

**LEARNING BY PROXY**

**THINKING BY  
PROXY**

**BY VIVEK SRINIVASAN**

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# 1.

## ON UNKNOWN UNKNOWNNS

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**T**he model of knowns and unknowns.

<b>KNOWN KNOWNS</b> I know...	<b>KNOWN UNKNOWNNS</b> I know I don't know...
<b>UNKNOWN KNOWNS</b> I don't know, but somebody does... and they ain't tellin'	<b>UNKNOWN UNKNOWNNS</b> Who would have thunk?

Known knowns are facts that you know.

Known unknowns are facts that you are certain you don't know.

Unknown unknowns are facts that you don't even know exist.

Unknown known are facts that you do not know but others do.

Also the most fertile ground for conspiracy theories.

When you are ignorant of something you get a free pass to make up any fact. You can attribute that knowledge to someone else who is in the know of it.

Here is the issue -

There are more people who are not well versed in even the most basic things. Not to mention, what is considered basic has been changing rapidly.

*The whole problem with the world is that fools and fanatics are always so certain of themselves, and wiser people so full of doubts. ~ Bertrand Russell*

The worst thing that the internet has done is allowed for the broadcast of such thoughts to a wider and wider audience without the fear of any repercussions.

The weapon of choice for such people is stories. Stories are used to establish these conspiracies. Stories are far more certain than any data can ever be. They will look at the pictures of astronauts on the moon and argue that there are no stars in the background. This is conveniently ignoring the fact that they don't see stars during the day on earth either.

**“THE UNKNOWN KNOWN GIVES PEOPLE THE ABILITY TO MAKE ASSUMPTIONS ABOUT THE THINGS OTHERS KNOW AND CONCOCT WHATEVER THEORIES SUIT THEIR FANCY.**

# 2.

## ON HUMAN RATIONALITY

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In mathematics, the transitive law states:

**$x > y$  and  $y > z$  then it implies  $x > z$**

The trouble with humans is that when it comes to making choices, they are not transitive at all!

If you prefer coffee over tea and you prefer tea over hot chocolate, does not imply that you would prefer coffee over hot chocolate. Psychologists have conducted similar experiments with mate selection and other such areas of human choice to prove quite conclusively that human choice is not transitive. This implies also that human choice is much less rational than you would think it is.

The entire discipline of economics is based on the assumption that humans are rational beings. Time and again though, our own choices show that we are not rational at all. Even so, we continue to use economics as the bedrock of financial planning for governments' policies.

It is time to reconsider the art of Economics and re-write the very fundamentals of it.

On that note, I was reading an article about Amos Tversky. It read;



He worked with an economics professor who was always telling him how stupid someone or another in the university was. Amos quipped, your subject assumes human rationality and yet you only seem to come across stupid people.

**“HUMANS ARE NOT RATIONAL. THE SOONER YOU ACCEPT IT, THE EASIER LIFE BECOMES.”**

# 3.

## ON GOING FROM DREAMS TO SUCCESS

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**B**ig Dream - I want to change the education system!

But where do you start?

Small Dream - I want to make it easier for that one kid to learn physics.

When Salman Khan - of the Khan Academy fame - started putting his YouTube videos together, he just wanted to make it easier for his niece to learn science and maths. Eventually, Bill Gates invested in the company.

When Foodiebay started, a couple of guys just wanted to make the menu of their food court available online. This was so colleagues working in the building could decide what they wanted to eat for lunch. This company is called Zomato today.

When Martin Eberhard and Marc Tarpenning started Tesla, they just wanted to make an electric car that could cross the speed threshold of 100 miles per hour. They bought a Lotus and went to work on it.

### **Retrospective Narrative**

When you tell a story looking backwards, it is easy to change the narrative. It is easy to make it seem like success was a foregone conclusion and that there was no doubt in their minds. That they always knew.

Jeff Bezos always knew that he wanted to expand to other categories and become 'the everything store'. If only you could have asked Jeff Bezos who was sitting on the basement floor in 1995 packing books, he would have had a different story to tell.

Elon Musk founded and sold PayPal because he always knew that he needed money to build a space startup and PayPal was merely a conduit to raise the money. He did not even found PayPal, he merely joined PayPal through an acquisition made at a very early stage. He did not even found Tesla, he was an investor in the company.

Don't believe retrospective narratives. They are only meant to make the narrator look more impressive.

Before the British started writing Indian history, the year 1857 was known as the year of 'The Great Uprising', not 'The Revolt of 1857'. It was not a revolt; a company had no business trying to run a nation.

Everyone starts with a small dream. Those who tell you otherwise are using this cool trick of the retrospective narrative.

### **Small Dreams**

Small dreams are a good place to start. Rather, they are the only place to get started. A business, or any pursuit, involves overcoming challenges. The larger the pursuit, the more numerous the challenges.

Therefore, there are more reasons to give up on the dream.

Small dreams, on the other hand, are easier to achieve. The only excuse you would often be left with is that you are just too lazy to do it. Pick up a small dream and achieve it. It will give you a sense of accomplishment, which will motivate you

towards the next one. Maybe a slightly bigger dream, but achievable.

You need to change the life of one before you can change the lives of a million

**“SO DREAM SMALL.”**

# 4.

## ON HALO EFFECT

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**A**dam is a smart and intelligent boy. He is very interested in most things and wants to constantly learn. He is also known to be quite stubborn and at times, very envious.

What do you feel about Adam? Do you think he is likeable? Do you think you might want to spend a day with him?

Ben is known to be quite stubborn and envious. He is constantly poking and prodding at things since he has an appetite to learn. As a result, he is a smart and intelligent boy.

Now, what do you think about Ben?

Most people would like Adam but not Ben. Despite the fact that the characteristics listed therein are exactly the same.

For Adam, the fact that 'smart and intelligent' was mentioned first created a 'Halo Effect'. Once this halo has been created, every other defect that he had was seen through that prism and measured in that manner. Ben, unfortunately, has to deal with the Halo of 'stubborn and envious'.

Due to the quirks of human thinking, we tend to pay more attention to what comes first in front of us.

**“LEAD WITH YOUR STRENGTH, NOT  
WITH YOUR WEAKNESS. HOW YOU SAY  
IT MATTERS MORE THAN WHAT YOU  
SAY.”**

# 5.

## ON RAZORS

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In philosophy, a Razor is a rule of thumb or a principle. It helps you eliminate unlikely explanations. Knowing them makes it more likely that you will be able to poke at a problem with the right mental model.

When you are faced with a situation where you are trying to explain something complicated, you often have to make assumptions. Rarely do you have access to all of the information and it is important to assume those things that are not known.

**Occam's Razor** says "when confronted with competing explanations, often the explanation with the fewest assumptions is the correct explanation." It is often misdefined as 'the simpler the explanation, the truer.' It is actually, 'the fewer the unknowns, the truer.'

**Hanlon's Razor** simply [states](#) "Never attribute to malice that which can be adequately explained by stupidity."

We have a tendency to attribute many things to malice when they don't go our way. Often they are not. Even Charles Ponzi thought he would make a lot of money with the stamp scheme that he had come up with. He did not start out thinking, let me swindle money. When his plans went sideways, he chose to keep it going. He had never been

taken seriously in life and this time he was. The power blinded him and rendered him stupid.

**Hitchen's Razor** states 'What can be asserted without evidence can also be dismissed without evidence.'

Christopher Hitchen wrote a book about god titled 'God is Not Great: How religion poisons everything.' Unfortunately, a lot of the book is backed by personal experiences and stories. Thus, Hitchen's Razor was born.

Carl Sagan has stated the very same thing in a slightly different way when he said "Extraordinary claims require extraordinary evidence." This is known as **Sagan's Standard**.

**Hume's Guillotine** states that "If the cause, assigned for any effect, be not sufficient to produce it, we must either reject that cause or add to it such qualities as will give it a just proportion to the effect."

His reasons were in relation to morality. There is often a debate about what ought to be. His objection was that there is no way of knowing what ought to be based on the knowledge of what is. He implied, if a reasoner only has access to non-moral and non-evaluative factual premises, the reasoner cannot logically infer the truth of moral statements.

**Alder's Razor** states "If something cannot be settled by experiment or observation, then it is not worthy of debate."

In its weakest form, it says that we should not dispute propositions unless they can be shown by precise logic and/or mathematics to have observable consequences. In its strongest form, it demands a list of observable consequences and a formal demonstration that they are indeed consequences of the proposition claimed.



**Popper's falsifiability Principle** states "For a theory to be considered scientific, it must be falsifiable.

Every religion claims that God exists. But there is no way to verify if God really does exist. If the proof of anything is "because I said so" then it is not scientific. You need to be able to verify and falsify it for true proof to exist.

**Hobson's Choice** is a free choice where only one choice is offered.

Thomas Hobson was a stable owner in the 16th century. He would offer those who came to buy a horse the choice of buying the horse in the stall closest to the door or none at all. This kind of power play is often used to manipulate people into a corner where they feel they have a choice where they actually have none. If you "have" to buy a horse, do you really have a choice?

**Chesterton's Fence** is a principle that states Reforms should not be made until the reasons behind the existing state of affairs are not understood.

The story goes, a hand hired by Chesterton came up to him at the farm and told him that the fences around the farm were broken and served no purpose. He asked if it would be okay to remove the fence altogether. He was told that he could do whatever he wanted to the fence, just as long as he could tell why the fence had been put there in the first place.

**Maslow's Hammer** - In 1966, Maslow said "I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail."

There is a tendency to use the tool that one is familiar with in circumstances that often require a different kind of tool. An attorney who specialises in litigation would not suggest

arbitration and reconciliation. Their suggestion would be to litigate because that is more familiar.

**Lindy Effect** suggests that the longer something has survived to exist or be used, it is also likely to have a proportionately long remaining life expectancy. This often applies to design, ideas and things.

Take the design of the spoon. It has survived for thousands of years in its current form. In all likelihood, it would survive thousands of years more amongst us. It is highly unlikely to undergo a massive transformation in a decade or even a century.

Bitcoin will probably be the longest surviving cryptocurrency.

**Shirky Principle** states that “Institutions will try to preserve the problem to which they are the solution.”

TurboTax is an Intuit company that is able to make money only because filing taxes is like wading through a marsh. They put in all the lobbying possible to keep things that way. They do not want tax filing to become easier under any circumstance.

# “USE THEM AS A RULE OF THUMB”

# 6.

## ON THOUGHT EXPERIMENTS

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**Y**ou have two trains approaching you at the same speed from two different directions. One train is 20 kms away and another is 30 kms away. The train that is closer to you will pass you before the train that is farther from you.

Einstein, aware of the finite speed of light, performed a similar thought experiment. He posited that if lightning strikes two places at the same time. Both at different distances from you. To you, as a viewer, one lightning strike will appear earlier than the other. By that same analogy, if you had two clocks at two locations at two different distances, the time on both would never be the same to the viewer.

It was this thought experiment that gave birth to the general theory of relativity which describes a space-time continuum. Each point in space has a time associated with it and there is no absolute time. Many if not most scientific discoveries have been the result of such thought experiments.

I have witnessed many thought experiments, only in a different setting. Startups.

Every startup “idea” starts as a thought experiment. What if something could be this way? What I have found is that founders who spend a lot of time running thought experiments are the ones who often succeed.

A thought costs you nothing. But it allows you to look at the possibilities that would be very expensive to execute. Imagine all possible outcomes for that situation and think about what that would mean for your business. Part of the reason why having a diverse team helps. It brings diverse perspectives and diverse possible outcomes to the table.

Not only when you are thinking up potential ideas but also when you are trying to solve specific problems such as market segmentation, marketing plan, content strategy, product design, etc.; running through thought experiments helps. It opens up your mind to myriad possibilities that you may or may not execute. It could even be that some solutions are great but require you to line up a lot of ducks. Resulting in a long-term strategy that delivers results.

Thought experiments are powerful tools. It is important to make time for them. A world that is constantly obsessed with execution and delivery often does not make time to perform enough of them. Often, it feels like a waste of time, except when, as Einstein found out, you run a thought experiment that creates a paradigm shift in your perception altogether.

Thinking has never cost anyone any money. Time is precious but so is thought. Execution often involves far more time and resources. If you could take the leap of imagination and wonder what outcomes you may achieve from that execution, it could save you far more money.

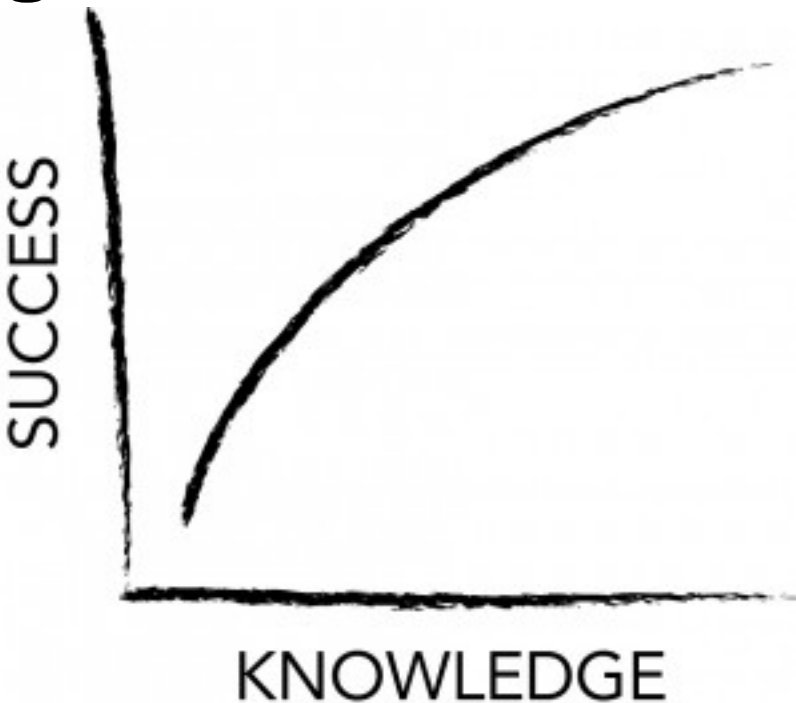
**“THINK BEFORE YOU EXECUTE.”**

# 7.

## ON KNOWLEDGE AND SUCCESS

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One might assume the knowledge-success curve would look like this.

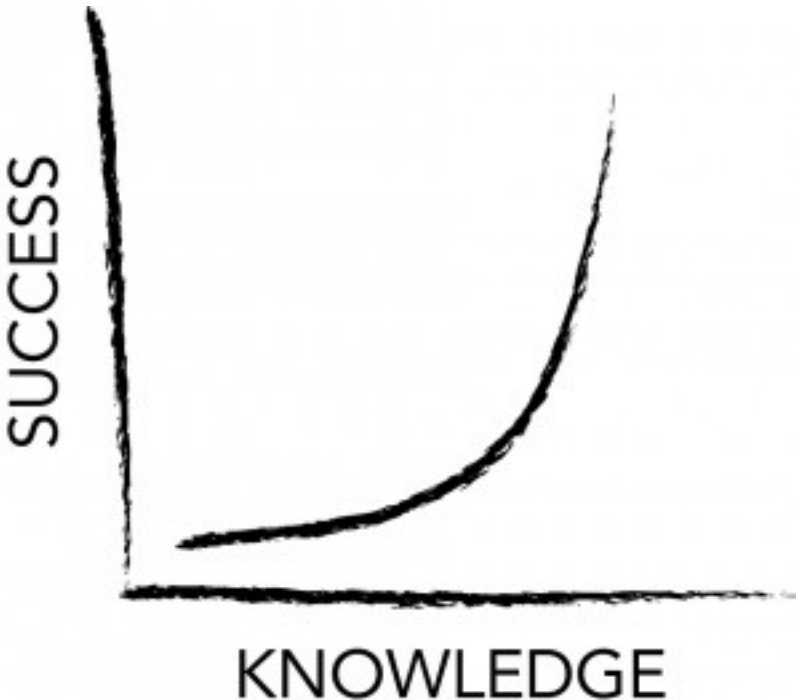


It is normal to assume that as your knowledge increases, you become more successful.

If there is a particular subject about which you have increasing amount of knowledge, you would assume that you would be more accomplished in that area. You would assume that you would be.

Let us say you played cricket and the more you train, the more you would expect to be successful in the game, isn't it?

### **The actual Knowledge Success curve**



In reality, the success that you achieve grows exponentially after you reach a certain critical mass. Therefore, many times you feel that you are ploughing away at a problem

continuously without getting much in terms of success or breakthroughs. It is imperative to reach the inflection point, where things start changing for you.

When you reach that point, you always end up thinking; "Why didn't I do that before?"

This applies no matter what your pursuit is. Learning something, setting up a venture, a creative pursuit, or a job.

**“YOU WILL NEVER KNOW WHERE THE  
INFLECTION POINT LIES BUT  
PERSEVERANCE INVARIABLY PAYS OFF.”**

# 8.

## ON EXPLANATIONS AND EXCEPTIONS

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**W**hy are there seasons on our planet?

In ancient Greek lore, Persephone, the daughter of Zeus and Demeter, was abducted by Hades, the lord of the underworld. When Zeus consented to Persephone being married to Hades, Hades agreed to allow her to visit her mother for 8 out of the 12 months in a year.

This is why we have Spring, Summer and as the time for Persephone to leave comes closer, Summer gives way to autumn. During the 4 months when Persephone is away, Demeter becomes very sad. Demeter, who is the goddess of fertility robs the earth of its fertility and so the winters are cold.

This is an oversimplification of the story. I did not want to write 4 pages.

If any Greek had even visited Australia, the question; "Why is it summer in Australia when it is winter in Greece?" might have come up. But that was not to be.

It is human to try to find a way to explain all the things that occur on around us. This is part of the reason Economics is even an area of study. Truth be told, economics is about the psychological relationship between people and money.



Whoever thought it might be possible to translate human psychology into a set of equations. But we NEED to explain. If the Greeks had come across Australia, they would have probably created an exception to the rule.

The earth is tilted on its axis and this axial tilt is what causes seasons. It also causes days to be longer in the summers closer to the poles and longer nights during winter.

Every axiom, every rule, and every law that you have ever been taught which has a corresponding exception is probably a poor explanation. It is there because we do not know the actual explanation. It is a placeholder in the interim so that it does not drive us crazy.

**“A GOOD EXPLANATION DOES NOT REQUIRE EXCEPTIONS. IT OFTEN ENDS UP EXPLAINING OTHER THINGS THAT YOU WERE NOT EVEN SEEKING TO EXPLAIN.”**

# 9.

## ON WRONG LESSONS

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**O**ften the outcome of a decision ends up determining our assessment of the quality of the decision. What it also does is that it makes sure that we learn all the wrong lessons.

In 1986 as the space shuttle program was reaching maturity, people were losing interest in the human spaceflight program. As public interest waned, NASA was under serious threat of budget cuts. Determined to reinvigorate interest, they recruited a school teacher to go to space. The idea of a civilian travelling to space would reinvigorate imagination, get the entire schooling system excited and keep the interest alive. This was going to be the 25th mission that the space shuttle would be undertaking.

One of the engineers on the team flagged an issue with the rubber rings that were used to seal the fuel tank. He found out that in very cold temperatures they do not work as expected. The shuttle had been flown 24 times without an issue, so there was no reason to assume anything would go wrong.

With the teacher on the shuttle, this was a high profile national television event and they did not want to delay the launch because someone had a hunch.

The Challenger exploded seconds after liftoff and it was the first loss of human life since the NASA spaceflight program had taken off the ground.

You can make bad decisions and still succeed. Success only makes you assume that you did everything right. You discount luck completely. Tell a successful person that they got lucky, they will look at you as if you slapped them in the face. You need to constantly be on the lookout for what can fail you, especially when you succeed.

The corollary can also be true. You can make really good decisions and still fail. We often do not have any problem ascribing this to bad luck.

Do not learn the wrong lessons from success or failure. They are two sides of the same coin. Your decisions matter, but so do a lot of factors that you would never be able to control.

**“ALWAYS KEEP YOUR EYE ON THINGS  
THAT YOU CANNOT CONTROL.  
ESPECIALLY WHEN YOU SUCCEED.”**

# 10.

## ON MISTAKES

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**W**hen you attempt to solve a question in algebra, once you solve it, you will spend some time checking the steps. This is to make sure that you have not made any mistakes in the solution. Irrespective of how proficient you are at mathematics, there is always a possibility that you could have committed a mistake.

To err is human.

But the very same people, when it comes to their professions would never bother to check the steps that they took to arrive at their conclusion.

How many doctors do you think, sit back and analyse if what they are thinking is right or if they have made any mistakes in arriving at their conclusion?

How many CEOs go over all the evidence that they have taken into account to arrive at the decision that they have?

We may discuss and offer up evidence, but we rarely double-check ourselves.

**“GIVEN HOW OFTEN WE HUMANS MAKE MISTAKES, IS IT RIGHT THAT WE ARE SO CERTAIN OF THE DECISIONS THAT WE MAKE?”**

# ABOUT THE AUTHOR

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Vivek has been writing Learning by Proxy since 2020. He has been blogging since 2011 but took it up in a disciplined manner in 2020.

He co-founded Startup Squares (<https://startupsquares.com>) where he works with startups, supporting them through strategic consulting. A lot of his blogs often relate to startup experiences because of his work.

His work, travels and engagements have given him the opportunity to work with several entrepreneurs. It has also given him the opportunity to speak on several stages across the world.

He has been in the habit of reading over 200 blogs a week for the last 10 years. In addition he reads over 50 books every year. This gives him adequate exposure in several areas and

on topics as diverse as politics, economics, psychology, technology, business, and history.

Learning by Proxy was born out of the suggestion of friends who asked him to precipitate all that he was reading into a weekly blog.

You can learn more about him at <https://viveksrinivasan.com>.

You can follow what he writes at <https://learningbyproxy.com>