our capacity for moral thinking. A handful of cultures and religions have convinced themselves that homosexuality is a moral problem and millions of our fellow humans must suffer because of it. Not only does anti-gay sentiment have no real counterpart in the behavior of any other species, but it actively creates barriers to our species' success. It not only sews societal discord but leads to the suffering of a large swath of the human population. What biological benefit has been given to our species through our bizarre moral posturing around the non-problem problem of homosexuality? Precisely none. It is a sad testament to the cruelty of human moral reasoning.

Intelligence is not a biological fact. This idea of human intellectual or behavioral exceptionalism has no basis in science. We feel in our guts that intelligence is both real and good but when we look at the ways in which nonhuman animals manage to eke out a living on this planet, the jaw-dropping solutions they've come up with for solving ecological problems, it becomes clear that neither of these gut beliefs holds up to scrutiny. Intelligence is the grand MacGuffin, a concept we've been chasing in the study of human, animal, and robot minds that has distracted us from the reality of the natural world, a reality in which natural selection has never once acted on a biological trait that we can distill into a singular concept known as intelligence, a reality in which our intellectual and technology feats, born of a mishmash of cognitive traits shared by many other species, are not quite as important or exceptional as we'd like to believe. A reality in which the Earth is bursting with animal species that have hit on solutions of how to have a good life and ways that put the human species to shame.

Human intelligence is not the miracle of evolution we like to think it is. We love our little accomplishments, our Moon landings, and megacities like a parent loves their newborn baby. But nobody loves a baby as much as the parents. The planet does not love us as much as we love our intellect. Because we are indeed exceptional, if not necessarily good, we have generated more death and destruction for life on this planet than any other animal, past and present. Our many intellectual accomplishments are currently on track to produce our own extinction, which is exactly how evolution gets rid of adaptations that suck. It is the greatest of paradoxes that we should have an exceptional mind which seems hellbent on destroying itself, unless we can pull out a Star Trek solution in the nick of time human intelligence is going to wink out of existence.

So, instead of looking at the cows and chickens and narwhals in your life with pity because they lack human cognitive capacities, first think about the value of those capacities. Do you experience more pleasure than your pets because of them? Is the world a better place thanks to our species' intelligence? If we are honest about the answers to those questions then there's good reason to tone down our smugness because depending on where we go from here, human intelligence may just be the stupidest thing that has ever happened.

Ha-ha! We got you with dolphin sex and now we have to think about our own brains destroying things.

So, obviously, some humans just don't get communing with the natural world, and some do. We did a Witchology episode in October with a real-life witch and author, Fio Gerde Parma. And some of you freaked out because it contained their experiences and opinions and some of you freaked out because you discovered that being a witch is for you. Now, if the latter is the case, you may want to pick up their 2023 book, *The Witch Belongs to the World: A Spell of Becoming*. And Fio selected this passage for y'all:

Witches belong to the world. Etymologically the roots of the word 'world' position this concept in terms of the age of man, an epic. The quantity of the known world, this place, this time, not some other place, not some other time, definitely not the other world. Witches belong to the world, and we are emissaries to and of the other world. To the other world, we travel and with the mysteries of the other world, we return. Born to both, witches are a blessing and a bane to the human societies who have feared and revered us. We are part of the fate and destiny of humankind; we have always been here. Stories and legends about us are as old as written records and oral traditions. We are older than revivalist traditions bearing our names, we are older than initiatory lineages and orders of witchery, we are older than the persecutions, the pyramids, the cave painting, the stone axes. But who and what were we before empire? What have we become? Who are we becoming?

So, that was, *The Witch Belongs to the World*. Which book to get? There are so many, and we're not done yet, folks. ["Books." "More books."]

So, as long as we're lurking in the mist and the darkness, let's hear a little bit from teratologist and monster lore expert, Dr. W Scott Poole from the slam dunk, fan-favorite recent episode on monsters. So, Dr. Poole has monster books of course, such as *Monsters in America*, but his latest book is titled *Dark Carnivals: Modern Horror and the Origins of American Empire*. He chose this creepy and thought-provoking passage for us:

*Empires stand alone. There is so often an immense loneliness at the heart of contemporary horror films, the stories leaching out of our inner poisons, replaying for us the terrors of living in a fortified nation-state. Even before the pandemic of 2020, themes of blindness, deafness, and above all isolation, saturated contemporary horror films like *Bird Box*, *A Quiet Place*, *The Silence*, *Hush*, *Here Alone*, *It Comes at Night*, *The Wind*, and *Don't Breathe*. Empire's apocalypse has come to mean suffering alone, a particularly haunting echo of the failed promises and the horrors of a global village. The writer Linh Dinh in his novel *Love Like Hate*, admits that Vietnam, especially his beloved Saigon, is a disaster but he adds that, "At least one doesn't die alone in the desolation, the solitary nightmare of America." Americans are so cool they manage to be quiet about their desperation.*

Isolation may seem a strange condition at empire's twilight. Perhaps it's the pondering of the aftermath of the world we made that horror plays with now. The clowns are terrifying, the sound of the calliope tingles the spine with its weirdness, the music of the carousel jangles, its

Wurlitzer tune broken and serrated. But once something wicked coming this way has passed, what does it leave behind? Is our insatiate need to victimize or at least glamorize those who victimize in our name art of the reason for our polarizations and isolations? American myths adore the loner and the rogue, the quiet man of action. Teddy Roosevelt tore a canal into Panama and Ted Bundy tore apart sorority girls. John Wayne buried his kills by Old Red River, and John Wayne Gacy laid his to rest in a crawlspace at 8213 West Summerdale Avenue, Chicago, Illinois. Speaking softly and carrying a big stick has been the American way, as has using that stick to bludgeon others into paralysis and death. It's lonely at the top of the bone pile.

Have Americans chosen the chainsaw or the shark? The last hundred years suggest they wanted both. The certainty that the monsters waiting in the deep can be slain by American tough guy-ery means we are never afraid to wade back into the water. We still feel the saw but refuse to let its blind roar unsettle our sleep. We can even reimagine it, a weapon we make our own; Ash of the Evil Dead films putting a chainsaw on his bloody stump of an arm and marching against an army of darkness with panache, even a John Wayne swagger.

War stories are difficult. War stories are so often horror stories that try to ignore their own tropes. Too often when the lights go up, you think "War is hell but also damn exciting and has to be done." But look at it, it's also the sort of empire that demands full cooperation; your taxes, your apathy, your willingness to hate what you see in the floating gun site that ranges across Africa, Asia, Latin America, and the Pacific world. Horror movies, fiction, and games draw on these poisoned waters and reimagine these piles of corpses. In a country that taught itself to become history's most powerful war machine while keeping less than 1% of its population under arms, horror offers one of the few places where the true war story can unfold. The truth of war is not about what happens on the front lines, it's a story about what Americans consume, what we're willing to allow our government to do so we can keep bingeing, and whether we're willing to all play at answering the call of duty, becoming a nation of first-person shooters, most of whom will never have to pick up an actual rifle unless it's the kill other Americans out of rage and frustration.

Instead, the working-class avatars we'd call the cops on if they walked through our neighborhood, do the killing for us, we'll just wrap ourselves in the softer side of empire, tales of soldiers in our wars defending our freedoms and not the truth that they are pawns in a larger game of taking what belongs to others. The war story of America has become the very apotheosis of Aislinn Clarke's dictum about horror: The worst thing is true.

So yes, that is from Dr. W Scott Poole's book, *Dark Carnivals* about empire, and America, and much darkness that's well written and well thought out.

Now, in those city streets of America are not just mysteries and power struggles but people and Aaron Foley, an expert in Detroit history and culture from the Detroitology episode wrote a beautiful novel called *Boys Come First*, but he also authored a really straightforward and hilarious guide to the Motor City titled *How to Live in Detroit Without Being a Jackass*, which also has really beautiful reflections on how we treat each other, and he gave this passage to read to you:

Listen to people, real people. Life in Detroit cannot be gleaned from an article, no matter how shareable on social media it seems. You have to absorb everything here in real-time. It will not be easy but do not put the blame on Detroit, life is an obstacle course no matter where you are, but people are paramount. Treat people with respect and dignity, not just in Detroit but especially in Detroit. It's pretty basic but you'd be surprised how many people don't abide by

this. And why is that? Because people get so wrapped up in things like Coney dogs that they forget about humanity.

Which is beautiful writing about Detroit and American culture at large. Again, life is an obstacle course, no matter where you are. Also, did someone say obstacle course? Let's talk about chickens now.

So, Tove Danovich is not only a chickenologist – and yes, that's a real word, look it up, I swear to frogs – but also, she's an author and I'd like you to hear part of her 2023 book, *Under the Henfluence: Inside the World of Backyard Chickens and the People Who Love Them*. In it, she describes an experience she had firsthand:

The workshop seems ordinary, there are rows of tables and chairs, a large screen for PowerPoint presentations, and an area for coffee and snacks. If it weren't for the dusty smell when you walk in the door and the sounds coming from downstairs, this could be a 101 workshop in any conference room in the US. The spell is broken quickly when I hear a "Bok-bok" from downstairs, someone has laid an egg.

This is chicken camp, a multi-day class that is ostensibly all about clicker training chickens. Most people in the workshop work with animals, some are professionals while others just want to learn how to train their puppy when they get back home. One woman does wildlife rehabilitation, another is a primate researcher, a few of them work with feral cats. But for the next few days, or longer for those who stay for both the beginning and advanced chicken training classes, we will learn how to clicker train chickens to do all kinds of things a chicken doesn't normally do; some will teeter across balance beams, others will walk confidently around a parking cone, they will complete obstacle courses and matching games. These hungry chickens will do amazing things in exchange for food but for now, they know very little, nothing has ever been expected of them besides laying the occasional egg. Today, that's all about to change.

So yes, you've been wanting chickens? Get yourself *Under the Henfluence: Inside the World of Backyard Chickens and the People Who Love Them*, or get it as a gift for your partner and beg them for chickens.

Let's continue on the topic of eggs but also zombies. Come with me into the world of Neuroparasitology, AKA nature zombies with author Matt Simon who wrote *Plight of the Living Dead: What Real-Life Zombies Reveal about Our World and Ourselves*. Zombies? Really? Really. He writes:

The zombie may as well be real because it actually is, only in a far more incredible and diabolical and horrifying way than a screenwriter could ever dream up because all across the animal kingdom, parasites are climbing into other creatures and mind-controlling them. Be they worms, or wasps, or microbes, certain organisms have figured out how to brainwash their victims in ways so clever and precise that they make Hollywood's creations look downright irresponsible.

In September 2013, I was pacing in my kitchen, talking on the phone with presumably a madman. In South America, he told me, a fungus invades ants' bodies and takes over their minds, manipulating them with unreal precision and consistency. The parasite steers the ants out of the colony and up a tree, always at noon, always ordering them to bite onto a leaf, always about a foot off the ground. This just so happens to be where the temperature and humidity are ideal for the fungus' growth and the body snatcher has positioned its host right about the colony's trail. So, as it erupts out of the back of the zombie ant's head and sprays its

spores, it infects more victims. A parasite without a brain of its own has brainwashed one of the most loyal creatures on Earth to betray its family in spectacular fashion.

So, for more on that, see the Neuroparasitology episode with Matt Simon, his book is *Plight of the Living Dead*. Oh, it's so good.

And I realize you may feel a beef with bugs right now but let's change that mind of yours with the book *Eyes on Flies* by Dr. Bry the Fly Guy, written by Dipterology guest, Dr. Bryan Lessard. He wants you to love flies like he does, and he makes it easy with passages such as:

No flies, no chocolate. Without flies, there would be no chocolate, true story. This is because midge flies are the most important pollinators of the cacao plant which gives us chocolate. These teeny tiny flies are the size of a pinhead and are the only pollinators small enough to crawl inside the cocoa flowers. Turns out these flies have a sweet tooth. As they buzz from flower to flower drinking sweet nectar, they get doused in pollen to help pollinate the flowers that eventually ripen into delicious cocoa pods. Next time you eat a piece of chocolate, make sure to thank the chocolate fly.

Will do. He also writes:

New species realness, category is... New Species Extravaganza. One charismatic and unique soldier fly looks like a shiny rainbow jewel sashaying around the forest floor, so I named it Opaluma RuPaul after the glamazon, RuPaul. The first specimens of Opaluma flies were collected in 1912 and waited more than a hundred years before someone came along with the nerve and the talent to name them. That's why I wanted to give them big, bold names so they can get the much-needed attention they deserve, from researchers and community scientists. Even RuPaul saw the ru-semblance and posted a picture of the fly on social media, the rest was herstory.

He also writes:

Want to know the secret of looking pretty fly? Believe it or not, some cosmetic companies have a secret ingredient in their age-defying face creams that keep you looking younger: oil from a maggot, ["Pardon?"] and not just any kind of maggot but the youthful black soldier fly. Turns out, the oil found in black soldier fly larvae is rich in fats, oils, and vitamin E that are supposed to nourish the skin and help it look healthier and younger. After all, beauty is in the fly of the beholder.

So, get his book, *Eyes on Flies* by Dr. Bry the Fly Guy. And y'all that's it. Ask smart books not-smart questions or get some as gifts to delight and entertain your loved ones.

Head to the link in the show description at AlieWard.com/Ologies/Bookworm3 for links to the original episodes that we talked about and the ologist's books as well as a link to literacy charity, which we donated, 826LA. If you're listening on Apple, make sure you have hit the follow button to subscribe so you always have episodes as soon as they go up. We have some great ones coming on every week, you don't want to miss.

You can follow us @Ologies on Instagram where we post your art tagged #OlogiesArt on Fridays and your merch pics on Mondays that are tagged #OlogiesMerch. I'm on there and Twitter @AlieWard. We also have so many kid-friendly *Smologies* episodes you can download at AlieWard.com/Smologies for free, which is linked in the show notes. Erin Talbert admin's our Facebook group, Noel Dilworth is our scheduling producer, Susan Hale is managing director, and Kelly R. Dwyer does our website. Emily White of The Wordary makes our professional transcripts.

Smologies have been edited by Zeke Rodrigues Thomas and Jarrett Sleeper of Mindjam Media, as well as our lead editor Mercedes Maitland, of Maitland Audio who wrote the book on piecing together podcasts. Well, she might one day. The theme music was written by Nick Thorburn of the band Islands.

If you stick around until the end of the episode, I tell you a secret. This week, let's do book-related. So, in college and in my early twenties I did some TV shows and it helped pay for college and I also was catering on the side, I had like four jobs. But I really liked doing the TV stuff until one day I was mugged by these two guys with giant kitchen knives in real life and then my appetite for simulating violence on crime shows just kind of disappeared with my wallet that day.

But on my first audition ever, like years before, I was so nervous, it was for a moody college student and I had practiced the audition and in the waiting room, there were, like, 15 other girls who looked just like me. So, to distract myself I took out a book from my bag and it was Sylvia Plath's *The Bell Jar*, and I was like, how perfect am I for this? I'm already reading a really depressing book. And then, I looked up and there was literally a girl across the room also reading *The Bell Jar* by Sylvia Plath and it wasn't even assigned for a class. We just, I guess both happened to be reading it and I was like, "What's even the point of being here? So easily there's *nothing* interesting about me." And I guess I was so defeated that I seemed like an actual depressed college kid, which I was, so I got the part. And when I found out via a pager that I was shooting, like, the next day, I called my parents from a payphone in San Francisco, and I was screaming so much that my dad thought that I was gravely injured or being held hostage, but I was just happy.

But then years later when I actually did get mugged, I could not make a noise at all. I opened my mouth, nothing would come out, it's kind of like when you're in a nightmare or a cartoon and you're like [*quiet croaks*] like, nothin'. But don't be sad about all that because if that hadn't happened, I wouldn't have been like "Eugh, yuck," and then become a writer and done science TV and made *Ologies* so it all worked out. And I also learned that when you're authentic in your life and your work, you become irreplaceable but when you try to be just like everybody else then things don't work out so great. You also become a little bit less depressed when you're just you.

Okay, next week, another new ology so make sure you're subscribed Apple users, pass it on. And thank you for listening to the very end of this Audiobook Mixtape 3. I hope you like it. My throat is so sore. Okay. Berbye.

Transcribed by Aveline Malek at TheWordary.com

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Links to things we discussed: