This episode is brought to you by Five Bullet Friday, my very own email newsletter.
It's become one of the most popular email newsletters in the world with millions of subscribers, and it's super, super simple.
It does not clog up your inbox.
Every Friday, I send out five bullet points, super short, of the coolest things I've found that week, which sometimes includes apps, books, documentaries, supplements, gadgets, new self-experiments, hacks, tricks, and all sorts of weird stuff that I dig up from around the world.
You guys, podcast listeners, and book readers, have asked me for something short and action-packed for a very long time, because after all, the podcast, the books, they can be quite long, and that's why I created Five Bullet Friday.
It's become one of my favorite things I do every week.
It's free.
It's always going to be free, and you can learn more at tim.blog.com forward slash Friday.
That's tim.blog.com forward slash Friday.
I get asked a lot how I meet guests for the podcast, some of the most amazing people I've ever interacted with, and little known fact, I've met probably 25% of them because they first subscribed to Five Bullet Friday, so you'll be in good company.
It's a lot of fun.
Five Bullet Friday is only available if you subscribe via email.
I do not publish the content on the blog or anywhere else.
Also if I'm doing small, in-person meetups, offering early access to startups, beta testing, special deals, or anything else that's very limited, I share it first with Five Bullet Friday subscribers.
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So easy peasy, again, that's tim.blog forward slash Friday, and thanks for checking it out if the spirit moves you.
Hello boys and girls.
This is Tim Ferriss.
Welcome to another episode of The Tim Ferriss Show, where it is my job to deconstruct world-class performers of all different types to tease out the routines, habits, and so on that you can apply to your own life.
This is a special in-between episode, which serves as a recap of the episodes from the last month.
It features a short clip from each conversation in one place, so you can jump around, get a feel for both the episode and the guest, and then you can always dig deeper by going to one of those episodes.
View this episode as a buffet to wait your appetite.
It's a lot of fun.
We had fun putting it together, and for the full list of the guests featured today, see the episode's description, probably right below where we press play in your podcast

app, or as usual, you can head to tim.blog slash podcast and find all the details there.
Please enjoy.
First up, Dr. Andrew Huberman, neuroscientist and tenured professor in the Department of Neurobiology at Stanford University's School of Medicine.
I've doubled down on the idea, which perhaps I stated last time we spoke and perhaps not, but I certainly believe that our state of mind and body at any point in time is strongly dictated by our state of mind and body in the hours and days prior to that.
And on the one hand, people are going to hear that and say, well, duh, if you're sleep deprived, you're going to feel like garbage, and if you're well rested, you'll feel great.
That's kind of the top contour of it.
But when one looks at the neuroscience, for instance, of sleep, you start to realize that the amount of rapid eye movement sleep that you're going to get in any 90 minute bout of sleep, because your sleep is broken up into these 90 minute segments, more or less, is strongly dictated by the ratio of slow wave sleep, a.k.a. deep sleep and rapid eye movement sleep that you had in the previous 90 minute bout.
And then when you start to look at the research in terms of waking states, you start to find that your ability to be focused, say, for about a work in the morning or the afternoon or a creative brainstorm session or, I don't know, to maybe drill into some personal issue that you're dealing with during therapy or just on a walk or while journaling is not a square wave function, none of us should sit down and expect ourselves to just drop into that state.
Much of our ability to move into that state effectively, whatever effective means, whatever the target or goal of that bout as I'm calling it is, is going to be dictated by what happened in the previous moments and hours.
And so when I zoom out from that, what I've doubled down on is this idea that there are just a core set of foundational things that we have to re-up every 24 hours.
I think thanks to the incredibly hard work of Dr. Matt Walker at Berkeley, the sleep diplomat on Twitter, it's such a great name because it's so appropriate, a decade ago or so, it was like, I'll sleep when I'm dead.
That was the dominant mentality out there.
And yeah, sleep's great, but getting stuff done is more important.
I mean, Matt has really impressed on everybody that our mental health, our physical health and our ability to perform is so strongly dependent on our ability to get quality sleep.
Maybe not every night of our life.
I mean, we have to be realistic, but that sleep is vital.
So, you know, a hat tip isn't sufficient.
But so sleep is critical, but sleep is just one of about, I would say, five things that really set the buoyancy or the foundation upon which our nervous system is able to accomplish these transitions that I'm talking about at all.
And those five things are sleep.
In the absence of quality sleep over two or three days, you're just going to fall the pieces.
In the presence of quality sufficient sleep over two or three days, you're going to function

at an amazing level.
There's a gain of function and a loss of function there.
It's not just if you sleep poorly, you function less well.
You sleep better, you function much better.
So sleep, I would say, is at the top of the list, nutrients, you know, and there you can think macronutrients and so your carnivores are only eating meat and your vegans are only eating plants and your omnivores, which is I think probably 90% of the world is eating a combination of those.
But you know, quality nutrients, I think when I look at all of the nutrition literature and arguments out there, it seems that everyone can agree on one thing, which is that probably 80% or more of our nutrition should come from unprocessed or minimally processed sources.
Minimally processed would require some cooking, but could survive on the shelf as opposed to packaged foods or highly palatable foods.
So you've got sleep, nutrients, but then we should also put in micronutrients.
And this is where maybe we'll get into a discussion about supplementation.
I think that there's supplementation or supplements is a bit of a misnomer because it implies vitamin supplements.
And people say, well, can't you get all that from food or that whey protein, isn't that just food?
Can you better off with a chicken breast?
Okay.
Well, then when you talk about convenience and the, you know, absorption, okay.
But then there's this huge category of things, you know, ranging from the kind of esoterically named things like Ashwagandha and Shilaji and Tongali and Fidoji, I mean, it sounds exactly all the herbal stuff, right?
You're not going to get that from food.
So should we call them supplements at all?
So let's just say the second thing is nutrients and that includes macronutrients and that includes micronutrients as well.
So those two things, then the third would be movement.
And this has also been an enormous transition in the last, I think, just five years, which is not just for people interested in bodybuilding or powerlifting or for competitive athletes, but now it seems everybody, including the elderly, understand that you need a combination of cardiovascular exercise and you need resistance training, whether or not it's with body weight or weights or machines, et cetera, that you need both.
I mean, not a week goes by without seeing an article in one of the major publications out there, standard media, let's call it traditional media, will be nice to them.
Traditional media that highlights some studies showing that, you know, resistance training in elderly people can offset Alzheimer's or, as our friend Peter Atia has pointed out so many times that many of the end of life creating injuries are due to people, older people stepping down the eccentric movements.
Okay.
So, so you need movement.

That's the third category.
Fourth, I will argue, and I like to think that maybe I've helped this movement, if you want to call it that, is light.
In particular, sunlight in the early part and throughout the middle of the day, and trying to minimize the amount of artificial light that you're exposed to in the evening and late night hours, most of the time, because you have to live life.
Just fundamental, I think the last category that's important is social connection, aka relationships.
Because that can include relationship to self.
So those things set up the core foundation.
And I think one way to think about them is just as a list.
Another is to think about them in terms of a schedule basis.
And that's how I've really doubled down is I realize that every 24 hours I need to invest something into each one of those things.
So I think that 10 years ago or five years ago, or even two years ago, I used to think, okay, like what's the workout split, or how am I going to eat for the next couple of months you know, what am I trying to optimize for?
Is it muscle?
Is it fat loss?
Is it just maintaining?
Is it energy?
Is it focus?
That's all fine and good.
But sleep, nutrients, exercise, light relationships, those really establish the foundation of what I consider to be all of the elements that create our ability to move as seamlessly as possible between the states that we happen to be in and the states we desire to be in.
And when I zoom out and I think about what are the major struggles that I, and it seems most everyone deals with, it's like how to get more focused, okay, so we can talk about what do you take?
What's the supplement?
You know, but you have to say, well, how are you sleeping?
Have you done any exercise?
You really always find yourself, or I find myself taking 10 steps back and then moving through the sequence of five things before you can even begin to talk about whether or not taking three or 600 milligrams of alpha GPC and how often to do that and does it work and yes, it works, et cetera.
But those things really set the foundation, and so I like to think of those five things every single day.
You have to re-up on sleep every 24 hours or try to, you have to re-up on movement every 24 hours.
You can go a day or so immobile, but you better move the next day, right?
And ideally you're moving seven days a week, doesn't necessarily mean trying to failure and running marathon seven days a week.

You can Goggins your life or you can not Goggins your life.
For those of you don't know, I'm referring to David Goggins there, by the way, who seems to never stop moving.
Although I just learned, meditates two hours every night, every night, and I'm inclined to believe when he says that, that he indeed does that.
You need nutrients, even if they come from stored sources, even if you're going to fast, you're going to fast for a day or two.
Okay, fine.
I've done that.
I know you've done that.
I would put hydration under nutrients too.
So you can drive nutrients from stored, fat protein, et cetera, glycogen.
Light is, you're going to need that every 24 hours.
You're going to need sunlight, even if through cloud cover, and you're going to want to avoid bright artificial lights at night, not every night, but most nights of your life.
And then that relationships one is the one that maybe we can go into a little bit more depth at some point, but it requires focus.
It requires attention every 24 hours.
Now that doesn't necessarily mean you have to see friends, talk to friends, text friends every 24 hours.
Some people are far more introverted than others.
But then you're working on your relationship to yourself in that solo time and hopefully when you're spending time with others as well, that has some internal repercussions.
So if I've doubled down on anything, it's the understanding that there is no so-called optimization.
There is no real interest, at least from me, in trying to layer in other things unless I'm paying attention to each and every one of those things every 24 hours.
You have to re-up on each and every one of those five things every 24 hours.
And if you don't, you can get by for a day or two.
But pretty soon you're going to hit that wall where you won't be able to do any of the things that most people are actually seeking to do.
And the last thing I'll say about that is, I think people hear a list of those five things and they think, gosh, okay, well, that must be nice for you, Andrew and Tim.
You wake up, you look at sunlight, you guys don't have kids, you don't have to worry about kids running around, you don't have to, you can exercise.
There are ways of layering in the protocols that re-up, as I'm referring to it, these five things every 24 hours that also include other people in your life, kids, pets, et cetera.
Exercise certainly can include that as well.
But I would argue that there is no showing up properly for yourself and for the other people in your life unless these things are being handled.
And it's not about becoming soft and cushy, it's about becoming quite resilient and effective.
It seems so simple, but as our friend Paul Conti said to me recently, he said, you know, after all the analysis and pouring through things and the complicated notions of the

subconscious, he's a psychiatrist after all, you know, in the end, really great mental
health is about simple practices, like first principles of self-care, to which I raised
my hand and said, well, what is a first principle of self-care?
I'm a biologist after all, and he said, aha, it's basically the things that we were just
talking about.
There's those five things.
And so I'm doubling down, I'm tripling down on those as essential to the point where nothing
else really happens for very long unless those five things are tended to.
Next up, Dr. Peter Atia, author of the new book, Outlive, The Science and Art of Longevity.
My response to alcohol while we're on that topic is, if I drink something that doesn't
taste incredible, I pour it out.
I'm never going to tolerate a bad glass of wine ever.
It's just not worth it.
So since we're on it, I'm going to pull us back to this question of data probably through
the lens of continuous glucose monitors and the best uses and maybe the most common misuses
for people who do not have type 2 diabetes or type 1 diabetes.
But let's just sit with the alcohol for a second.
So what are your personal rules for alcohol consumption outside of the, if it tastes mediocre
or shitty, it gets poured out, which is a great rule.
But what are your favorite types of alcohol?
How do you personally navigate that?
Well, I'll start with kind of quantity.
So I would personally just say there's going to be an insane reason to have more than two
drinks in a day.
So it's sort of somewhere between zero and two, and it's got to be a really good reason
to drink on more than three days a week.
So in the back of my mind, I'm keeping a tally, which is I really shouldn't be having more
than about seven drinks in a week.
And again, seven drinks in one day is very different than one drink a day for seven days.
So it's the frequency and it's the dose, and that defines the poison.
The second thing is I really have to make sure that that drinking is a good three hours
away from sleep.
Again, when I say these things, people say, Peter, you must be a robot.
No, I'm just saying these are general principles.
There are going to be times when I violate that.
I think I posted something on Instagram a little while ago, which was like the most
rancid night of sleep when I sleep data were comically bad.
And the reason was we had friends over.
It was very late.
We drank.
We ate.
You know, I basically went to bed.
And by the time they left at like 1030, I went to bed and we had just finished eating

sort of thing.
And not surprisingly, my sleep sucked.
The point I made in the post was I'd do it again.
It was a fantastic night.
The four of us hadn't had dinner together in a long time.
So you just have to be very thoughtful and deliberate about the choices and tradeoffs that you make.
As far as the type of alcohol, you know, I think people, I think love to.
This isn't, again, an example of something I think we tend to overindex to, oh, you know, I drink a lot, but let me tell you, it's just vodka and tequila.
So it's got to be good for me, right?
It's like, no, alcohol is alcohol, right?
So I love tequila.
I love mezcal.
I love really good wine and I love really dark Belgian beer.
I'm not deluded to think that any of those are healthy.
And I know that there are some people who have, you know, a horrible reaction to certain types of alcohol.
Well, I would put that in the same category as people who have a horrible reaction to certain types of foods don't consume them.
But I think mostly where I focused him is on how much am I going to drink?
How close is it going to be to bed and what's the total tally per week and never exceed a certain tally in a given day?
Next up, CEO coach Matt Moschari, author of The Great CEO Within, which is available on Amazon and online as a free Google Doc.
One of the things I've noticed that I do different than others is this what I call bias to action.
Like, we're not going to leave a conversation without you having at least one, two or three actions to take.
Because I think this time spent together is so expensive for you, for me, frankly, that if we're just going to think deeply about things, come to answers that are likely very likely to work and then not turn them into actions and do them and me not follow up and specifically see if you did them, but then just go to another meeting two weeks from now and start all over of super expensive time and ideate, but not have done anything in between to me is just like my stomach curls when I think about that.
So my coaching is all about driving towards an action and I have a system and the system is all about writing that down and checking to make sure it got done and that's it.
And I find it works with individuals, it works with teams, it works with companies and it's called accountability and it can be done in a micromanagey shameful way or it can be done in a I'd like to help you succeed way and of course as a coach, you can stop coaching with me anytime so it's much easier for me to make it feel like I'm trying to help you succeed way.
If I'm your boss and you're giving you a paycheck and you're afraid to let go of the paycheck,

then it can easily feel like I'm micromanaging you, but there is no difference.
When I coach someone, I become their manager period end of story and if by the third meeting they feel more successful, more engaged, more empowered, then they know the system works and it's all written out so you can just copy, paste, use with their team members and then it works with their team members as well.
Let's look a little more closely at accountability because this is one of my favorite topics and I mean the tools can be rusty, they can be even mediocre in a lot of cases, but if you use them routinely, it's a lot better than the person who has a pristine, perfectly sharpened tool that never gets used and for me and I've thought and written about this a lot as it relates to behavioral modification, which is what we're talking about in many respects whether that's diet, exercise, quitting smoking, starting a new behavior, whatever it might be, years resolutions that accountability beats elaborate planning most of the time.
I would say all the time.
All the time.
You can read something and this is, I believe this is either something written by you or your team and I'd love to hear you elaborate on it.
If we have to do something that isn't fun and we're alone, it is painful, but if we're in the presence of another human, then we're usually okay to do that thing which isn't fun.
Who that other human is doesn't matter too much.
It can be our child, our EA or any other random person.
Could you give an example of how this might work because I found this to pique my curiosity?
I find that they're generally personality types that I encounter when coaching and one big bucket is introvert versus extrovert and obviously it's a sliding scale, but people generally fall one side or the other and extroverts I've noted and I'm an extrovert, just feel more comfortable around humans and there are these solo tasks.
This goes back to in the beginning, you talk about your anger, your frustration around having to do these administrative tasks that don't create any value, but only you can do them because you're the investor named investor individually, so only you can get the K1 and your assistant can't get it because she's not you and what a pain in the ass and you've got to do it and you're probably doing it alone and you're probably going, ugh, and so I have things like that as well and plenty of extroverts have things, there's some amount of stuff you just got to do and so what I've noticed is in my own life and I've recommended this to many people and they've done it and like, oh my God, that's amazing is just having another living, breathing human in the room creates a sense of peace, enough of a sense of peace that these tasks no longer feel so annoying because our body is no longer so sensitized.
We're sensitized, extroverts are sensitized when they're in the alone position, but when they're not alone, their bodies just aren't as sensitized and so these tasks become less onerous and I've literally hired people to sit in my office with me on a couch reading a book while I do administrative tasks and it works and I've recommended this to dozens of people and they now do it and it works for them.
Next up, David Deutsch, visiting professor of physics at the Center for Quantum Computation,

a part of the Clarendon Laboratory at Oxford University and Naval Ravikant, co-founder of AirChat and Angelist and this interviews co-host.
And as an aside, one beautiful output of that that I saw in one of your books was that if you were to look at, there's lots of ways to be wrong, but there's only a few ways to be right or there are certainly less ways to be right than there are to be wrong and because the ways that are right are likely to be copied, if you were able to peek at the entire multiverse at once, you would see truth as a thing that is repeated across the multiverse.
So I took that in a fanciful way as a meaning of life, which is I want to be the version of myself that is successful in the most instances of the multiverse because that contains the most truth.
We want to be multiversal crystals.
Yes, the closer you are to the truth, the more of you that exists in the multiverse in a very odd way.
So there's your practical application of multiverse theory combined with epistemology.
But out of this also came all kinds of other interesting outputs.
I really encourage people to read The Biggin Infinity, at least the first three chapters which I think are an easy read before you even get in the physics part, where you talk about wealth and resources.
Can you give us your definition of wealth and then as a follow-up to that, I think naturally comes are we running out of resources?
Because it's not a number, I don't think it can be characterised very well by a number, it is a set.
The set of all transformations that you are capable of bringing about, that is your wealth.
And obviously if optimism is true, then there's no limit to wealth.
And at any one time, there is a rough correlation between the wealth that is the set of all transformations
that you could bring about and other things that aren't very fundamental, like the amount of money you have or the amount of energy you control or the amount of land you control or the amount of power you have and so on.
But those are not fundamental.
They are all outgrown eventually by the growth of knowledge.
So at the moment, if you have a lot of gold, you can bring things about by exchanging the gold for knowledge that other people have.
If you want a painting of yourself, you can hire a painter to make the painting of yourself even if you couldn't.
But in the long run, gold won't do that because in the long run, some other knowledge that is growing will be able to get gold from an asteroid and then gold will become cheaper and cheaper and cheaper and artists will no longer accept gold.
Ultimately what they will accept and it's also true today because the economy is a rather imperfect way of accounting for knowledge creation.
It's true that it's rather imperfect so people can acquire money and power and so on sometimes without creating much knowledge.

But again, in the long run, that is not true.
So in the long run, the only thing you could pay the artist with would be more knowledge, kind of knowledge that he's not good at creating.
And I love how deep this explanation is.
I love the reach of it because it also applies at the civilizational level as a civilization figures out how to make more and more transformations.
Everybody gets wealthier.
Wealth is a byproduct of knowledge and because we can do anything and figure anything that's not constrained by the laws of physics, that wealth is unlimited just like knowledge is unlimited and even things that before were not considered wealth, we can transform into sources of wealth through new knowledge.
So this idea has tremendous reach much deeper than I think even just the first definition would imply if one thinks it through.
And as somebody who personally spent a lot of time thinking through wealth creation, it was staggering to me how good of a definition this was to the point where I replaced my previous definitions with this one.
Yeah, that's nice to hear.
When you have an idea, let's say you're a geologist or something, you have an idea about geology, suddenly your idea has converted some rocks into a resource.
And you haven't even touched it yet.
The rock has been converted into a resource without anyone ever touching it.
Just the idea in the mind of somebody has converted the rock into a resource.
I mean, I've just mentioned asteroids.
Somebody thought of mining asteroids, nobody's mined an asteroid yet, but they have already made asteroids more valuable just by thinking of that.
Yeah, it's like a solar power is basically a set of ideas that converts sunlight into an energy resource for that's usable by humans before it was only usable at plants through photosynthesis.
The discovery of fire turned wood into a resource.
Nuclear fission turned uranium into a resource.
And so resources are things that we create through knowledge rather than some finite static fixed set of things that we've burned through and abuse and use up.
Yes.
And before anyone had those ideas, the objects, the physical objects in question, obeyed the hierarchy rule.
But as soon as you have that knowledge, it was the other way around.
The hierarchy rule people turn everything the other way around.
It's the, instead of massive, energetic things dominating less massive, less energetic things, it's things with more meaning that dominate things with less meaning.
Things with more knowledge dominate things with less knowledge or, you know, hopefully no knowledge because we don't want to dominate people.
Next up, Michael Mobison, head of Consilient Research on Counterpoint Global at Morgan Stanley Investment Management.

Now, in addition to the wisdom of crowds, there are a number of books that came up in the process of doing research for this conversation that you have mentioned.
And I don't mean to imply that we need to spend a ton of time on all these, but I would love to at least get your take on two that have popped up.
And there may be one or two more, but I'll mention two.
One is Against the Gods, The Remarkable Story of Risk, and this came to mind because you just mentioned risk in the context of Switzerland.
And the other is Complexity by Mitchell Waldrop from getting that pronunciation right.
Why are either or both of these books meaningful or must-reads or important in any way?
So let's start with Against the Gods, it's written by Peter Bernstein, who was a brilliant economist and historian, and it is the history of human understanding of risk.
So it's a fascinating thing.
Now, I'll just say that broadly speaking, I think understanding the history of ideas is incredibly valuable in pedagogy, generally speaking, right?
So if I'm talking about an idea, or I'm using an idea today, I think it's very helpful to understand where it came from, who were the propagators, what were their blind spots, where did they take a turn, one direction where they could have gone a different direction and so forth.
And so Bernstein just brilliantly lays this out in Against the Gods, and he was a wonderful writer.
It's a very interesting book, by the way, he also wrote a book called Capital Ideas, which basically does the same thing for the history of finance.
So Peter Bernstein, that is money, and if anybody's interested in the idea of how we understand risk, and this goes back to the Bernoulli's in the 1700s, up to relatively modern times, it's a fabulous book.
I'll give one other backup, one little step on this, which is, it's a book I almost never talk about, but one day when I was a food analyst, I was visiting a money management firm, it was actually the State of Michigan, the Pension Fund State of Michigan, and I was in the waiting room, literally waiting for my meeting, they had a bunch of books and I just strolled over there and I picked up a book called Bionomics by a guy named Michael Rothschild.
I don't think anybody's, I think it's a somewhat obscure book, but as the name would indicate, and this book was written, I think, originally in 1990, as the name would indicate, what he was saying was, the way to understand economics is really through biology.
And starting really in the late 1800s, but into the early 20th century, economics became very mathematical, and in fact, there's a wonderful book called More Heat Than Light by a professor named Phil Morwaski, which documents how economists literally, and I mean literally mapped over equations from Newtonian physics to basically give economics street cred.
So economics and finance went sort of this mathematical slash physics envy route versus going more biological.
And you know, I think that in retrospect, you could sort of say that biological way would have been a very logical way to go, or as logical, albeit not as mathematically straightforward

or tractable.
So I've read this book by Anomics, and I'm like, this is like so cool.
And the guy sort of opens the book by saying, hey, you can't really understand economies unless you understand sort of evolution and so forth.
So I was very drawn to all that.
So that's the backdrop, I'm like sort of primed, I'm thinking about this idea.
And then along comes Waldrop's book, Complexity.
And this is really the story of the founding of the Santa Fe Institute.
And by way of background, this too was founded in 1984 by a number of scientists who felt and very prominent scientists, many Nobel Prize winners, who felt that academia had become too siloed, right?
So the physicists hung out with the physicists and the economists were the economists and the chemists were the chemists.
But again, most of the interesting problems in the world were really at intersections of these disciplines.
And gee, wouldn't it be awesome if we got these different scientists to hang out and talk to one another?
And so this is how this thing got going in some of the early conferences.
For example, one of them was the economy is a complex adaptive system, right?
So the idea of economics being in there early on was early days.
And so why this book is so, I think, still to this day kind of exhilarating is because you read about these scientists and how they were coming up with ideas that were far from the mainstream.
And when we look back on them now, many of them have become much more mainstream ideas, but it's just, it was super cool.
And so one of the main protagonists, I think the book does open with a story, is Brian Arthur, who's an economist now.
And Brian was promoting this idea of increasing returns.
Now, if you've taken economics, microeconomics at any point, you learn about decreasing returns, right?
So if Tim's lemonade stands super profitable, Michael will open up and let him stand right next door, charge slightly lower prices.
And so you'll become less possible and then you'll have to match my prices and so forth and we'll compete our way down to less profitability, so decreasing returns.
And Brian pointed out that under certain circumstances, there were these increasing returns.
There were sort of these winner-take-all effects.
This is now, again, he was writing about this in the 80s and 90s, completely heretical.
And by the way, like basically the mainstream economists wanted nothing to do with it.
Waldrop, I think in a very engaging way, describes how all these ideas developed.
And so if you said, if the Santa Fe Institute is their unifying theme, it would be sort of this idea of a complex, adapting, evolving system is a way of thinking about it.
So those would be my answers.
Those are two wonderful things and my oldest son, before he went off to college, he did

a gap year and I thought, what would be a list of books that would be really great for him to read and internalize?
And I think we had a list of 15 or 20 books, but these were both on that list because I just think it's super cool to understand the history of ideas.
And as a teacher, if you're ever teaching something, I think it's just super helpful to know where it came from.
Like, what is the genesis of this?
By the way, there are a couple of things that I'm actually trying to track down now.
These are specific finance type of things and I'm in a hard time finding the first person that come up with it.
So it's kind of cool, right?
To sort of go on these little wild goose chases.
Last but not least, performance coach, Dr. Kelly Starrett, author of the new book, Built to Move, the 10 essential habits to help you move freely and live fully, co-written with Juliette Starrett.
800G, I assume that doesn't mean $800,000, 800 grams?
I hear grams.
So food can be a little sensitive for people.
When we talk about food with people and diets, 5% is per performance.
I'm a cyclist runner, right?
I want to build muscle.
And the rest of it tends to be around, how do I change my body composition?
So we'll start with that assumption.
Now here is the non-trigger trigger warning.
If you're a vegan, carnivore, paleo, vegetarian, I'm still talking to you, okay?
Doesn't matter what you eat.
We found that when I back up, didn't want to ever get near nutrition for all the reasons that it's complicated, it's highly individualized, it's cultural, people have strong ideologies around it and really personal identities around it.
So we're cool.
I think nutrition for a lot of people has become almost like entertainment, it's a go hobby.
Or religion.
Oh, sure.
But if we get down to, you're working with me and I'm worried about your tissue recovery or tissue health or you're injured, because again, a lot of times it comes through.
Or we're trying to keep lean body mass on you because you're aging and it turns out maybe fat is a problem, but keeping your lean body mass is a bigger problem.
When we actually get into how much protein are you eating?
People oftentimes do not get enough protein.
And so notice that I'm like, oh, you want to eat raw bear steak?
You knock yourself out.
You want to do plant P cricket protein?

You knock yourself out.
I don't care.
But let's see if we can establish what a reasonable amount of that is.
But again, what I really like in my life is getting something for nothing.
And something for nothing in this situation is that we found that when people started eating more protein, guess what happened?
They got fuller.
So 800 grams of protein today?
No.
Yes.
That would be great.
For the low, low price of $6,995 per month with a free dialysis machine for the first year.
All you need to do.
That's right.
We found that a reasonable amount of protein was somewhere between 0.7 and 0.8 and one gram per pound body weight.
That's a reasonable amount.
That's not crazy.
We're not going to shock load you.
And remember, a lot of times, if you're trying to change your body composition or heal or grow, you need to make sure you have enough protein aboard.
And so one of the things that we found was this was an easy way of controlling satiety and actually making sure that people had on board what they needed to recover and to heal.
And what I'll ask you is, if you count the protein that you're growing children or eating, you might be shocked to discover they're actually in some pretty low to moderate protein diets because it's hard to get kids to eat those things.
Okay.
Protein aside.
And again, however you want to do that is fine with me.
If vegetarian, it may be harder to hit your protein minimums.
One of the things that we saw a lot was our vegetarian friends would come in with these little tendinopathies and some of these issues.
And when we asked them about the whole sort of pantheon of potential behaviors that went along with that, we found that they were really under protein.
And the international track and field folks, everyone sports, they really have this one gram and hovers around one gram per pound body weight.
And it really ends up being a very reasonable number that a lot of people agree on, okay.
Which is still a lot more than most people consider.
Great.
So guess what?
Now you have a vital sign.
Yeah.

Okay.
And if you didn't nail it today, you'll nail it tomorrow.
So where's the 800 coming?
Okay.
So this is the magic.
We have seen a dearth of fruits and vegetables eating.
And this 800 grams comes from our friend, E.C. Sinkowski, and E.C. came up with this idea that, hey, what if instead of taking things out of your diet, we expanded your diet?
What if I said, Tim, you want to change your body composition, I'm going to have to have you eat a lot more.
You'd be like, we'll sum you up.
So 800 grams is 800 grams of fruits and vegetables.
And it can be, they can be frozen, they can be fresh, they can be cooked.
It doesn't matter.
So four big apples is 800 grams, right?
So it's not as crazy as it sounds.
It's not as crazy as it sounds.
But the banana is about 100 grams, you can think of it that way.
So what I'm asking you to do is eat fruits and vegetables.
And what we find is people don't really eat fruits and vegetables.
They talk about it a lot, and they have a little iceberg lettuce salad.
We've struggled to eat vegetables here in Japan.
Actually, not only have we struggled, but we went to a sushi restaurant where one of our guides who is fantastic, native Japanese, and I was overhearing and someone's like, why are you laughing so hard, Tim?
And I was like, well, and then the guide explained, she said, well, I just asked, where can we get some vegetables?
What are your vegetable options?
Do you have vegetables?
And they're like, no.
It says sushi on the door.
Yeah.
What's the question?
It's not a vegetable restaurant.
This is a sushi restaurant.
So we're agnostic about how you do that.
You're like, I'm a rutabaga guy.
Cool.
You want to get 800 grams of rutabaga?
But buried in there are these things called micronutrients, vitamins and minerals.
And what also buried in there is crucial is this thing called fiber, which most people don't get a lot of.
And one of the things we've seen when we have gone into this diet culture where we restrict

and take out, it's really not very sustainable.
And I have two daughters, full disclosure for one, who haven't always been the best eaters.
But if I pack them full of strawberries and apples and whatever they want to eat, fruits and vegetables wise.
Again, fruits or vegetables, if you're like, I don't eat vegetables, I'm like, down, cool.
Just you do you.
You do fruits.
That's fine.
We found that there's a lot less room for crap in our diet.
And all of the research is that 800 grams is about this magic number where a lot of really good things happen to you from a health perspective, fiber, micronutrients, should you eat the rainbow?
Sounds great.
Let's eat the rainbow.
There's six to eight kinds of fruits and vegetables every day.
It's kind of a game.
And guess what?
Tomorrow, six to eight servings, six to eight different types of types.
So a grape is one, then I had some spinach and trying to eat this diversity.
I think it was Kate Shanahan of Deep Nutrition who wrote that we used to eat roughly somewhere between 40 and 50 different kinds of fruits and vegetables every year, typical person in America.
And now it's like three or four, but we just don't eat a lot of fruits and vegetables.
And those two things, we find that we have people focus on getting more protein, getting more fruits and vegetables.
There's just not a lot of extra room for keto donuts.
You know what I mean?
Like you're like, holy crap, I'm really like, guess what everyone, white potatoes, it's a vegetable to fried potato, not a vegetable, right?
We should probably do, you have been advocating for these very dangerous things called beans for a long time.
Oh boy.
Internet.
You're going to give me a Brian McKenzie Ted Talk on beans?
No, beans count towards your grams.
I'm like, how cool.
Redemption.
You're eating a thing that's a plant full of plant matter and fiber.
That's so great.
Let's eat more beans, right?
And like, I think, yes, of course, if you're a person who's like beans, cause me anxiety, not trying to be beanist here, but if that's you, you're excused from eating beans.
And that's what I want to give people permission is saying, Hey, I understand you don't like

these things.
Let's, what else can we open up to 800 grams of kiwi fruit?
Do it.
Do it.
Do it.
And you know what we found is that if you are like, I'm only going to do this with apples.
You'll do that for four or five days and you're like, what else is that kiwis are super cool.
Oh, kiwi every day is a little bit much.
And again, we're looking at through this lens, this built to move lens of durability.
If we keep lean muscle mass on you and get fiber and micronutrients in you, you're probably going to feel better and do better along the hall.
And maybe we have all the things your tissues are going to need to repair and heal.
And sometimes that is one of our friends described as supply chain economics of your tissues.
There's a reason here in Japan, they eat everything, all the collagen, all the skin, all the bones, everything, brah, brah.
Those things have been part of our diet for a long time.
Yeah, totally.
So few thoughts for folks also on top of that.
So with getting an increased volume of vegetables, fruits, it may make sense if you have the savings to do so in the cash flow.
Look at a list called dirty dozen.
There are certain plants that have more pesticide exposure in the United States.
Totally.
And so you can use that to selectively either avoid certain things or consider selectively buying certified organic so that you're not dealing with.
Like a strawberry is my understanding, it's like a sponge.
So maybe spend your money on better strawberries.
Yeah.
Yeah.
Or like stick with bananas.
Don't eat the skins.
Yeah, less skin.
Banana skin is not great.
But you'll notice there, it's easy to demonize meat, for example.
And I didn't even say you're an organic man, I just said whatever you can afford, whatever works in your socioeconomic system is going to be a better health outcome than not getting enough protein and fruits and vegetables.
And now here are the bios for all the guests.
And I am thrilled to have Andrew Huberman here with me.
So great to have you here in person, Andrew.
So Andrew Huberman, who is this Andrew Huberman, Dr. Huberman PhD on Twitter at Huberman Lab

is a neuroscientist and tenured professor in the Department of Neurobiology at Stanford University School of Medicine.
He has made numerous important contributions to the fields of brain development, brain function and neuroplasticity.
Work from the Huberman Laboratory at Stanford Medicine has been consistently published in top journals, including Nature, Science and Cell.
For those who don't know, that's like having a sweep at the Oscars.
But back to the bio.
Andrew is the host of the podcast Huberman Lab, which is often ranked as one of the top five podcasts in the world by both Apple and Spotify.
The show aims to help viewers and listeners improve their health with science and science-based tools.
New episodes air every Monday on YouTube and all podcast platforms.
You can find all things Andrew at HubermanLab.com on YouTube, that is Huberman Lab, Instagram, Huberman Lab, and also on Twitter, as mentioned, at Huberman Lab.
Hello boys and girls, ladies and germs.
This is Tim Ferriss.
Welcome to another episode of the Tim Ferriss Show, where it is my job to interview world class performers, to deconstruct how they do what they do, lessons learned, tools, etc. that you can apply to your own lives.
Nowhere is this more true than in this episode where I interview my friend and doctor, Peter Atia M.D., you can find him on Twitter, at Peter Atia M.D.
He is the founder of Early Medical, a medical practice that applies the principles of Medicine 3.0 to patients with the goal of lengthening their lifespan and simultaneously improving their health span.
He is the host of The Drive, one of the most popular podcasts covering the topics of health and medicine.
Dr. Atia received his medical degree from the Stanford University School of Medicine and trained for five years at the Johns Hopkins Hospital in General Surgery, where he was the recipient of several prestigious awards, including Resident of the Year.
He spent two years at the National Institutes of Health as a surgical oncology fellow at the National Cancer Institute, where his research focused on immune-based therapies for melanoma.
His new book is Out Live, subtitled The Science and Art of Longevity.
And on the book page for Out Live, you can find quotes from Steven Levitt, who is the bestselling author of Freakonomics, from Esther Perrell, who no doubt many of you will know, New York Times bestselling author, psychotherapist, and podcast host of Where Should We Begin, Andrew Huberman, who many of you will know, also Hugh Jackman and others.
This is an incredible book.
It's taken a long time for Peter to put together, and I'm very excited to have him on the show to discuss not just the book, but everything that went into the book, many different approaches and frameworks you can apply to navigating and improving your own health and health span.
You can find him online.
I'll give just a few on Instagram, at peteratiamd, and that's peteratiamd.

And on the website peteratiamd.com, you can find links to the book and many other things.
And the practice website is earlymedical.com.
My guest today, I would say, is not only a world-class performer, but also one who studies world-class performers, advises world-class performers.
Matt Moschari, you can find him on Twitter, at Matt Moschari, M-O-C-H-A-R-Y, coaches the heads of Top Silicon Valley tech investment firms and companies on how to be the best leaders and build the best organizations possible.
There are some names you might recognize, including my friend, Naval Ravikant, as well as Brian Armstrong of Coinbase, Sam Altman, perhaps best associated or most associated with open AI these days, well done, Sam, and many, many others.
His philosophy and method are captured in both the Moschari coaching methodology, which is available as a free Google Doc, and in his book, The Great CEO Within, which is available on Amazon, and also online as a free Google Doc.
We will link to all of those in the show notes at tim.blog.com.
And you can also find, I imagine all of them, I believe, under the top right curriculum at MoschariMethod.com.
As a former founder, CEO, and investor, Matt knows firsthand the challenges of those roles, as well as solutions to the most commonly encountered problems.
His coaching is not questions only.
There is real guidance.
Matt specializes in helping CEOs and their companies, or investment firms, transition from free willing startups to dominant enterprises.
First, let me say that one of the secret agendas, not so secret, but I'm not sure I've stated it explicitly, of this podcast is to capture living legends, people who have so much to offer that I want to capture their lessons for posterity, so hopefully millions can learn from them for decades and decades, that is the intention with many of these conversations.
In this conversation, I should stress from the beginning is not for professional philosophers, nor for physicists, it doesn't require any hard scientific training.
This is for curious people who want to learn to think more clearly, learn more effectively, and that perhaps just live more optimistically.
And I want to introduce first my co-host, who is really the lead driver, he is the host of this conversation.
And I do this when I think it will be most helpful for the listener, and I've done it many times in this podcast, Naval Ravikant, close friend, you can find him on Twitter at Navalnaval, he is the co-founder of AirChat and Angel List.
He's invested in more than 100 companies, including many mega successes, including Twitter, Uber, Notion, Open Door Postmates, and Wish.
You can see his latest musings on AirChat and subscribe to Naval, his podcast on wealth and happiness, on Apple Podcasts, Spotify Overcast, or wherever you get your podcasts.
You can also find his blog at nav.al.
For more conversations with Naval, you can check out my wildly popular interview with him from 2015, which was nominated for podcast of the year.
You can learn more about AirChat and Naval and interact certainly at getairchat.com

slash Naval.
The guest today is David Deutch.
You can find him on Twitter at DavidDeutchOXF, last name is spelled D-E-U-T-S-C-H.
David is a visiting professor of physics at the Center for Quantum Computation, a part of the Clarendon Laboratory at Oxford University, and an honorary fellow of Wolfson College, Oxford.
He works on fundamental issues in physics, particularly the quantum theory of computation and information, and especially constructor theory, which he is proposing as a new way of formulating laws of nature.
He is the author of The Fabric of Reality and The Beginning of Infinity, and he is an advocate of the philosophy of Carl Popper.
You can find him online at daviddeutch.org.uk.
And I should return to what I stated initially, and that is preserving the lessons of a living legend.
David is truly a pioneer in multiple fields, and the hope is that with the help of Naval, because I am in the passenger seat, I am largely silent in this conversation, that Naval can help to tease out counterintuitive learnings that you can apply to your life, and apply to your life in many, many different areas.
And to quote Naval, I will say, quote, I think understanding David Deutch and Carl Popper is the easiest way to actually get smarter, fix your epistemology, and fix your thinking.
So what is epistemology briefly because that term comes up a lot?
Multiple definition of epistemology is the theory of knowledge, especially with regards to its methods, validity and scope, and, perhaps this is a key part, you want to keep in mind, the distinction between justified belief and opinion.
How do you separate fact from fiction?
How do you stress test your own beliefs?
How do you navigate reality, construct reality, in a way that is helpful, optimistic and constructive?
My guest today is Michael Mobison, spelled M-A-U-B-O-U-S-S-I-N, you can find him on Twitter, MJ Mobison.
He is the head of conciliant research on counterpoint global at Morgan Stanley Investment Management.
Prior to joining Counterpoint Global, Michael was director of research at Blue Mountain Capital, head of global financial strategies at Credit Suisse, and chief investment strategist at Legg Mason Capital Management.
Michael originally joined Credit Suisse in 1992 as a packaged food industry analyst.
Some of you long-term listeners will perhaps recognize some of that from my conversation with Bill Gurley, and was named chief U.S. investment strategist in 1999.
Michael is the author of many books, including The Success Equation, subtitled Untangling, Skill and Luck in Business, Sports and Investing, Think Twice, Harnessing the Power of Counter-Intuition,
which I've mentioned several times on this podcast, and More Than You Know, Finding Financial Wisdom in Unconventional Places.
More Than You Know is named one of the 100 best business books of all time by 800 CEO

Read, one of the best business books by Business Week, and best economics book by Strategy and Business that's in 2006.
Michael is also co-author with Alfred Rappaport of Expectations Investing, reading stock prices for better returns.
Michael has been an adjunct professor of finance at Columbia Business School since 1993 and is on the faculty of the Heilbrunn Center for Gram and Dodd Investing.
He received the Dean's Award for Teaching Excellence in 2009 and 2016, and the Gram and Dodd Murray Greenwald Prize for Value Investing in 2021.
He earned an A.B. from Georgetown University and is chairman emeritus of the board of trustees of the Santa Fe Institute, a leading center for multidisciplinary research in complex systems theory.
You can find all things Michael at MichaelMobuson.com.
Dr. Kelly Starrett, who is he?
He's one of my favorite performance coaches.
I've spent a lot of time with him.
When I have problems, other people cannot solve.
If I have aches and pains, injuries, performance goals, perhaps, that people can't spec out for me, makes sense of, I call Kelly.
He's also a treasure trove of one-liners and is hilarious.
So I think you'll enjoy our conversation.
He has been on the podcast before, is very, very popular.
Kelly Starrett, DPT, you can find him on Twitter and Instagram at the Ready State, is, along with his wife Juliet, co-founder of the Ready State.
The Ready State began as mobility wad in 2008.
Just a side note, Kelly's like 230 pounds of pure muscle with quads bigger than my chest and he is more mobile and flexible than I am.
Full lotus, no problem.
Couch stretch until you think your hips would explode, no problem.
So he really walks the talk and squats the talk, as it were.
All right, so the Ready State began as mobility wad in 2008 and has gone on to transform the field of performance therapy and self-care.
You know, I'm going to keep adding in little tangents.
I think it was for Kelly's 40th birthday he decided, and he'll have to correct me if I get this wrong, that he wanted to do a few things to celebrate his 40th birthday and mark it as a milestone.
But if my memory serves me, it was a standing backflip, remember the dimensions that I mentioned.
It was running an ultramarathon, the quad-dipsy, so look at that up.
It is no joke.
Again, remember his physical dimensions and then power cleaning something like, I have no idea, 300 pounds, 350 pounds, something outrageous.
So that is Kelly Starrett.
He is the decathlete of power and mobility.
So let's get back to the bio.

His clients include professional athletes in the NFL, NBA, NHL, and MLB.
That's Major League Baseball for folks outside of the U.S.
He also works with Olympic gold medalists, tour de front cyclists, world and national record-holding Olympic lifting and power athletes, CrossFit Games medalists, professional ballet dancers, elite military personnel, and much more.
Kelly is the author of The New York Times and Wall Street Journal bestsellers, becoming a supple leopard and ready to run.
His new book is built to move, subtitled The 10 Essential Habits to Help You Move Freely and Live Fully, co-written with Juliette Starrett.
So her name has come up a few times now, and I've known Juliette for a long time.
Who is Juliette?
I just have to mention a few things before we move on.
So Juliette trained as an attorney.
She's done a million different things, badass in business, incredible operator.
But also, she was the U.S. national champion in extreme whitewater racing from 1997 to 2000.
World champion from 97 to 98, she returned to the sport in 2018 to become world champion in the Masters division.
So she is also very smart, very capable, very fit, and both of them as a team have really thought through what it takes to build yourself to move.
Hey guys, this is Tim again.
Just one more thing before you take off, and that is Five Bullet Friday.
Would you enjoy getting a short email from me every Friday that provides a little fun before the weekend?
Between one and a half and two million people subscribed to my free newsletter, my super short newsletter called Five Bullet Friday.
Easy to sign up, easy to cancel.
It is basically a half page that I send out every Friday to share the coolest things I've found or discovered or have started exploring over that week.
It's kind of like my diary of cool things.
It often includes articles I'm reading, books I'm reading, albums perhaps, gadgets, gizmos, all sorts of tech tricks and so on that get sent to me by my friends, including a lot of podcast guests and these strange esoteric things end up in my field and then I test them and then I share them with you.
So if that sounds fun, again, it's very short, a little tiny bite of goodness before you head off for the weekend, something to think about.
If you'd like to try it out, just go to tim.vlog.friday, type that into your browser, tim.vlog.friday, drop in your email and you'll get the very next one.
Thanks for listening.