

[Transcript] Huberman Lab / Goals Toolkit: How to Set & Achieve Your Goals

Welcome to the Huberman Lab Podcast where we discuss science and science-based tools for everyday life.

I'm Andrew Huberman and I'm a professor of neurobiology and ophthalmology at Stanford School of Medicine.

Today we are talking about goal setting and achieving goals.

Now, we've done three full episodes about this topic previously.

I did a solo episode about this topic where I described the neuroscience of the circuitry in the brain and body that underlies goal setting and pursuit.

I also hosted two expert guests who have done extensive research on these topics.

Those guests were Dr. Emily Balchettis from New York University and Dr. Maya Shankar.

So today's episode is going to focus on the key takeaways from those three previous episodes as well as incorporate new information that has been published in the scientific literature since those episodes aired.

So that by the end of today's episode, you will have a potent toolkit for setting and pursuing goals.

We will talk about how to select which goals to pursue and when.

We will talk about how to measure your progress.

We will talk about how to initiate and sustain motivation as you pursue your goals.

We are also going to dispel some prominent myths about goal setting and pursuit.

Given that this is a toolkit episode, I will talk about some of the underlying biological mechanisms for the protocols that I describe.

But most of what I will cover are the protocols themselves, the how to identify a goal, select the best goal for you to pursue, how to initiate goal pursuit, how to maintain goal pursuit, how to evaluate progress and how to do the post hoc analysis after you achieve a goal or as the case may be, not achieve a goal.

Although I am confident that if you implement even a subset of the protocols that we cover today, that you stand the greatest possible chance of both setting the proper goal and achieving that goal.

And I can say that both with confidence and humility because the protocols I describe were not created by me.

They are gleaned from the scientific peer reviewed literature and they have been shown to work.

Before we begin, I'd like to emphasize that this podcast is separate from my teaching and research roles at Stanford.

It is however part of my desire and effort to bring zero cost to consumer information about science and science related tools to the general public.

In keeping with that theme, I'd like to thank the sponsors of today's podcast.

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Again, that's MauiNuiVenison.com slash Huberman to get 20% off.

Okay, let's talk about goal setting and pursuit.

And as I mentioned a few minutes ago, this is a toolkit episode, so I'm not going to talk too much about the mechanistic underpinnings of the protocols for goal setting and pursuit.

I'm mostly just going to give you those protocols.

But before I do that, I want to take just three minutes, I promise just three minutes or less and describe the neural circuitry involved in goal setting and pursuit.

And there are two reasons to do that.

First of all, the biology of goal setting and pursuit is absolutely beautiful.

It's incredible that we and many other animals, in fact, have this neural circuitry and that it works in the way that it does.

But equally important is that when we have a mechanistic understanding or framework for how a protocol or set of protocols work, it makes it much easier to tweak those protocols and customize them to our unique needs.

Okay, so with that said, the goal setting and pursuit circuitry essentially consists of four major stations in the brain, although it's important to point out that each of those stations has a number of other connections that are important for the whole goal setting and pursuit process.

But we can distill things down to four major hubs or stations within the brain.

And those are the basal ganglia, the lateral prefrontal cortex and the orbital frontal cortex.

So going through those one by one, the amygdala is a structure within the brain.

We actually have two of them, one on each side of the brain that is involved in circuits associated with arousal in driving levels of alertness.

It's also involved in fear.

You've probably heard that many times before, but also things like anxiety and actually the amygdala can be involved in what we call positive valence experiences, not just the bad stuff like fear and anxiety, but also positive forms of arousal and even learning.

The basal ganglia include a lot of different brain structures.

But for sake of today's discussion, what you need to know is that the basal ganglia includes two major pathways.

One is the so-called go pathway, which is the pathway involved in generating actions.

And the other is the so-called no go pathway or the pathway involved in withholding or ceasing action.

And this is really important to understand because with all goals, we have to ask ourselves, are we trying to learn how to do something new or are we trying to withhold a certain set of actions?

And of course, anytime we learn anything, it's a process of both generating and withholding certain actions.

So we've got the amygdala and we have the basal ganglia, which has this go action initiating and no go action withholding circuitry within it.

And then there's the lateral prefrontal cortex, which is involved in immediate and long-term planning.

And this is going to be a key component of today's discussion because we aren't going to be talking about lateral prefrontal cortex per se, but we are going to be talking about time perception in the context of setting and achieving our goals because setting and achieving our goals is all about being able to orient both in space, knowing where we are and what we're doing, but also in time know where we are in that road of progress toward achieving our goal or crossing that finish line and repeatedly updating those finish lines in many cases.

And the fourth structure is the orbital frontal cortex, which like all brain areas tends to be a multitasker does a bunch of different things.

But for sake of today's discussion, it's important to understand that the orbital frontal cortex is involved in evaluation of our current emotional state and arousal state as it relates to our goal pursuit.

For instance, are we happy because we are sensing progress or are we unhappy and feeling frustrated or sad or angry because we are feeling that we are not achieving progress or that somehow we can't get into the sorts of actions that are going to allow us to eventually

reach our goals.

Okay.

So I described four major structures, all of which communicate with each other and of course, a lot of other brain areas.

And those four structures were the amygdala, the basal ganglia, the go and no go circuitry, the lateral prefrontal cortex and the orbital frontal cortex.

And those represent the core components of the neural circuitry involved in goal setting and pursuit.

Now, I realized I didn't time that section.

So I don't know whether or not it was three minutes or less, but if it was shorter than three minutes, great.

And if it was longer than three minutes, well, I promise to shave a couple of minutes off the end of this episode.

Okay.

So I have the understanding that we all have the same neural circuitry for goal setting and pursuit.

I find that amazing regardless of whether or not you want to achieve a fitness goal or an academic goal or a work goal, monetary goal, relationship goal, maybe you want to just get better at relaxing.

I've been told I should perhaps pursue that goal.

Well, you're going to use the same neural circuits for each and any of those.

I find that incredible.

I also find that very reassuring because what it means is that if we can focus on the tools and protocols that are anchored in the biology of goal setting and pursuit as we understand them to exist in all humans and indeed in other animals as well, well, then we should have the greatest possible confidence that we will in fact achieve our goals.

So how do we go about doing that?

Well, the first question you need to ask yourself is what goal do I want to pursue?

And the first protocol for deciding what goal you want to pursue is actually quite simple one in terms of how it's stated, but it's fairly complex for a lot of people to answer.

And that is which specific goal are you going to try and pursue?

Because guess what, folks?

Most people who try to achieve many goals simultaneously fail at all of them.

This is what I call the overhaul approach when people think, okay, you know, in January one or next month or next week or perhaps even today, I'm going to start exercising.

I'm going to start meditating.

I'm going to learn a language.

I'm going to learn to dance.

I'm going to do all these different things.

And that's just too many goals.

I think here is an appropriate place to highlight the word priority.

A priority literally means one thing that you place ahead of all others.

These days we hear a lot about priorities, plural, but we really should be thinking about priority and defining our priority for learning in a given phase.

So if you are somebody who wants to get more physically fit or you want to learn something that's not cognitively, that's terrific.

You are allowed to have multiple goals, but I highly recommend that you first select just one goal.

Of course, you don't let go of other aspects of your mental health and physical health that you don't throw your life away in service to this one goal.

We've all seen how that goes and it's not a pretty picture.

But rather that you continue to engage in healthy ways with the other aspects of your life that you're proficient at or mostly proficient at, but that you select one goal that you're going to try and attain.

How you select that one goal, of course, is going to reflect your values, your motivation, your resources, but it's very important that you spend some serious time defining that one priority, that one goal for this initial goal setting and pursuit period.

And in a moment, I'll tell you how long that goal pursuit period ought to be.

But for some people, the best way to define which goal they're going to pursue is to write out the different things that they want and then essentially cross off the various things that they're willing to put on hold for the time being and circle the thing that they're really going to focus on and only that thing.

And again, this is highly individual.

It's going to depend on you, your past, your present, your future, your resources, all of that.

But having that one priority is going to really increase the probability that you're going to achieve your goal.

Now we also know from the scientific literature that how lofty that goal is will impact whether or not you're able to achieve it.

And I think most people mistakenly believe that if a goal is easy to achieve, it's more likely that they will achieve that goal, sort of a duh.

But in fact, the opposite has been shown to be true.

If a goal is too easy to achieve, it seems that it doesn't recruit sufficient amounts of the arousal network that involves the amygdala, but a bunch of other brain structures as well, that get people into the necessary actions to continually pursue that goal.

This perhaps should not be surprising.

In order to learn something, we have to shift our nervous system into states that are somewhat uncomfortable.

They should be safely uncomfortable states, but they should be uncomfortable states.

And we're going to talk more about this as the episode continues.

But any kind of successful learning or goal pursuit is going to involve errors.

It's going to involve failures.

It's going to involve frustration.

It's going to involve anxiety.

All of those states of mind and body, in fact, shift the brain into modes of so-called neuroplasticity. They give it the ability to change.

And that should make perfect sense because if you can complete what you need to do easily, there's absolutely no reason for the neural circuitry in your brain or body to shift in

any way.

Why would it rather those states of discomfort, frustration, anxiety, et cetera, represent shifts in neurochemical states that literally open the opportunity for neural plasticity to occur, the changes between neurons that allow those neurons in their associated neural circuits to perform differently in the future when we learn something.

So the key here is twofold.

First define the specific priority goal that you're going to pursue and set aside all other goal pursuits.

And in doing that, it makes sense to pursue a somewhat loftier goal than perhaps a more mundane goal.

Or if you know exactly what goal you're going to prioritize, that you try and achieve perhaps more than you think you ought to be able to achieve within that given goal.

And within the goal that you decide to prioritize, you want to set a level of progress, a level of performance that you're striving to attain.

That's a bit above what you actually believe at this time you can accomplish.

Now in doing so, you are inevitably going to encounter some frustration and anxiety.

But remember the component of the neural circuitry that we talked about at the beginning of the episode, the orbital frontal cortex.

That orbital frontal cortex is not just part of a neural circuitry that assesses how we feel in a given moment as we're trying to pursue a goal.

But it also understands context.

It has the capacity to, for instance, see that you're experiencing anxiety, know that you are frustrated.

But now that you understand that anxiety and frustration that comes with making errors is actually the gateway.

It's a necessary gateway to achieving neural circuit changes, so-called neuroplasticity.

Well, the orbital frontal cortex understands that context.

It literally can take information about neuroplasticity.

It can take information about frustration, which you now have, and it can combine those such that when you experience that frustration, you experience those errors and you previously would have wanted to quit.

Now you know that you are literally making progress.

You're literally shifting those neural circuits in the direction of improved learning.

Now it's also important to remind that neuroplasticity, the changes in neural circuits that allow for improved performance in the future, does not occur instantaneously.

That frustration that occurs during our attempts to learn or to pursue a goal is the trigger for neuroplasticity.

The actual rewiring of neural circuits that allows for proficient correct performance occurs during deep sleep and other forms of deep rest.

This is something I've covered extensively in episodes on neuroplasticity and learning.

If you'd like to learn more about neuroplasticity, in fact, if you'd like a zero-cost toolkit that defines the so-called super protocol for neuroplasticity and learning that is not just nested within the context of goal pursuit and learning, we have that.

You can go to hubermanlab.com, you go to the menu, scroll down to newsletter, and you can

sign up.

It's completely zero-cost, and you'll get that as a brief, I believe it's a two or maybe three-page PDF.

Okay, so returning to goal setting and pursuit, first, you need to set your goal.

You really should take the time required to define your priority.

What are you going to try and learn?

And then you're going to pick a goal that really feels challenging, that feels like it might even be out of reach, because that will recruit the neural circuits associated with arousal, they're motivating enough to get you into action.

Now I want to be very clear.

I'm not suggesting that you pick a goal that's impossible to achieve or that you believe is impossible to achieve.

That's not going to serve you well.

Rather, I'm saying pick a goal that feels just a bit out of reach and don't obsess too much about whether or not it's a lot out of reach or a little bit out of reach.

Pick something you're excited to pursue that you would really like to accomplish.

Set that goal and then just set aside all other goals.

Still, of course, maintain or improve other aspects of your life that are necessary for daily living, for mental health, physical health, etc., but really just focus on one goal.

Focus that you will be far more satisfied with the results if you can truly set a priority.

So once you've defined the specific goal that you are going to prioritize, there are two more things that you need to do before you start to pursue that goal.

The first one is that you need to define the specific verbs, the actions that are involved in pursuing that goal.

This is absolutely critical.

A lot of people will set a sort of title goal or a goal state.

They'll say, Oh, you know, I want to be rich or I want to be smart or they will say I want to be fit or proficient in a given language.

It's really important that you put additional specificity on your goal.

In fact, it's important that you put a lot of specificity on your goal and that you focus mainly on verbs when defining that specificity.

Now there are a lot of reasons for this that have to do both with increasing the probability that you will achieve your goal as well as maintaining motivation as you pursue that goal.

So for instance, rather than saying you want to be fit or you want to be a better runner or swimmer, you would want to get very specific about the verb that you're going to engage in in order to achieve that goal.

Now it's somewhat obvious in the case of running or swimming.

I think everyone understands that if you want to be a better runner, there is going to be some running involved.

If you want to be a better swimmer, there's going to be some swimming involved, of course. But presumably there will be some other behaviors as well.

Everything from driving to the pool or lacing up your shoes, I mean, there's essentially near infinite number of verbs involved in any type of goal pursuit.

So what we are talking about here is really defining the goal on a piece of paper.

And I do think that's important.

You should write this down.

And I think the process of selecting your goal, that priority, as well as defining the specificity of the verb action that you're going to pursue should be done on paper.

So of course, you're going to think, but then you should write it out seeing things on paper and writing them out by hand with pen or pencil really has been shown to engage neural circuitry in a way that is different than typing with your thumbs into your phone, which by the way is a new feature of human evolution.

I do believe this is the first time in human evolution that we have written with our thumbs.

I don't know.

I don't have a time machine.

I can't go back and check, but I'm willing to place a bet that that statement is correct.

So the point is that writing things out is not only important.

It's also the most effective way to embed knowledge in our nervous system.

So I highly recommend that you write things out on a piece of paper in your process of goal setting.

So when we are talking about generating verb specificity about your goal, it would look like the following.

So let's say I want to quote unquote get more fit or learn conversational French or anything for that matter, gardening.

Maybe I want to build a gazebo in the backyard or a deck in the backyard.

The key thing to answer is what is the major block of action that's going to be involved in pursuing that goal?

So for instance, if you want to get more fit and you're going to do that primarily through running and weight training or swimming and weight training, you would want to get very specific in defining that priority goal as I'm going to run X number of miles per week or I'm going to go to the gym three times per week to lift weights.

So I would recommend getting even more specific than that.

I would recommend that you literally write down I'm going to go to the gym three times per week for a minimum of 60 minutes where 50 minutes of that are carrying out hard work with of course rest between sets, etc.

Or I'm going to attend three classes per week or perhaps even just one class per week of learning conversational French plus I'm going to spend two hours per week of practicing say word problems or mathematical problems, whatever it is you want to define first the priority, then you want to define the verb action that represents the bulk of effort towards that priority.

So running in the case of the person who wants to get fit by running weightlifting in the case of the person that wants to get fit by weightlifting.

Although of course I highly recommend people do both resistance training and cardiovascular training if indeed they want to be truly fit or in the case of language learning or learning how to code or gardening or something of that sort to really define the verb actions involved and then to place specificity in terms of the amount of time that one is going to try to achieve each week in pursuit of that specific priority goal.

I realize that that process itself takes a bit of time but when you look back on the 100 year plus scientific literature of what leads to successful goal setting and pursuit, you find over and over again that those two components we've been talking about specificity and a measurability are paramount you just simply cannot discard those from the process if you expect yourself to achieve your goals.

So whether or not it's the ABC method or it's the smart method or the smarter method again all acronyms coined not by me but by others previous to this conversation, you're going to find elements of specificity and measurability showing up again and again.

So these are key features of any protocol that you are going to use in order to try and set and achieve your goals.

And I should mention that setting specific goals and clearly defining the verbs that you're going to engage in to pursue those goals and defining how long you're going to try and engage in those verbs each week to achieve those goals has significant impact on the probability of success.

We're not talking about a minor effect.

In fact, in the original episode I did about goal setting and pursuit I talked about the so-called recycling study.

I'm not going to describe it in a lot of detail right now but essentially this study looked at motivating people to recycle more recyclable products in the workplace and what they found was that when people were told what the specific goal was and what specific actions they needed to engage in were and how much of a given batch of refuse so say, you know, after lunch there's some boxes, there's some forks, et cetera, some napkins, how much of that refuse they were going to try to put into the recycle versus the trash.

It led to a greater than doubling of successful achievement of that goal.

Now that's a perhaps trivial goal to some of you, although let's face it recycling is important but that result has been shown again and again and again for different domains of goal setting and pursuit.

So this thing of setting specificity, really spending time with it on paper, setting specificity of actions or which specific actions and then setting specificity of how long you are going to gauge in each of those actions each week greatly increases the probability that you will achieve that what previously seemed to be a all too lofty goal.

Earlier I mentioned that during the course of today's episode we were going to dispel some common myths about goal setting and pursuit.

So now I'd like to mention two popular myths about goal setting and pursuit.

The first one is that if we set a post it, you know, a little post it sticky where you write down what you're trying to achieve and you put that on the refrigerator or you put that on your mirror that it increases the probability that you are going to stick to your goal. Turns out that is not the case.

And the reason for that is that your visual system adapts to whatever is regular in your environment.

Doesn't matter whether or not that environment is sparse.

So it only has a few things in it or whether or not it is dense, like a forest, anything that shows up regularly in our visual environment gets canceled out.

This is actually a basic feature of the way your visual system is wired.

So for those of you that are taking a sticky note or a magnet or a sign and putting it on your mirror and leaving it there from day to day, maybe that says, you know, run 60 minutes today or study French 20 minutes or whatever the goal happens to be.

If you leave it there day to day to day, it actually diminishes the likelihood of progress. I know that seems kind of hard to believe, but it's true.

Instead, a better approach is to continually write that thing out each day and put up a new sticky, put it in a new place, perhaps on the refrigerator, sometimes in the kitchen, maybe on the windshield of your car, although of course, remove that while you're driving, et cetera.

If you are going to incorporate visual reminders in your goal setting and goal pursuit process, you want to change those each and every day.

This is actually something that perhaps app developers will start to incorporate because I think the notifications that come through on various apps designed to remind us to do certain things can be helpful, but there too, we tend to attenuate to them and we simply either do not notice them or we start to swipe them away over time.

Visual reminders can be very effective if you want to use them great.

You certainly don't have to, but if you're going to use them, you want to update them every single day.

Otherwise, your visual system and certainly the areas of your brain that are associated with assessing novelty and emotionality will simply start to cancel those away.

The first common myth that we're dispelling is what I call the post-it fallacy.

The idea that if you write something down on a post-it and you post it in an area that you frequent every morning or every day or every night, that you stand a higher probability of adhering to what is on that post-it, that is simply not true.

You would want to replace it every day and you would also be wise to move that post-it to different locations.

The second myth is that if you want to increase your motivation toward pursuing a goal and you want to increase the probability that you will achieve that goal, that you should engage in so-called accountability, meaning that you should tell people you are going to achieve that goal.

Now, I realize that there are some prominent examples in pop culture of people posting something on social media and saying, you know, in three years, I'm going to be, you know, playing in Wembley Stadium or in two years, watch, I'm going to be at the top level of my game, whatever that game happens to be.

Sure, there are examples of that and those are beautiful and inspiring examples.

However, the scientific data tell us that if we inform people around us that, for instance, we are going to write a book or that we're going to start a podcast or that we are going to run a marathon or whatever it happens to be, more often than not, we get feedback that is generally positive in form.

I think that's good and to be expected, frankly, you know, if a friend tells us, hey, I'm going to write a book or I'm going to pursue a new fitness goal or I'm going to learn a language, we say, great, go for it.

You can totally do it.

You're very likely to succeed.

Go for it.

How do you want me to support you?

Is there anything I can do to support you?

Those all are, frankly, healthy exchanges and yet the data tell us that the positive feedback that we get from others when we announce that we're going after a goal activates certain reward systems and motivation systems within our brain that then quickly dissipate and then diminish the probability that we'll engage in the type of behaviors that actually lead us to achieve that goal.

So we have the post-it fallacy and we have the myth of accountability fallacy within the context of goal pursuit.

I, of course, am not saying that accountability is bad.

To the contrary, accountability is a great thing both to ourselves and to others.

It's something that we should all cultivate throughout life.

I'm merely talking about the myth of accountability in the context of goal pursuit and I'm actually being more specific than that.

I'm saying don't tell people that you're going to go out and achieve something prior to initiating action toward that goal because, in fact, the positive feedback that we get will diminish the probability that we will continually pursue that goal in a way that allows us to achieve it.

So you could interpret the information I just gave you as meaning that perhaps it's better to tell someone who doubts us that we are going to achieve a goal and then, of course, they're not going to give us the positive feedback.

We're not going to get all that reward circuitry activated rather we're going to get the friction circuitry activated of us wanting to prove ourselves and overcome the, let's just say, the lack of faith in our ability to achieve a goal and indeed that can work.

There is evidence that can work.

But then, of course, you have to find someone who doesn't believe in you.

You have to get them to tell you they don't believe in you and that could have all sorts of deleterious psychological effects that might undermine the goal pursuit process and other things as well.

So if you are lucky enough to know somebody who doubts you, go ahead, tell them that you want to pursue your specific priority goal.

But more likely than not, the best thing to do is to simply keep that goal to yourself.

You may need to inform a family member or others of where you will be between the hours of say 8am and 9am if you're going to be exercising or learning language or meditating, whatever it is during that period of time.

But what I'm referring to here is what I will call the don't tell the world rule.

Don't tell the world that you're going to achieve X, Y, or Z.

Just simply tell yourself.

In fact, I would suggest that the more time you can spend with that one or two or three sheets of paper where you defined the goal, the specific actions that you're going to take, how you're going to measure progress, which we'll talk about a bit more later.

The more time that you can spend with that goal in your mind and on that paper, the higher the probability that you will achieve that goal.

That stands in stark contrast to telling everyone around you that you're going to achieve a certain goal, the so-called accountability myth or the myth of accountability within the context of goal pursuit would be the more specific way to describe that myth.

Now, it turns out there is some utility to having one person that is a so-called accountability buddy if that person is really just strictly addressing accountability.

They are reminding you to do what you need to do or they are asking you, did you do what you said you were going to do?

But that's a bit more of a tough love accountability model.

What the don't tell the world rule is really about is not getting the kind of dopamine and other forms of neurochemical reward that come from just simply saying that you're going to pursue a goal because as you'll soon learn, that dopamine and other molecules too, of course, are going to be critically important, not just for initiating the sorts of actions required to achieve your goals, but for re-engaging and constantly updating your strategy to ensure that you reach your goals.

It's worth mentioning that the friction model of achieving your goals does work.

I mean, I, for instance, am somebody that if I were to say to a family member or friend, hey, I'm going to achieve a particular goal and they said, no, there's no way you can do it.

That would recruit a certain set of neural circuits and hormones and neurochemicals in me that would make me much more likely to lean into the required set of efforts to achieve that goal.

But there's a danger in approaching a given goal that way, especially if the goal is something that you already want to pursue, which is that then a lot of your effort becomes framed in the context of making someone else wrong as opposed to achieving the goal.

And of course, you can do two things in parallel.

You can achieve your goal and prove somebody else wrong.

But as we've talked about in various episodes on motivation and pursuit and the dopamine system, and as we'll talk about a bit more in a few minutes, there's something tremendously powerful about learning how to derive pleasure from the effort process itself.

That is learning to enjoy the process of pursuing a goal for sake of that goal for yourself rather than trying to pursue a goal simply to prove somebody else wrong.

I'll just tell you right now that intrinsic motivation, motivation that is directly attached to the thing that you are doing and root to a goal is the most powerful and sustainable source of motivation.

As many of you know, I've been taking AG1 daily since 2012, so I'm delighted that they're sponsoring the podcast.

AG1 is a vitamin mineral probiotic drink that's designed to meet all of your foundational nutrition needs.

Now, of course, I try to get enough servings of vitamins and minerals through whole food sources that include vegetables and fruits every day.

But oftentimes, I simply can't get enough servings.

But with AG1, I'm sure to get enough vitamins and minerals and the probiotics that I need, and it also contains adaptogens to help buffer stress.

Simply put, I always feel better when I take AG1.

I have more focus and energy and I sleep better and it also happens to taste great. For all these reasons, whenever I'm asked if you could take just one supplement, what would it be, I answer AG1.

If you'd like to try AG1, go to drinkag1.com slash huberman to claim a special offer. They'll give you five free travel packs plus a year supply of vitamin D3K2.

Again, that's drinkag1.com slash huberman.

The final protocol related to goal setting, because really up until now, we've been talking only about goal setting.

We haven't yet talked about goal pursuit, is that you want your goal to be measurable. And when we say measurable, you really have to define two things.

First of all, you are going to have to define how long you are going to pursue this goal overall.

In other words, how long you think it will take before you achieve your goal.

And in addition to that, you are going to have to define how much time you are going to spend pursuing that goal each week or each day.

Now there are an infinite number of time blocks that one could use to answer these questions.

So for instance, you could set an overall yearly goal and you could break it down into monthly goals where you spend X amount of time on that goal each week and X amount of time on that goal each day and essentially ladder up from the shortest timeframe to the longest timeframe required to achieve that goal.

And certainly all of that is doable, but that I believe is going to be an overwhelming amount of work and indeed is going to be counterproductive toward achieving your goal. What I recommend, which of course is gleaned from the scientific literature, or at least the consistencies or the center of mass, that is the major findings that show up again and again in the scientific literature on goal setting and pursuit, is that you establish a roughly 12 week period of time to focus on your specific goal.

Now of course, achieving the entire goal might take longer than 12 weeks, but chances are it's not going to take shorter than 12 weeks, although if it does, you could simply close out that goal pursuit and then pursue another goal.

There's no reason you couldn't do that.

But there's nothing magical about this 12 week period, but it seems to adhere to a number of things in society and culture and work schedules, in seasonality, meaning the holidays and the shifts in the overall seasons that works for most goals and most people.

So a 12 week cycle or roughly a three month cycle, sometimes called the quarterly cycle of goal pursuit toward your particular goal, I think is a good macro time to focus on.

And then within that 12 week cycle to define very clearly how many hours each week and each day and on which days you will pursue that goal.

So it's 12 week cycle to pursue your goal.

That goal might be achieved by the end of that 12 weeks or even prior.

It might not be, but you said a 12 week cycle or quarterly cycle, or if you prefer to think about it, a three month cycle.

And then you define how many hours per week you are going to spend pursuing that goal.

And then you define how many hours per day you are going to spend pursuing that goal.

And then you define which days of the week you are going to pursue that particular goal.

I think those three numbers, the 12 week quarterly, aka three month cycle, the number of hours per week and the number of hours per day and particular days that you're going to spend working on a goal is going to be effective for 90%, if not more of different types of goals out there.

And as with defining the specific goal itself, I highly recommend that you write this down with a pen or pencil, there's just so much data to support the fact that writing things down ideally in complete sentences on a piece of paper with a pen or pencil serves to reinforce the goal setting and pursuit process, greatly increasing the probability that you will achieve those goals.

So what you're really defining in that process are the specific verb actions that you are going to take and the specific quantifiable amount of time that you are engaging in those verb actions in order to achieve your goal.

What we haven't discussed yet, however, is how to define or quantify the goal itself.

Now, of course, in different endeavors, you're going to have the opportunity to quantify and define goal achievement in different ways.

So for instance, if you want to be able to run a sub six minute mile or a sub five minute mile, or if you're really impressive, a sub four minute mile, well, that's a highly quantifiable goal that you can break down into a series of training steps or milestones, meaning that you could quantify at the beginning of your goal pursuit, how long it takes you to run a mile, you could then set out to achieve a faster time within two weeks or three weeks and then do the appropriate training to achieve those numbers and simply keep updating that in order to eventually reach your quantifiable goal at 12 weeks.

Again, you might not complete your goal of running a sub five minute mile or sub six minute mile at the end of 12 weeks, but perhaps if your goal is to be able to run a sub five minute mile by the end of the calendar year and you're initiating this whole goal pursuit thing on the first of the year, well, then you have 12 months broken into four three month cycles and you would essentially set the quantifiable goal at the end of the year, December 31st, perhaps is when you actually do that run where you hopefully would achieve that sub six minute or five minute mile or maybe four minute mile and then you backtrack from that date and you set milestones of goals that you're trying to achieve.

That's a highly quantifiable set of goals because it is literally distance over time.

However, in a lot of pursuits, in fact, I would argue in most pursuits, you don't have that very clear quantifiable result.

You might have, for instance, the achievement of a doctoral degree or a bachelor's degree or an AA degree or a professional degree of some sort, which represents a finish line.

You could perhaps even attach a grade point average or a publication goal to that.

But in most endeavors that aren't athletic or aren't within the realm of finance, it becomes much harder to very clearly define your goal in purely quantitative terms.

So that is the reason why we spent so much time talking about the measurability of the specific amount of time that you're going to engage in the verb actions that each day, which days each week over the course of these 12 week cycles, because ultimately what's going to allow you to arrive at successful achievement of your goal, regardless of whether or not that goal is highly quantifiable X number of dollars X number of minutes to complete a mile run or swim, etc.

Or it's something that's a bit more nebulous in terms of quantifiability, like conversational French, right?

There's conversational French that you can learn.

There's also conversational French that incorporates humor or that incorporates good humor or perhaps

you want to get better at writing poetry or simply spend time writing poetry.

Can you quantify the quality of that poetry?

Well, perhaps, you know, if you could win a particular prize for poetry, but I think for most endeavors, they are more loosely defined in terms of their quantifiability.

Now we can always attach quantifiability to the ultimate end goal if we choose.

So for instance, I could decide that I'm going to learn conversational French and I could decide that the ultimate goal at the end of this 12 week period is to be able to have a 10 minute conversation with somebody who is fluent in French, they're native, born in France, and that I'm going to make zero mistakes.

It's a pretty lofty goal.

But the point being that if you are picking a goal that is not easily quantifiable, you want to be exceptionally precise about the amount of time that you are going to spend engaging in the specific verb actions that are going to allow you to make progress toward your goal.

Because ultimately, whether or not it's a highly quantifiable goal or it's a more loosely quantifiable goal in terms of the end goal, the process of achieving goals is always going to be in the form of actions and actions themselves are always quantifiable.

It's number of hours of dedicated work toward that particular goal.

A common example of an end goal that's very hard to quantify in terms of the end goal itself is the writing of a book, for instance.

Now you could set out to write an 800 page book, but most people agree that the length of the book should have something more or less to do with the content and not the other way around.

In other words, that you don't just want to add a words in order to achieve a certain number of pages.

That said, most all experienced writers will tell you at least two things.

They'll tell you, first, don't wait for inspiration.

Simply set a period of time each day that you're going to write and write X number of words or for X amount of time each day or perhaps even just three days a week.

But most of the experienced writers that I've spoken to write every single day and they write 800 words per day or 2000 words per day or 500 words per day, whatever they can do consistently.

They may do it for time.

They may do it for words, but they are writing during that time.

They are not waiting for inspiration to land on them.

They're not trying to get optimally caffeinated and perhaps they didn't even sleep that well the night before.

In other words, they are dedicated to engaging in a particular number of hours of word generating action rather than trying to focus on getting the number one bestseller at the end after

the book is published.

Of course, they can wish for that number one position on the bestseller chart, but ultimately the greatest probability of achieving that goal is going to come from engaging in a particular number of hours of generating a particular number of words each day.

So again, the highest probability of achieving our goals of achieving any kind of goal is going to be by understanding the specific verb actions that we need to engage in and then quantifying the amount of time that we engage in those specific word actions and then simply doing those verbs.

So up until now, we've been talking about goal setting and we really haven't talked about goal pursuit itself.

So now I'd like to talk about what the scientific literature says is the best protocol for initiating our goal pursuit, for starting toward our goal.

And to do so, we have to address a set of key questions.

The questions you have to ask yourself are, do I want to pursue this goal, meaning am I highly motivated to pursue this goal or even mildly motivated to pursue this goal?

Do I want to do the things involved to get this thing, to accomplish this thing?

Or am I feeling resistance?

Do I not want to pursue this goal?

Or perhaps this is a day-to-day shift that occurs where some days you're really motivated and other days you are not.

Now the reason to ask yourself the set of questions is that the data say that there are two different strategies, in fact, two markedly different strategies that you'll want to incorporate depending on whether or not you're motivated or you are unmotivated to pursue that particular goal, for whatever reason.

And of course there's an entire psychology to motivation and you could get a therapist or a coach to work with in order to address that underlying psychology.

Yes, it might ladder back to childhood issues, it might ladder back to esteem things.

None of that can be covered here in any sort of meaningful depth because frankly we each have different circumstances, different pasts, different psychologies.

There are, however, some universals that we can all apply in order to help us get started toward our goal.

And this is nested in this whole concept of whether or not we should visualize the end and successful completion of our goal.

So keep the end in mind as we start off toward a goal or whether or not we should incorporate a different strategy.

Here's how it goes.

So if you ask yourself, do I want to achieve this goal?

And I would hope the answer is yes because the overall goal should be something that you want to pursue.

It should be something that you are deeply desiring to accomplish.

Then you have to ask yourself, next, do I want to do the things required to achieve that goal?

Now, maybe you don't want to do all of them, you only want to do some of them, but given that you've now carefully quantified which specific actions you're going to be doing

on which days and for how many hours and how many weeks for these 12-week blocks, you could simply ask yourself, do I want to do this thing today?

And if the answer is yes, well, then it turns out that spending just one to three, maybe five minutes, but even just one minute visualizing the outcome, the positive outcome, of course, and the feeling state that you may have because, of course, you don't know, you don't have a time machine, you can't feel yourself into the future, but you can make a good guess as to how you might feel in the future if you accomplish that goal.

Taking one to three, maybe five minutes in a sort of meditation, although sort of a visualization is perhaps the better way to describe it, thinking about that feeling state and the outcome and some of the things that are going to be associated with that outcome turns out to be a great practice to engage in just prior to initiating that day's work toward that goal.

However, if you arrive to your practice, meaning you show up to the piano to learn piano or you're sitting down to the table, or maybe you haven't even gotten enough motivation to go toward the piano or toward your notebook or computer or whatever landscape it is that you are going to be pursuing your goal within, and you are having, quote, unquote, a hard time getting motivated toward that goal, well, then it turns out what the scientific literature tells us is that visualizing the end, keeping the end in mind, positive visualization of all the good things that you'll experience when you achieve that goal is not going to be an effective strategy to motivate you.

Rather, if you are not feeling motivated, then what the scientific literature tells us is that you actually want to spend one to three, maybe five minutes visualizing failure, visualizing how terrible you will feel if you do not achieve your goal, visualizing severe consequences perhaps mostly of the sort like telling yourself, gosh, I set a goal, I've set a 12 week block, I quantify it, I know I want to do this, here I have the time to do it and I'm simply just not doing it.

And in that case, you would think, okay, well, you should kind of build yourself up, maybe call a friend, text a friend, get some encouragement.

No, the scientific literature tells us that when we are not motivated, and it is a goal that we actually want to pursue.

And of course, here I'm talking about adaptive goal pursuit, meaning things that are going to enrich your mental health, physical health, et cetera, not things that are going to be detrimental to us.

Well, then if you're not feeling motivated, you want to spend one to three, perhaps five minutes meditating, concentrating on what it's going to feel like to fail and the fact that you are not succeeding, but indeed that you are failing.

And I know this sounds like rather harsh advice that this protocol sounds like kind of a self flagellating protocol.

It's not intended to be self flagellation, in fact, it should not be self flagellation, but rather what you want to do when you are not motivated is to think about failure and what that failure at the end of 12 weeks will feel like.

And the reason for that is that the data tell us that when we visualize positive outcomes, yes, it deploys certain neurochemicals in our brain and body that make us feel good.

Although frankly, if you've heard that imagining something creates the same neurochemical and

neural circuit states in the brain as actually experiencing that thing, that is simply not true.

That's a myth.

We've talked about this in previous episodes.

That's simply not true.

But if you are having a hard time getting motivated toward a goal that you actually want to achieve, then spending that short amount of time thinking about how lousy you'll feel when you don't achieve it recruits certain elements of your so-called autonomic nervous system.

It creates shifts in the release of things like epinephrine nor epinephrine, even release of the so-called reward molecule dopamine, which in fact is not the molecule of reward.

It is the molecule of motivation and it's associated with pain.

It's associated with negative thoughts and of course it's associated with positive thoughts and outcomes.

But basically what I'm saying is if you're highly motivated to do something, you're ready to go spend one to three minutes, maybe five, visualizing the positive outcomes that you're going to experience when you ultimately finish out that 12 week cycle as a consequence of all the great work that you've done.

If however you are not motivated, if you're like, I don't want to do this thing.

I'm procrastinating.

I'm just not feeling like doing it.

Yes, I want to achieve the goal, but I just don't feel like doing it.

Well, then your task is to take one to three, maybe five minutes and think about how much more lousy you will feel when you do not achieve that goal at the end of 12 weeks.

And that the data tell us recruits certain elements of your nervous system, your hormonal system that are more successful in getting you into action, into starting toward your goal than were you to try and build yourself up towards all that positivity.

So yes, indeed, there is a place for negative thinking.

I'd like to take a quick break and acknowledge our sponsor, Inside Tracker.

Inside Tracker is a personalized nutrition platform that analyzes data from your blood and DNA to help you better understand your body and help you meet your health goals.

I'm a big believer in getting regular blood work done for the simple reason that many of the factors that impact your immediate and longterm health can only be analyzed from a quality blood test.

However, with a lot of blood tests out there, you get information back about blood lipids about hormones and so on, but you don't know what to do with that information.

With Inside Tracker, they have a personalized platform that makes it very easy to understand your data, that is, to understand what those lipids, what those hormone levels, etc. mean, and behavioral supplement nutrition and other protocols to adjust those numbers to bring them into the ranges that are ideal for your immediate and longterm health.

Inside Tracker's ultimate plan now includes measures of both ApoB and of insulin, which are key indicators of cardiovascular health and energy regulation.

If you'd like to try Inside Tracker, you can visit insidetracker.com slash Huberman to get 20% off any of Inside Tracker's plans.

Again, that's insidetracker.com slash Huberman to get 20% off.

Now in terms of tools or protocols to both initiate and to sustain effort during your goal pursuit process, we need to think about the specific time domain or the amount of time that we're trying to do that within.

So for instance, there are tools that you can use to stay motivated within the one-hour learning block that you happen to be doing on Monday morning, for instance.

And there are other tools and protocols that you can incorporate towards staying motivated from one day to the next or from one week to the next.

But I think the most useful of those tools are going to be the tools that you incorporate to stay motivated within a given training block or practice block toward your goal.

Because what I just described a few minutes ago was the process of how to initiate your daily work.

Right?

You ask yourself that question.

Am I motivated?

The answer could be yes, could be no.

If you really want to get, you know, quantitative about it, you could give yourself a one to 10 score, 10 being the most motivated, frankly, I'm not that quantitative about that sort of thing.

I'm more subjective about it, but I know some of you are real number junkies and you really like to quantify everything, keep a journal and look back, see how that relates to your sleep.

You know, some people are of that orientation.

Other people like myself are simply going to, you know, sit down and say, okay, it's time.

It's time to train or it's time to practice, whatever the thing may be.

How motivated am I?

I'm like a six out of 10 or a seven out of 10.

Okay.

I'm ready to go.

I'm going to visualize the end in mind in a positive way, or if I'm a two out of 10 or anything less than a four out of 10, I'm thinking, I'm not that motivated.

So then I'm going to basically scare myself into doing the work that day.

So that's how you initiate the work each day.

And I just gave you a couple of quick examples of how you could quantify that took me about 30 seconds to do that example out loud.

Take you about 30 seconds to do.

But again, if you want to quantify it in more detail and write it down and relate it to other things, be my guest.

So now you already have a science-based protocol for how to get started each day toward your goal.

Now, what about within the one or two hour block or perhaps 90 minute block that you're going to use to pursue your goal?

And here it's very important that you have a number of tools that will allow you to both set the optimal amount of focus so that you're really concentrating on pursuing that goal.

You're concentrated on the verb actions that will deliver you to that goal is perhaps the best way to state that and that you can constantly update or renew your level of focus should it start to dissipate.

Now I want to be clear.

I've done entire episodes about focus and how to increase focus with behavioral tools, everything related to meditation, which indeed can increase your ability to focus.

I've talked about nutritional tools, supplementation tools, prescription drug related tools.

There's a lot of information on that.

You can simply go to hubermanlab.com, put focus into the search function and it will take you to not only those episodes and the toolkit for that, but the specific time stamps for that.

But what we are going to talk about now is not about how to increase focus per se, rather it's about how to use focus in particular visual focus in order to increase your or maintain your level of motivation within a given learning block, within a given batch of time on a given day where you are pursuing your goal, you're engaging in that practice, which of course will include frustration and anxiety.

It has to if you're going to get any better and how to set that motivation and keep that motivation throughout that hour or 90 minutes or two hours is critical.

So how do you do that?

Well, it turns out it's fairly straightforward.

So it's anchored in the fact that your cognitive focus, your ability to maintain a narrow cone of attention, as well as your bodily state of readiness and your mental state of readiness to perform work is powerfully anchored to your visual system.

As many of you have heard me say before, your eyes are actually two pieces of brain, I mean to be more specific, the neural retinas that line the back of your eyes like pie crusts are literally two pieces of your central nervous system of your brain that were extruded from the cranial vault during development.

So yes, these two bits.

And for those listening, I'm just pointing to my eyes, your eyes are two pieces of brain outside of your skull and your eyes can view things broadly so you can so-called soften your gaze and view the entire horizon.

You can see the periphery of the room by relaxing your eyes.

You can actually do this now.

In fact, when you drive most of the time you're doing this, you're not looking at a particular focal point.

You're viewing things in so-called panoramic vision.

And of course you can draw your visual focus to a particular occasion, what we call a virgin's eye movement.

That is you're bringing your eyes in toward the center, toward your nose a little bit and you're focusing them in a more narrow cone of visual attention.

This is something you can do almost imperceptibly to others, although if we were to measure your eye movements, what we would see is that your eyes are actually moving inward a little bit toward your nose when you do this virgin's eye movement and narrowing that cone of visual attention and then they're relaxing into a state of being slightly further out from

your nose.

Not the eyes themselves, of course, they can't move within the sockets, but the pupils of your eyes are moving out a bit from your nose and you're in so-called panoramic vision.

So essentially what I'm saying is that you can narrow or broaden your visual attention and that's something that can take a little bit of practice.

I highly recommend that you try this and then you practice it a little bit.

But indeed, everyone has the neural machinery to do this from birth.

This is not something that requires neural plasticity to be able to do.

You can do this right now.

You can narrow your visual attention.

You can expand or relax your visual attention and thereby narrow or relax your visual field from being smaller or larger.

There are data that show that when we narrow our visual attention and we hold that narrow visual attention on a spot, several things happen.

First of all, there's recruitment of circuitry within the so-called brainstem that then deploys neurochemicals that increase our level of alertness and arousal.

That's right.

When you focus your visual attention on a more narrow location or one location in front of you and you hold that focus, you are causing the release of neurochemicals that increase your overall level of alertness in the brain and body.

Conversely, when you relax your visual focus, so-called panoramic vision, you are turning off that recruitment.

You're not actively recruiting molecules for relaxation within the brain, but you are turning off this release of the neurochemicals associated with increasing focus and arousal.

Why am I talking about this in the context of goal pursuit?

Well, if you are feeling lack of motivation at any point within a given training block or baptism calling it, this could be at the beginning, this could be five minutes in, this could be half an hour in, you would be wise to pick a visual target.

That is within the general range of the work that you're trying to perform.

In other words, if you're doing desk work or the piece of paper, you would draw that visual target on a piece of paper, approximately the same distance that you were reading or that you were looking at music.

You can tell how little playing of piano I've done in my life, but the point being that you set the visual target at approximately the same distance that you would be performing your particular work.

If you're doing a sport, the distance might be some many meters off in the distance, whereas if you're doing desk work of some kind, then it might be much closer.

Then you focus your eyes on that location and you actively work to maintain that focus, just like I'm doing now into the camera for a given period of time.

I recommend that you set a timer and that you, of course, allow yourself to blink like I just did there and that you try and achieve at least 30 seconds, but even better would be 60 seconds.

Even better would be 90 seconds of that focused virgins eye movement, during which several things happen, including the deployment of those neurochemicals from the brainstem that

I talked about before, which are going to increase your level of autonomic arousal and also increase your level of focus further.

There I'm not just talking about visual focus, I'm talking about cognitive focus.

It has also been shown that when we focus on a particular point in the way that I'm describing here, that it increases our so-called systolic blood pressure.

As many of you know, blood pressure is always described to us as a given number over another number and the first number is the so-called systole or systolic pressure, which is the amount of pressure in your vascular system when the heart beats as the fluid of your blood is pumping through the arteries, veins, and capillaries of your system and then the bottom number is the amount of pressure within those arteries, veins, and capillaries in between heartbeat.

So it's the systolic over the diastolic.

And what we know is that visual focus, and here I'm still holding my now on the camera.

So for those of you listening, I probably blinked once or twice, but I'm really trying hard to maintain my focus directly within the camera.

This visual focus increases the systolic blood pressure.

It increases the deployment of those neurochemicals from the brainstem and we know it also can recruit the liberation of molecules such as dopamine and some associated molecules elsewhere in the brain that together act in a synergistic way to increase our level of focus and motivation.

This is based again on work describing the neural circuitry of what I'm describing here and work from Emily Balchettis' lab, which has shown that if people focus on a target, on a goal line, literally a physical location within their environment and then they initiate some work, it could be physical work or cognitive work.

Not only do they experience significantly decreased levels of perceived effort while engaging in that work, but they also complete that work in a significantly reduced amount of time.

Meaning that within a given training belt or training block, you are able to get significantly more work done and you perceive that as less effortful or requiring less effort than had you not done this visual focus.

I've been doing this for quite some time now into the camera.

This is actually a practice that I've been doing for well over a decade and it's actually a practice that I use when I podcast or when I post on social media.

It's part of the reason why I'm accused of being a non-blinker quite often, but I want to remind people that you are allowed to blink, don't let your eyes dry out.

It's perfectly fine to blink.

It's not going to inhibit the effectiveness of this protocol, but I don't think I can really overstate how valuable this sort of protocol is.

First of all, it's completely behavioral.

It costs nothing.

It's completely safe as long as you remember to blink and it allows you to increase your level of focus, your level of motivation and the sustainability of your focus and motivation while in goal pursuit.

So it's a quite valuable protocol to incorporate and it's something that you can do once for 30 seconds and then lean into whatever it is, your writing process, your running process.

It's something that you could do repeatedly throughout that learning bout and it's something that you can practice offline a little bit away from that training bout as a means to sort of learn and get familiar with so that then you can incorporate it very quickly and repeatedly and with much more effectiveness during these different learning bouts. Again, it's a highly valuable tool that's grounded in neural circuitry, grounded in neurochemistry and that Emily Balchettis' lab has shown in numerous domains, physical pursuits, cognitive pursuits can really help people achieve their goals and to achieve them more easily or at least with less perceived effort and more quickly.

Now we can get a bit more granular about the incorporation of this tool, this protocol, but before we do, we should acknowledge that all of the things that lend themselves to improved cognitive focus and physical ability still hold true, right?

You still need to get good sleep as many nights of your life as you possibly can.

You still need to eat properly.

You still need to try and limit your stress.

We have podcast episodes related to all of those topics.

We have toolkits available at zero cost related to all of those topics.

I'm not saying that this visual focus or visual target training is the only tool that you should incorporate.

It's a tool that you want to superimpose on the foundation of all the things that bring you to your practice with the best possible cognition, the best possible physical readiness and that when added to that foundation of excellent sleep, excellent nutrition, social connection, sunlight in the morning, et cetera, is going to increase the probability that you're going to make those learning bouts as effective as possible.

Now, some of you may be thinking, elevating your blood pressure is bad.

Why would I want to elevate my blood pressure?

Ah, well, it turns out that the increases in systolic blood pressure achieved with this visual target training or focusing on a finish line for some period of time are transient and they are perfectly safe.

So essentially what it does is it boosts or bolsters the activity of the autonomic nervous system.

It kick starts the deployment of those chemicals and those neural circuits that then allow you to be motivated for some period of time.

But then that is a transient increase in autonomic rousal, which is why perhaps every 20 minutes or perhaps on the hour, you might stop, do a 30 second or 60 second visual target training and then lean back into your process of however you it is that you are pursuing your goal.

I should also mention that if your eyes are getting tired doing whatever goal pursuit you happen to be engaged in, it's also a good idea to go into that panoramic vision mode.

The easiest way to do that is to go outside or to be outside and to view a horizon and not look at any one particular point on the horizon.

But if you're indoors as I am now, you can also just relax your eyes, you know, blinking a few times and getting rid of that virgin's eye movement and try and visualize the corners of the room or the sides of the room rather the floor and the ceiling all at once.

That's a good way to explain how to so-called relax your eyes and take you out of that virgin's eye movement.

And I say this because a lot of people will feel when they're pursuing their goal that it's kind of fatiguing.

So you have to remember to breathe, right?

You still want to breathe as you're pursuing your goal and you certainly want to be visually focused on your goal.

So you're cognitively focused on your goal and you're motivated, but that from time to time you also relax, take a moment, shake things off, look into your panoramic vision mode and then go back to your mode of goal pursuit.

Now there are a few other protocols that might seem oh so simple, but frankly are oh so effective that I'd be remiss if I didn't mention them.

The first of those is actually something that I'm borrowing from Tim Ferriss who did a post on Instagram, which we will link to, which I think is just spectacular, which is 30 things that he wished he had known when he was 20.

And while the internet is chock-a-block full of such lists, that particular list is truly impressive.

Those are things that I too wish I had known when I was 20, but also when I was 30 and 40 and so on.

But one particular thing on that list of 30 is particularly relevant now, which is that the best productivity app is already on your phone, which is to put your phone into airplane mode or more ideally, and this is the one that I try my best to incorporate to simply turn the phone off and remove it from my workouts or my attempts to learn language or my attempts to learn anything.

I realize that some people need to keep their phone with them for reasons related to communicating with family or coworkers, et cetera.

That's fine if you need your phone.

But to the extent that you can remove yourself from distractions, that's certainly going to enhance your ability to focus on what you need to focus on in pursuing your goals.

That sort of stands without saying it's kind of a duh.

And yet I think a lot of people are searching far and wide for the productivity app for the secret hack for the thing that's going to allow them to be productive.

And oftentimes there are dues actions that we can take in order to become more productive.

We're talking about some of those today.

We've talked about those in other episodes, but there are, of course, important don'ts.

So don't have your phone facing up with Wi-Fi and cellular service on if you want to be productive at something that doesn't involve your phone.

Ideally, you'll turn it over.

You'll turn it off.

You'll get rid of it.

You'll put it in the next room.

If you're like me, you'll sometimes lock it in the car.

I think the most extreme that I've ever gone to ensure that I didn't engage with my phone during goal pursuit was during the early days of having my laboratory and I was writing multiple grants in parallel, which is an immense amount of work.

I would walk into the laboratory in the morning and I would hand a student or postdoc my phone

and I'd say, don't give this back to me until 5 p.m.

And if I ask for it back, if I even ask for it once, everyone in the lab gets \$500.

There were quite a few people in my lab and so it's a significant cost to that.

And I must tell you there were numerous times throughout the day when I impulsively just thought, okay, I'm going to need my phone.

Damn it.

I don't want to have to do it.

I want to demonstrate to them that I could create an incentive system whereby I could basically scruff myself into getting the work done and indeed, much to their dismay, I never once had to pay them out, although when we got the grants and indeed, even when we didn't get the grants, I did take them all to dinner.

Now another key protocol for maintaining motivation while pursuing your goals stems from our understanding

of the dopamine reward and motivation pathways.

For which I have done multiple, indeed, three podcast episodes previously and we can provide a link to all three of those as well as the toolkit that we've published and that's available to you at zero cost on our website about how to regulate dopamine, both baseline dopamine stores and peaks in dopamine.

There's a lot there to be understood and incorporated because it has to do with various things not just in the realm of goal pursuit, but also feelings of well-being, staving off depression and things of that sort.

The dopamine system is linked to so many important aspects of life, far too many than we could discuss right now and we have those previous episodes in which we do discuss all of that material.

Nonetheless, it is important to understand that dopamine is the molecule of motivation and to some extent reward, but really motivation and that if you want to maintain consistent motivation during say your individual bouts of work toward your goals and from one bout to the next, so not just within a session, but from day to day across sessions and from week to week and indeed from 12 week cycle to 12 week cycle if that's required and from one goal that you set to the next goal that you define and decide to pursue, you want to understand this particular feature of dopamine, which is that yes, dopamine and its release is highly valuable toward getting more motivated and feeling more motivated, but that it has certain properties related to things like dopamine reward prediction error, baselines of dopamine, et cetera, that make it the case that if you reward yourself every time you reach a milestone, say you finish out an hour or two hours of work, so you treat yourself to something, you reward yourself that you are going to diminish both the potency of that reward and you're going to reduce your motivation over time.

That might be surprising to you, but if you were to watch those episodes, it would all become clear as to why that is the case.

It is also true that if you were to only reward yourself when you accomplish your goal or perhaps more commonly, if you look at the accomplishment of your goal as the only reward in the whole process of goal pursuit and achievement, that is going to undermine your probability of success as well.

Rather, the best way to incorporate the mechanics of the dopamine system such that you can

achieve

not just immediate motivation, but ongoing motivation is to incorporate what is referred to as random intermittent reinforcement, which is what the casinos use to keep people playing and it simply means randomly reward yourself and randomly don't reward yourself for successful completion of milestones.

Those milestones could be within a bout of effort or it could be across bouts of effort.

So let's say you set out at the beginning on your piece of paper to basically let's say run or practice at some cognitive endeavor, four hours total per week and you're going to do that Monday, Wednesday, Friday and Saturday.

Should you reward yourself at the end of each session?

Should you reward yourself at the end of each week?

The answer is it depends and it should depend in a random intermittent way.

So the simplest way to do this is whenever you complete a milestone, could be at the end of a day, you did your one hour, whatever it was that you designated you were going to do on that particular day.

Should you reward yourself cognitively or with some physical thing, I don't know what that physical thing might be, but I don't know, could be a meal, could be a movie, could be something that you enjoy.

Well the answer is you should flip a coin and if it's heads, yes, reward yourself and if it's tails, don't.

It's that simple.

It is that simple.

It should be 50, 50 probability and it's random as to whether or not you reward yourself.

Now with physical rewards like monetary rewards or food rewards or a movie or participating in something else that you enjoy, it's a bit easier to define the cognitive rewarding of one's own efforts is something that people really struggle to comprehend.

But what I'm not referring to when I say cognitive rewards is I'm not referring to saying yes, I'm the best and really trying to shower yourself with internal praise and tell yourself that you're the greatest thing that ever happened simply because you performed this learning about what I'm simply referring to is the kind of internal dopamine reward that comes from telling yourself like, yes, I'm making progress.

I'm making progress.

I'm on the path.

I'm able to set a goal and achieve a goal, which might seem like a healthy thing to do psychologically.

And in fact, it is.

It's great.

And I think it's really important that people be able to self reward themselves, especially self reward for verbs that put them in a more adaptive stance in life that enhance their mental health, physical health and performance.

And that of course also includes relationships.

We're not just talking about solitary pursuits here.

We're talking about pursuits that bring us into the world that allows to lean into life with more vigor and with more effectiveness, not just to help ourselves, but to help others.

So what I'm referring to is completing something and internally patting yourself on the back for having completed that thing.

That is a good thing to do.

But if you want to maintain ongoing motivation, you're not going to do that every time.

You're not going to punish yourself, but rather you finish out a bout of learning.

You flip the coin.

Let's say it lands tails on that day.

You simply shift into the next thing you need to do that day.

Now it is not easy to suppress thoughts.

We know this.

It's very hard to suppress negative thoughts, but it's still hard to suppress positive thoughts.

So internally, if you're glowing from the fact that you performed well, don't try and suppress that.

That's okay.

But if you flip a tails, then you don't want to actively engage in a self reward process.

However, if you flip the coin and it's heads, well, then you should absolutely engage in a self reward process.

And that process should consist of 30 to 60 seconds of closing your eyes.

Well, you don't have to.

It works better if you close your eyes and simply thinking about the fact that, yes, you can set a goal.

You can engage in the specific set of questions.

Do I want to do this practice today?

Do I not want to do this practice today?

And then the specific set of actions, maybe they involve visual focus and the other tools we talked about turning off of your phone, et cetera.

You are somebody who can get things done.

You are somebody that is moving forward toward your particular goal.

And so you just sort of create a little bit of a positive cognitive loop around that ability that you are in fact building up.

And that's something that people often overlook, which is that not only is moving toward a goal great because it establishes more robustness in the neural circuits that allow us to perform that thing.

Right?

I mean, after all, that's what learning is.

Eventually you don't achieve the same frustration and errors that you do when trying to perform that thing.

Eventually you learn how to play the piano.

You learn how to speak conversational French.

You run that sub six minute mile, but also the neural circuits associated with self-generated motivation and with the tools that we're talking about themselves are subject to neural plasticity. So those become more robust.

And that's fantastic because when you eventually reach one goal, I would hope that you would then update and set out to achieve another goal.

And you will find that over time, you will be more effective in achieving other goals by virtue of the work that you did in pursuing a previous goal, because ultimately it's really about defining goals and then learning how to quantify the actions required and then engaging in those actions.

So there's the specific circuits involved in generating those actions, which are very goal specific.

And then there are the circuits, which circuits are we talking about?

We're talking about that amygdala, the lateral prefrontal cortex, the orbital frontal cortex and the basal ganglia we talked about earlier that had been built up that had been reinforced because as I mentioned, there is one universal circuit for goal, pursuit and achievement.

So random intermittent reinforcement is the key.

And while I spent a good amount of time talking about self-generated cognitive reinforcement, this also applies to any kind of physical rewards, the movie that you're going to reward yourself with, the ice cream cone, the whatever that you're going to reward yourself with.

Perhaps it's monetary, perhaps it's food, perhaps it's social, random intermittent rewards are the ones that are going to keep you motivated and are going to best increase the probability of success, not just within a given bout of learning, not just day to day, not just week to week, not just quarter to quarter, but across the lifetime.

An important protocol to incorporate in your goal pursuits is one that I learned from Dr. Maya Shankar when she was a guest on the Huberman Lab podcast.

And she talked about the so-called middle problem.

The middle problem is the fact that people tend to have a lot of motivation at the outset of pursuing a goal, although you now know that sometimes or some people don't have a lot of motivation when pursuing their goal at the start.

So they need to think about failures and how terrible everything will be.

And then they will certainly have motivation.

It's going to be a fear-based motivation.

But in general, people tend to have more motivation at the start of pursuing a goal.

And at the end, when they get close to or they start to perceive the finish line, but that most people experience the so-called middle problem where in the middle of a learning bout or in the middle of the week or in the middle of a 12-week cycle, they are less motivated.

And this has actually been quantified in numerous studies.

And there are several ways to overcome the middle problem.

The simplest one is to acknowledge it, to recognize that it's coming.

And so when it does come and you're experiencing lower levels of motivation, perhaps even increased

failure rates and you're not performing as well, you're getting frustrated to know that that's a natural process that everybody experiences.

And just knowing that can sometimes allow people to move through that to the place where then they can sense the end of the learning bout or they can sense that they're making some progress, the finish line is there and then they get that increase in motivation again.

However, sometimes the middle problem is such a problem that people need some tools to move through it.

And the best way to move through the middle problem or in fact to eliminate it is actually to make the middle of a learning bout its own separate thing that you acknowledge the presence of and that you break up into three separate bouts.

So here we're talking about carving up the one hour learning bout or the two hour learning bout into an initial phase where you either have naturally occurring motivation or you use a fear based visualization to increase your motivation.

You lean into that and then let's assume it's a one hour learning bout and then at about the 25 minute mark, you start to experience lower levels of focus.

Perhaps then you use the visual target protocol, but then you go back into your bout of learning and you're not feeling very motivated.

It's hard.

Your mind is drifting.

You want to pick up your phone.

You want to do other things.

You find yourself doing other things.

That's the period of time to take say the 25 minute to 45 minute period within the session and divide it into perhaps three or even four smaller chunks of time.

And you perhaps have heard of chunking before.

Chunking is simply breaking something down into smaller chunks that are more achievable.

Simply what we're talking about here, but really chunking up that middle section of a learning bout can be very effective at essentially eliminating the middle problem.

Now for those of you that are going to be really nitpicky, you'll say, wait, you take that 20 minutes from the 25 minute mark to the 45 minute mark within your hour learning bout and you divide it up into four little chunks.

And in those two middle chunks, I'm going to feel the middle problem for those two middle chunks.

Ah, well, that's not actually the way it pans out.

Fortunately, when you break things down into small enough chunks, you eliminate the middle problem and you experience sustained motivation.

Now the extreme interpretation of that would have you measuring every minute or even every second of a learning bout and having consistent motivation throughout that, because for instance, if you can concentrate for 10 seconds, why wouldn't you simply be able to just mark off 10 second increments?

Well, at some point, the marking off or the monitoring of those increments is going to be distracting toward the thing that you actually want to do.

So the simple thing to do is to acknowledge the middle problem, right?

The fact that we have more motivation at the start and at the end of our goal pursuit sessions than we do within the middle, and then to simply chunk that middle section into three, maybe four smaller chunks.

And if you need to incorporate things like the visual target protocol, one or three or perhaps even eight times within that middle section, so be it, it's going to help you move through with better focus and better motivation.

And what I just described can of course be applied to the longer bouts of effort that don't occur just during one learning bout, but perhaps across the week.

So for instance, if you are doing four days a week of language learning or fitness training, so maybe it's a Monday, Wednesday, Friday, Saturday type of schedule, you may notice that in the middle of the week, the Wednesday training session tends to be the one that you're less motivated to do for whatever reason.

There could be any reason at all for which the motivation is lower in the middle of the week.

It doesn't matter.

Well, in that case, you would want to first acknowledge the presence of the middle problem. So you would want to acknowledge that that Wednesday training bout is prone to the middle problem because it is indeed the middle problem.

It's in the middle of the Monday and the Friday training bouts.

So then you would want to approach it with the understanding that it's going to be there and that you are going to need tools and protocols that will allow you to overcome it by, for instance, taking that one or two hour session on Wednesdays and putting a bit more time toward a visual target protocol at the beginning to increase your focus, a bit more visualizing failure.

If you are feeling a motivated, that means not motivated and nerd speak a motivated toward doing that Wednesday session, and you would want to break up that Wednesday session into smaller chunks.

So instead of looking at that two hour session, you might break it up into a series of 15 minutes smaller learning bouts done consecutively back to back.

And then in doing so, you have essentially taken that Wednesday session and I'll bet that it becomes at least among your most motivated sessions.

So the middle problem exists, it's important to acknowledge and there are tools to overcome the middle problem on any time scale.

You simply have to chunk up the middle and approach things with deliberate increased vigor.

Just as you would, you know, if you're running and there's always a tough hill, you have to really gear up for attacking that hill and then to do that repeatedly in those smaller chunks until you've completed that session.

So today I've been talking about how to approach goal setting in pursuit at and in and around the specific times that one is engaging in goal setting and pursuit, the writing down of goals, defining of goals, the timing, and then the actual training sessions or the practice sessions toward achieving that goal.

What I haven't talked about is how to show up to all of that in the best possible state of mind and body in order to achieve the best possible results.

And of course, there are numerous things that we need to do in order to quote unquote show up at our best, where we would stand the best possibility of performing our best and learning the best in those learning bouts, things like getting adequate sleep, getting sunlight in our eyes early in the day, adequate and proper nutrition, social connection, and so on.

We talked about all of that in previous podcast episodes.

So I'm not going to talk about those again now, but it is important to recognize that the backdrop of our lives, how well we've slept, what's going on in our personal lives

will all impact things like motivation and frankly, our ability to even identify what's important because, you know, if we're dealing with a health crisis or someone close to us is dealing with a health crisis, we tend to have our attention diverted toward that.

But I do want to acknowledge all of that because it is critically important in defining how you're going to show up to these endeavors and for that matter, all endeavors.

Now with that said, there are a few things that you can do in order to try and optimize your ability to focus and your level of motivation during your goal pursuits.

And there are some really interesting data and protocols that I haven't talked so much about on this podcast ever that are relevant to today's discussion.

And this relates to our so-called circadian rhythms in attention.

We have a robust rhythms in our ability to focus and our level of motivation that vary across the 24 hour, a circadian cycle with a regular rhythmicity that is independent of how badly we want a goal or how afraid we are of failure, right?

All the stuff about motivation and fear of failure and desire, et cetera, all of that is still true, but we all have a naturally occurring rhythm of rise and fall and return to rise and fall of our levels of attention and motivation.

And this is something that's been described beautifully in the scientific literature.

In fact, I'll provide a link to what I consider a really nice review on this topic.

This is a review that was published by Pablo Valdes in the Yale Journal of Biology and Medicine in 2019 entitled circadian rhythms in attention.

And there's a lot of information within this review, but we can distill out a couple of useful gems from it.

So if you are somebody who is embarking on the pursuit of a goal, which is particularly hard, that's going to require a really high level of motivation and focus, know that there are three times during the day when you stand to have the greatest level of focus and attention. Of course, this will vary depending on when you went to sleep at night and when you wake up.

There's natural variation in circadian rhythms, but it's worth knowing that most people find that their level of attention and motivation is going to be highest 30 minutes, three hours and 11 hours after waking up.

Okay.

So 30 minutes, three hours and 11 hours after waking up.

And this relates to a number of important biological principles related to circadian shifts in body temperature, which are also related to circadian shifts.

That means changes around the 24 hour cycle in the release of particular neurochemicals.

So the amount of dopamine available to be released by any sort of goal pursuit or reward, the amount of serotonin available, lots of neurochemistry in there, lots of neural circuitry, but these heightened levels of focus and motivation that just occur naturally, regardless of what goal one is trying to pursue.

In fact, regardless of whether or not you're trying to pursue any goal, 30 minutes, three hours and 11 hours after waking, your focus and motivation are going to be their greatest relative to other times in that 24 hour cycle.

Now, as I tell you this, I can imagine that some of you are thinking, great, I'm going to schedule one bout of goal pursuits, three hours after waking in another one, 11 hours

after waking.

Great.

If you can do that and that fits with your work and other demands of life, your relationships, et cetera.

Perfect.

However, I don't want this 30 minute, three hour and 11 hour protocol to be considered a rule.

And here's why.

Most people don't have a tremendous degree of control over their schedule.

Things like work and family and other demands constrain them in terms of when they can get the work in.

And while I do think it's extremely valuable to schedule the specific time or roughly the specific time, even though that's an oxymoron, meaning a period of time during the day, say maybe four, nine AM or between nine and noon that you are going to carry out your goal pursuit endeavors.

I've talked about this in previous podcasts.

Some people do very well by scheduling an exact time from noon to two.

I'm writing other people like myself do a little better if I set a constraint, but it's a little bit broader, such as I'm going to exercise before nine AM.

That could be anytime before nine AM, or I'm going to engage in language learning sometime between say six PM and nine PM, as opposed to setting a specific time.

That's just what works best for me.

People vary in terms of whether or not they respond best to setting a specific time or a time block and setting up these kinds of barriers after which you are essentially telling yourself you won't do it.

But and this is a very important, but it is most important that you actually engage in the goal pursuit.

And I experienced this recently.

I'm trying to run more these days.

I still enjoy doing resistance training.

I still run three days a week, but I'm trying to run a little bit longer as opposed to just doing the one long run per week.

And then two shorter runs later in the week, I've talked about this in my optimal fitness protocol episode.

If you want to check that out or check out the PDF where it's all distilled down to one or two pages if you like.

But in any event, these days, I'm trying to extend the amount of time that I'm running. I'm just enjoying that.

It's kind of a throwback for me to when I ran across country as a senior in high school, and this was the time of year when I would start getting ready for the fall season.

So I'm enjoying running more.

And just this last week, I had the experience of having a very full Sunday.

And that's usually the day when I run in the morning or hike during the middle of the day.

And I simply did not get around to it because I had a lot of other important things to do.

And what I found was 9pm rolled around, 10pm rolled around.

And I started thinking, I wish I had gone running.

My Monday was going to be busy.

So what did I do?

I laced up my shoes and I went for a run at 10pm, something I haven't done since college or maybe even high school.

And I ended up running for 90 minutes from 10pm until 11.30pm.

Definitely not the optimal time for me to go running.

In fact, I was thinking, oh, this might disrupt my sleep.

But in fact, it didn't.

I came back.

I showered, had a little bit of food, which normally I don't eat that late and I slept like a baby.

And I felt great the next day waking up at my normal time, which cues me to another important scientific fact that relates to protocol and protocol flexibility, which is something that I gleaned from a colleague of mine at Stanford School of Medicine who works in the sleep laboratory.

And I intend to have him as a guest on this podcast, which is that much of our subjective feelings of energy and well-being during the day have to do not just with how well and how much we slept the night before, but how positively we view our previous days experiences and how positively we view our next day.

And in fact, that same day pursuits and experiences.

So in other words, how we feel about our previous day performance and how we feel about what we're about to embark on during our day can increase our energy.

And that might seem obvious to a number of you, but these days as I and many others out there are talking so much about the importance of sleep, which is, of course, essential.

You do want to get great sleep as many nights of your life as you possibly can.

And if you don't sleep much for a given night, hopefully it's for reasons that you enjoy and positive things like a party or a wedding or use your imagination.

But it's also the case that when we successfully complete something that we told ourselves that we are going to do, we feel great about it.

And that if it means that we sleep a little bit less or that we have to do our practice bout at 3 p.m. or 2 p.m., a time of day when we're really ordinarily in the trough of attention and we have to use 20 different tools or one tool 20 different times in order to get through that bout of learning.

The fact that we complete it leaves us with a feeling of accomplishment and I'm certain, although I don't know exactly which, that there are neurochemicals and hormones that reflect that it's almost with certainty going to involve dopamine and other neurochemicals.

But the point is not to get reductionist about it.

The point is that, yes, heightened attention and focus occur naturally 30 minutes, three hours and 11 hours after waking.

But the really important thing about all of this goal setting and pursuit is to do it, to get it done, to set the goal, to do it specifically, make it quantifiable, when you're going to do it, make it about verb states and then simply do it.

[Transcript] Huberman Lab / Goals Toolkit: How to Set & Achieve Your Goals

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I do read all the comments.

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And at all of those places, I talk about science and science related tools, some of which overlaps with the content of the Huberman Lab podcast, but much of which is distinct from the content of the Huberman Lab podcast.

Again, it's Huberman Lab on all social media platforms.

Thank you for joining me today for our discussion about science-based protocols for how to best set and pursue and achieve your goals.

And I do want to wish you all the best of luck in setting, pursuing, and achieving your goals.

Last but certainly not least, thank you for your interest in science.