



Don't Think Too Much

Yes, you're probably a bit of an idiot. Here's what you can do about it.

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“Think of how stupid the average person is, and realize half of them are stupider than that.”

— George Carlin

You will find this joke funny if you think you are in the smarter group. The truth is that you are a member of many groups, and you are smarter than average in only half of them.

Altered States of Awareness

The two most important times of day, for me at least, are the altered states of waking up and falling asleep. These short periods are only potentially useful; I only benefit when I take the time to guide them. They serve quite different purposes.

Before going to bed I review my projects. This starts anywhere from an hour to 10 minutes before lying down. It's a time of reflecting and summarizing: what have I got, where am I going, and what seems

most useful? I want to focus on ideas not conclusions. Something do-able, attractive, or interesting. I want to get beyond the usual confusion that comes from thinking. The result is a sense of direction with a tinge of enthusiasm.

The Uncertainty Principle for Grown-ups

I've been thinking about the definition of reality in physics and considering the classical and the quantum points of view. I'm contrasting these with Karl Popper's ideas from philosophy of science, and finding some mathematical insights that take this further. I sketch out the bigger picture and try to identify what paths need to be cleared.

A mathematical idea called Schur's Lemma says, in wildly imprecise form, that if you have the set of all possible ways of observing something and all of them are different and there are no other points of view, then any other way you find to observe this thing is going to be some combination of the points of view you already have. Beyond that, within the set of all points of view there will be at least two that contradict each other.

This may not seem surprising were it to pertain to attitudes and opinions, but it applies to precise statements of reality. From this, it seems, we can conclude there are no precise and true statements of what's real that are not contradicted by other equally precise and true statements of what's real. Or, to put it simply, there are no true and precise statements about reality.

This is not a statement about logic, it's a statement about observations. It means that there are no precise and true measurements of anything. All we've got, and all we'll ever get, are true and *imprecise* measurements of everything, at any place and at any time. Maybe that's not so bad, but it's not what we believed up until the introduction of quantum mechanics, which is a theory about theories more than a theory about things.

If you look at what Schur's Lemma actually says (I can find no nontechnical explanation of it) it will appear unintelligibly different from what I've described. Also, the first part of what I've described is practically self-evident, which is what mathematical statements should be. They are equalities, after all.

I'm still working to understand the second part of the lemma. That's the part that connects the mathematics of algebraic groups with the physics of measurement.

Hypnagogia

The hypnagogic state is that one to five minute period before you fall asleep. If you have insomnia and can't fall asleep, then you won't enter this state. Assuming you will fall asleep and you will experience hypnagogia, then you want to prepare yourself with an open-minded attitude.

Once you fall asleep you cannot think analytically, so there's no point in carrying a numerical, logical, or analytical problem into sleep. You will think emotionally and associatively, and if you prime your mind with those kinds of thoughts then you're likely to carry them into your dreams.

In dreams, a sort of chemical reaction occurs, similar to what happens when you bake something. You'll wake up with slightly more processed thoughts. Dreams provide a kind of thought digestion that is neurologically deeper than what happens when we're awake.

This is how you make use of your dreams: you feed them and let them do their work. You don't need to remember the dreams, you'll simply feel slightly different afterwards. That difference, while subtle, often has useful consequences.

In my case, while I had no dream specifically about my physics problem—although you can never be too sure what you're dreaming about—I feel more certain that I could use Schur's Lemma, and this is proving to be true.

I need to convert my problem into something simple so I don't have to understand all the details. I only need to understand Schur's Lemma well enough to know what I'm talking about. I currently don't; figuring that out is waking-state work.

Most people don't care much about physics or reality, but there will be some reality that you do care about. And your reality will have its obstacles, issues, and emotions. It's not really that much different from an engineering problem. You too will benefit from having an open-minded, optimistic, and actionable perspective before moving into your dreams.

This is exactly what depressed and anxious people lack. For those people, it helps to recognize that you're not solving anything or resolving to do or be anything, you're just identifying some potentially useful paths forward.

It's fine if these paths are obscure, unlikely, or out of reach, in fact that is the point. You want to let your dreams work like a dishwasher to dissolve the grease and crud that confuses your progress. Don't expect to wake up with clean dishes, but you might awake feeling a bit less concerned.

The Hypnopic State

When you wake you emerge from a state of emotions and associations rather than one that involves numbers or reasons. This is opposite from the hypnagogic situation in two respects. First, you're not able to prepare for waking up, but you can take advantage of the state in which you find yourself by giving yourself time to wake up slowly.

Second, you don't have to try to quiet your analytic mind because it is already quiet. It is quiet during sleep. While waking up, avoid throwing your analytic mind in gear as doing so results in forgetting your emotional state. Doing this will destroy the opportunity of using the hypnopic state to integrate your dreams into your waking awareness.

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The hypnopompic state is a physically and emotionally receptive state. It's a state that is easily overwhelmed by thoughts, words, numbers, planning, and movement. Too much disturbance will overwhelm your physical and emotional feelings and memories. This will cause you to forget what you're experiencing along with whatever you could remember of your dreams. Remaining hypnopompic is similar to remaining in a state of light sleep.

Lacking any thoughts, my attention is often drawn to the bottoms of my feet, my joints, and muscles. It would be easy enough to start thinking about something, but my sensations are often strong enough to keep my attention, and I make a point of focusing on them.

Interoception

A normally sleeping person moves around quite a bit. Without waking up, we roll and shift to relieve pressure and constriction. But when we're waking up and half aware these feelings of stiffness or soreness are easy to observe.

Before moving to find a more comfortable position, I imagine that I can resolve these feelings through force of mind. These are not thoughts that make any particular sense, and they don't involve any plans or strategies. I simply have the unreasonable idea that I can control and direct my body's sensations and restorative powers.

This is an optimal mental state in which to perform a body scan. This involves moving the focus of your awareness from one physical region to another. In this process you're trying to capture both sensations, tensions, feelings, and whatever ideas come to mind. I find that when I'm in the hypnopompic state I have a deeper awareness of my physical health.

I'm finishing a book on interoception, and it's these hypnopompic feelings that I'm working to explore in the book. Interoception is the mental awareness of the largely autonomic processes working within your body.

My book uses hypnotic inductions to concentrate your focus on particular systems—your gut, skin, joints, muscles, organs, et cetera. By enhancing your awareness, you can explore these associations and relax more deeply.

Thinking ahead while in my hypnopompic state, I conceive of new ideas about how I plan to eat, move, and sense the world in the day to come. Once awake, I will often forget or misunderstand the thoughts and feelings I had while in this state. I will forget what made sense to me, and I'll forget the resolutions I made to think and move more mindfully.

This kind of cross-state amnesia is common, but you can retain a semi-conscious sense of poise and refined attention. I think that with practice, a person improves their ability to remember. Through such practice you learn to integrate aspects of yourself.

Bridging Wakefulness and Sleep

Hypnagogia and hypnopompia are stages between higher and lower thought processes. They form chasms rather than bridges because you are not automatically carried across. You have to understand the opportunities and build your own bridges.

Ignore these opportunities and I think you'll have less insight and be less effective while awake and less effective in your dreams. I also think there is a physical consequence in terms of relaxing, adjusting, and finding solutions to physical and metabolic issues.

In addition to the feelings and associations that you have during dreaming, sleep is a phase of physical restoration. You don't manage this restoration consciously, but you benefit from it and you can direct your attention and become more aware of it. The hypnopompic state offers different opportunities from the hypnagogic state, and these opportunities are not automatic.

We should know how to bridge these states instinctively, automatically moving through mental states that integrate these insights, but we don't seem to do this automatically. Our minds have not yet evolved to coordinate these changes of state, but I believe we'll learn to do this in the future, much in the way our bodies already are restored after sleep.

We have had more time to coordinate our bodies with our brains, than our brains have had to coordinate with the more recently developed cognitive abilities. Our central brain and brainstem structures, the areas that communicate with our bodies, are older than our prefrontal cortex, which manages our executive functions.

God's Gift to the Universe

There is endless talk about how special human beings are among the roster of sentient beings, but no one seems to mention that our especially effective functions are balanced, and maybe outweighed, by our dysfunctions. Our disorganized social behaviors, unbalanced emotions, and odd mental complexes reflect our confused and underdeveloped mental evolution.

I don't suggest we blame and punish ourselves; I suggest we recognize that we need to take greater control of and responsibility for ourselves. Human beings are unique not because they have such great cognitive skills, but because they are so emotionally, socially, and intellectually disabled.

We can certainly do much better, but as long as we choose to be led by criminals, liars, and psychopaths—a group in which Donald Trump is the paradigm because he was elected—it doesn't seem that we're making progress. On the other hand, there is no better path to enlightenment than the path through hell. Success, however, is not assured.

We are not so far ahead of other species because we are so unique. We are ahead of competing sapiens because we committed genocide and murdered our competitors. The Neanderthals were our last victims, but I suspect there were others before them. If we don't get it together we may become our own victims.

Don't Think Too Much

We take thinking and autonomic processes for granted. We expend almost no energy in organizing our minds and building skills in areas where we have little control. We have the somewhat ridiculous preconception that all the skills we need and all the aptitudes we have are innate, genetic, or will evolve without any effort on our part.

You might object by saying that we devote 12 or more years to education, but the education offered in schools does virtually nothing to improve our intellectual, emotional, and associative intelligence. School education is actually de-evolutionary as it encourages the lower forms of learning that pertain to memorizing and problem solving. Even basic skills like reading and writing are not effectively taught in schools, as a large majority of people never develop themselves through writing or reading.

The learning you need is not on the job, it's off the job. What you need can be learned by traveling, living among different cultures, and engaging with the complex, natural world. All of these are encounters "modern life" provides in increasingly degraded and insipid forms. Real learning is learning that results in life changes and reorganization.

Thinking is however you engage your executive functions, and just because you are successful by some measure does not mean you have any skill. To expand your mental abilities you must test them by addressing problems whose solutions you were not taught. Do not be fooled: your certifications amount to nothing.

Thinking, for most people, involves remembering facts and instructions, but this kind of thinking is regressive. It's this kind of thinking you want to avoid, and you avoid it by avoiding the situations that require it. The admonition "Don't think too much," is the suggestion to engage in new situations that require you to develop new abilities. Some of these are developed by thinking new thoughts, but more is achieved by developing new perceptions and exploring new associations. Inject chaos, accept failure, reframe problems, and innovate.

Innovation and Evolution

What you want to do involves active, exploratory thinking. This is different from conservative, constrained thinking. Look for novelty, risk, the unsolved, and the unexpected. These are paths that require new skills that lie dormant or are absent. Maybe you'll develop them or maybe not, or maybe not right away. You can be certain that if there is no risk of failure, then there is no opportunity for learning.

What you want to do is exactly the opposite of what you've been taught: you want to do things you don't know how to do and which you're not good at. You don't gain insight by doing what you're told or repeating what worked before. It's not that you're trying to fail, but that failing is often the best way of learning. Unless you understand what does not work you have no real insight into what does.

Discovery, like evolution, means doing new things in new ways. Don't expect success and don't become fixed on any notion of success. As with any journey, by the time you reach the destination your mind should already be engaged in the next adventure.

As the misleading gambling slogan goes, “If you don’t play, you won’t win.” In the game of life, playing is your only option. The challenge is to improve your odds.