

土豆 21:12

Crop up

一天蓝 21:12

a herculean task

Sachraa 21:12

checklists

刘熙平 21:12

pontificate

米亚峰 21:12

navigate through her later years with success

Ho'oponopono 21:13

time-tested idea

Sicy 21:13

repertoire

Ho'oponopono 21:13

886

May 21:13

Repertoire

chenxiaohui 21:12

flesh out

May 21:12

irreverent

王莎 21:12

pontificate

July 21:12

effect positive change

Sicy 21:12

the name of the game

Anita 21:12

time-tested

Alex 21:12

hold forth on

杨长玉 21:12

repertoire

土豆 21:12

Crop up

Sicy 21:12

pontificate

Sachraa 21:12

pontificate

123 21:12

crop-up

Anita 21:12

crop up/pontificate

王贤 21:12

the name of the game

ARIANA 20:53

Effect positive change

Anita 20:53

effect positive change in your life

May 20:53

effect positive change in my life

一天蓝 20:41

keep up with the times

Ho'oponopono 20:41

keep up with the times

剪影 20:41

与时俱进 keep up with the times

Ho'oponopono 20:44

flesh out

一天蓝 20:46

bang one's head against the wall

Ho'oponopono 20:46

banging our head against the wall

王莎 20:46

bang one's head against the wall

May 20:46

bang our head against the wall

ARIANA 20:37

catch

fall through

1 [PHRASAL VERB 短語動詞] (安排)沒有落實;(計劃)未能實現;(交易)沒有達成; **If an arrangement, plan, or deal falls through, it fails to happen.** [V P]

They wanted to turn the estate into a private golf course and offered £20 million, but the deal fell through.

他們出價兩千萬英鎊，想把這塊地變成高爾夫球場，但交易泡湯了。

— Macmillan English Dictionary 2nd Edition

fall short **phrase**

to not reach a particular level or to fail to achieve something that you were trying to do

fall short of: *The party is likely to fall short of a parliamentary majority.*

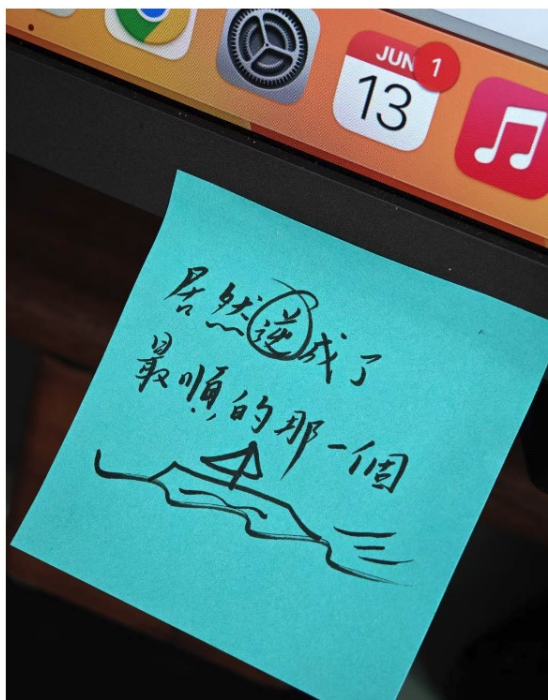
Thesaurus: to make a mistake, or to do something badly **synonym** to not make progress **synonym**

Main entry: fall



张海露 Eric 🎺

昨天上课学了个词，irreverent，不虔诚的不尊敬的无理的傲慢的，但它是个褒义词。叛逆不是秀给别人看怼天杠地，而是像皇帝的新装里那个孩子问“他们是谁？是谁制定了规则？是谁建了高墙蒙上一块红布？”逆是人性，是参差百态，没有这份逆你看不到自己就在水中，看不到那条 pathway 和 razor's edge。



— THE —
GREAT MENTAL
— MODELS —



— INSPIRED —



— NEW —
PERSPECTIVE

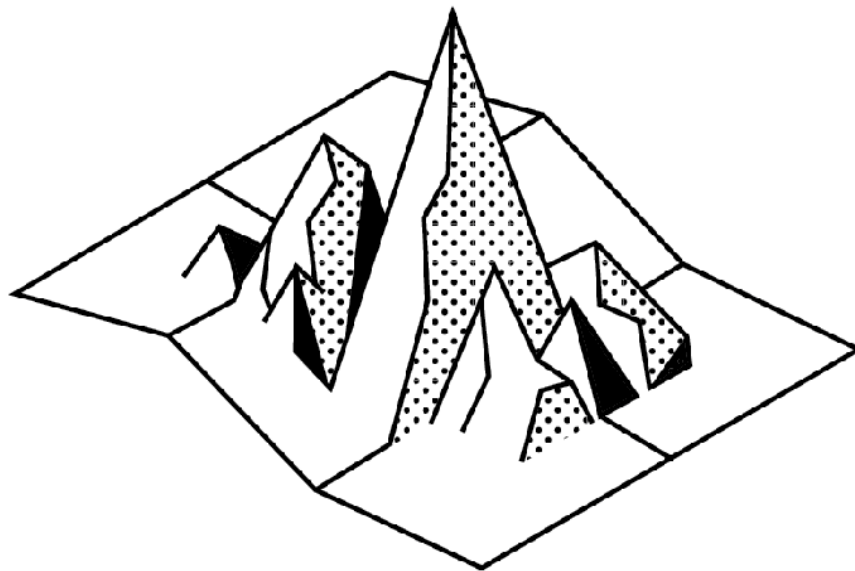


— KNOW THYSELF —

VOL 1

9

The Map is not the Territory



—
Reality check.

The map appears to us more real than
the land.

D.H. Lawrence¹

The People Who Appear in this Chapter

Korzybski, Alfred.

1879-1950 - Polish-American independent scholar who developed the field of general semantics. He argued that knowledge is limited by our physical and language capabilities.

Newton, Sir Isaac.

1643-1727 - English polymath. One of the most influential scientists of all time. He related the workings of the Earth to the wonders of the universe. He also spent 27 years being Master of the Royal Mint.

Einstein, Albert.

1879-1955 - German theoretical physicist who gave us the theory of relativity and opened up the universe. He is famous for many things, including his genius, his kindness and his hair.

Ostrom, Elinor.

1933-2012 - American political economist. In 2009 she shared the Nobel Memorial Prize in Economic Sciences for her analysis of economic governance; in particular, questions related to “the commons”.

Abbud, Karimeh.

1893-1955 - Palestinian professional photographer. Also known as the “Lady Photographer”, she was an artist who lived and worked in Lebanon

and Palestine.

Jacobs, Jane.

1916-2006 - American-Canadian journalist, author, and activist who influenced urban studies, sociology, and economics. Her work has greatly impacted the development of North American cities.

The Map is not the Territory

The map of reality is not reality. Even the best maps are imperfect. That's because they are reductions of what they represent. If a map were to represent the territory with perfect fidelity, it would no longer be a reduction and thus would no longer be useful to us. A map can also be a snapshot of a point in time, representing something that no longer exists. This is important to keep in mind as we think through problems and make better decisions.

We use maps every day. They help us navigate from one city to another. They help us reduce complexity to simplicity. Think of the financial statements for a company, which are meant to distill the complexity of thousands of transactions into something simpler. Or a policy document on office procedure, a manual on parenting a two-year-old, or your performance review. All are models or maps that simplify some complex territory in order to guide you through it.

Just because maps and models are flawed is not an excuse to ignore them. Maps are useful to the extent they are explanatory and predictive.

Key elements of a map

In 1931, the mathematician Alfred Korzybski presented a paper on mathematical semantics in New Orleans, Louisiana. Looking at it today, most of the paper reads like a complex, technical argument on the relationship of mathematics to human language, and of both to physical reality.

However, with this paper Korzybski introduced and popularized the concept that *the map is not the territory*. In other words, the description of the thing is not the thing itself. The model is not reality. The abstraction is not the abstracted.

Specifically, in his own words: ²

1. A map may have a structure similar or dissimilar to the structure of the territory. The London underground map is super useful to travelers. The train drivers don't use it at all! Maps describe a territory in a useful way, but with a specific purpose. They cannot be everything to everyone.

2. Two similar structures have similar "logical" characteristics. If a correct map shows Dresden as between Paris and Warsaw, a similar relation is found in the actual territory. If you have a map showing where Dresden is, you should be able to use it to get there.

3. A map is not the actual territory. The London underground map does not convey what it's like to be standing in Covent Garden station. Nor would you use it to navigate out of the station.

4. An ideal map would contain the map of the map, the map of the map of the map, etc., endlessly. We may call this characteristic self-reflexiveness. Imagine using an overly complicated "Guide to Paris" on a trip to France, and then having to purchase another book that was the "Guide to the Guide of Paris". And so on. Ideally, you'd never have any issues— but eventually, the level of detail would be overwhelming.

The truth is, the only way we can navigate the complexity of reality is through some sort of abstraction. When we read the news, we're consuming abstractions created by other people. The authors consumed vast amounts of information, reflected upon it, and drew some abstractions and conclusions that they share with us. But something is lost in the process. We can lose the specific and relevant details that were distilled into an abstraction. And, because we often consume these abstractions as gospel, without having done the hard mental work ourselves, it's tricky to see when the map no longer agrees with the territory. We inadvertently forget that the map is not reality.

But my GPS didn't show that cliff

We need maps and models as guides. But frequently, we don't remember that our maps and models are abstractions and thus we fail to understand their limits. We forget there is a territory that exists separately from the map. This territory contains details the map doesn't describe. We run into problems when our knowledge becomes of the *map*, rather than the actual underlying territory it describes.

When we mistake the map for reality, we start to think we have all the answers. We create static rules or policies that deal with the map but forget that we exist in a constantly changing world. When we close off or ignore feedback loops, we don't see the terrain has changed and we dramatically reduce our ability to adapt to a changing environment. Reality is messy and complicated, so our tendency to simplify it is understandable. However, if the aim becomes simplification rather than understanding we start to make bad decisions. ?

We can't use maps as dogma. Maps and models are not meant to live forever as static references. The world is dynamic. As territories change, our tools to navigate them must be flexible to handle a wide variety of situations or adapt to the changing times. If the value of a map or model is related to its ability to predict or explain, then it needs to represent reality. If reality has changed the map must change.

Take Newtonian physics. For hundreds of years it served as an extremely useful model for understanding the workings of our world. From gravity to celestial motion, Newtonian physics was a wide-ranging map.



—
Would you be able to use this map to get to Egypt?

Then in 1905 Albert Einstein, with his theory of Special Relativity, changed our understanding of the universe in a huge way. He replaced the understanding handed down by Isaac Newton hundreds of years earlier. He created a new map.

Newtonian physics is still a *very* useful model. One can use it very

reliably to predict the movement of objects large and small, with some limitations as pointed out by Einstein. And, on the flip side, Einstein's physics are still not totally complete: With every year that goes by, physicists become increasingly frustrated with their inability to tie it into small-scale quantum physics. Another map may yet come.

But what physicists do so well, and most of us do so poorly, is that they carefully delimit what Newtonian and Einsteinian physics are able to explain. They know down to many decimal places where those maps are useful guides to reality, and where they aren't. And when they hit uncharted territory, like quantum mechanics, they explore it carefully instead of assuming the maps they have can explain it all.

Maps can't show everything

Some of the biggest map/territory problems are the risks of the *territory* that are not shown on the *map*. When we're following the map without looking around, we trip right over them. Any user of a map or model must realize that we do not understand a model, map, or reduction unless we understand and respect its limitations. If we don't understand what the map does and doesn't tell us, it can be useless or even dangerous.

— *Sidebar: The Tragedy of the Commons*

The Tragedy of the Commons

The Tragedy of the Commons is a parable that illustrates why common resources get used more than is desirable from the standpoint of society as a whole. Garrett Hardin wrote extensively about this concept.

“Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons. Such an arrangement may work reasonably satisfactorily for centuries because tribal wars, poaching, and disease keep the numbers of both man and beast well below the carrying capacity of the land. Finally, however, comes the day of reckoning, that is, the day when the long-desired goal of social stability becomes a reality. At this point, the inherent logic of the commons remorselessly generates tragedy.

As a rational being, each herdsman seeks to maximize his gain. Explicitly or implicitly, more or less consciously, he asks, “What is the utility to me of adding one more animal to my herd?” This utility has one negative and one positive component.

1. The positive component is a function of the increment of one animal. Since the herdsman receives all the proceeds from the sale of the additional animal, the positive utility is nearly +1.
2. The negative component is a function of the additional overgrazing created by one more animal. Since, however, the effects of overgrazing are shared by all the herdsmen, the negative utility for any particular decision-making herdsman is only a fraction of 1.

Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another; and another. . . . But

this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit— in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.” ³

What is common to many is taken least care of, for all men have greater regard for what is their own than for what they possess in common with others. —Aristotle

Here’s another way to think about it. Economist Elinor Ostrom wrote about being cautious with maps and models when looking at different governance structures for common resources. She was worried that the Tragedy of the Commons model (see sidebar), which shows how a shared resource can become destroyed through bad incentives, was too general and did not account for how people, in reality, solved the problem. She explained the limitations of using models to guide public policy, namely that they often become metaphors.

“What makes these models so dangerous ... is that the constraints that are assumed to be fixed for the purpose of analysis are taken on faith as being fixed in empirical setting.” ⁴

This is a double problem. First, having a general map, we may assume that if a territory matches the map in a couple of respects it matches the map in all respects. Second, we may think adherence to the map is more important than taking in new information about a territory. Ostrom asserts that one of the main values of using models as maps in public policy

discussions is in the thinking that is generated. They are tools for exploration, not doctrines to force conformity. They are guidebooks, not laws.

«Remember that all models are wrong; the practical question is how wrong do they have to be to not be useful.»

George Box⁵



In order to use a map or model as accurately as possible, we should take three important considerations into account:

1. Reality is the ultimate update.
2. Consider the cartographer.
3. Maps can influence territories.

Reality is the ultimate update: When we enter new and unfamiliar territory it's nice to have a map on hand. Everything from travelling to a new city, to becoming a parent for the first time has maps that we can use to improve our ability to navigate the terrain. But territories change, sometimes faster than the maps and models that describe them. We can and should update them based on our own experiences in the territory. That's how good maps are built: feedback loops created by explorers.

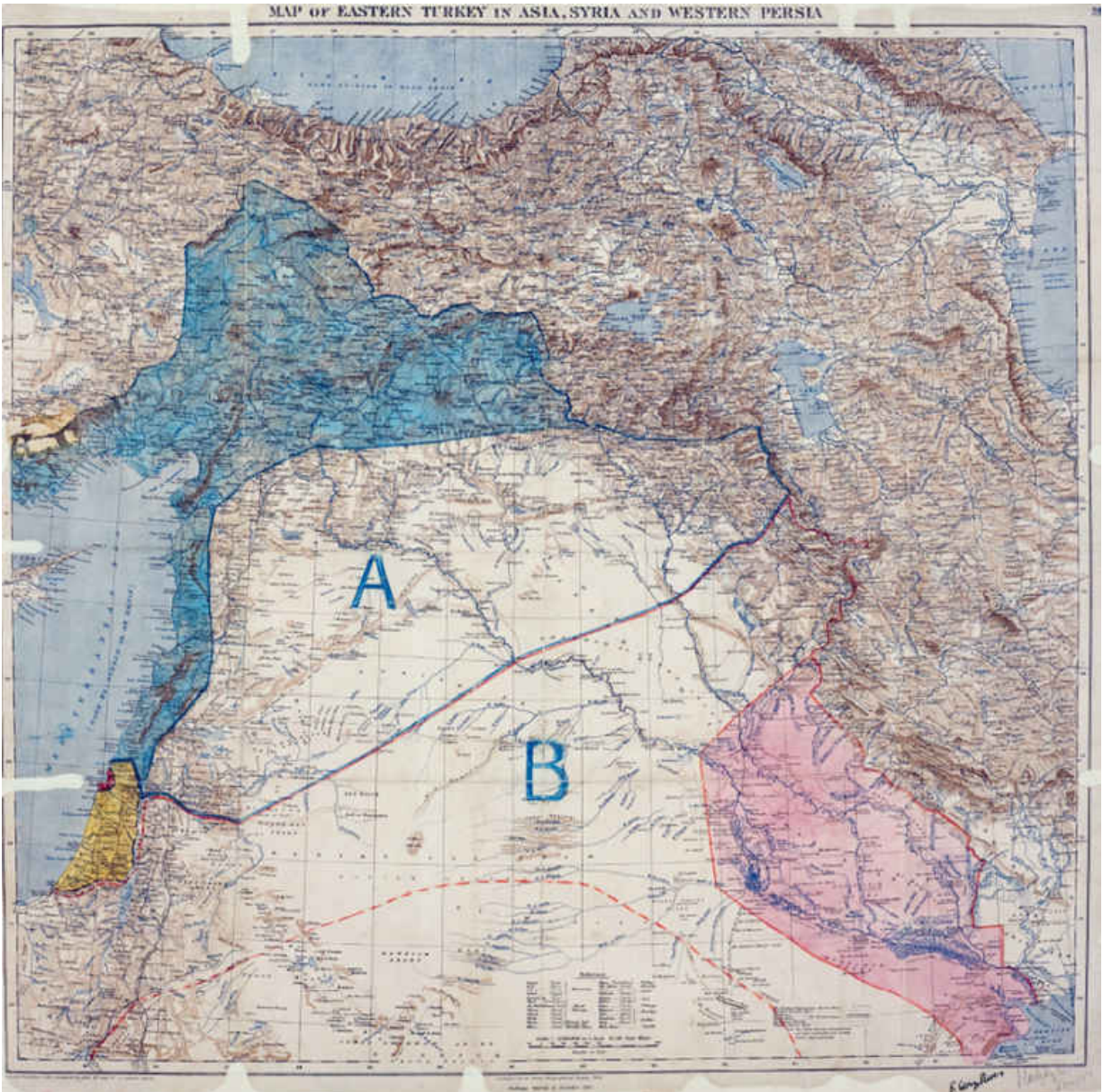
✓ We can think of stereotypes as maps. Sometimes they are useful—we have to process large amounts of information every day, and simplified chunks such as stereotypes can help us sort through this information with efficiency. The danger is when, like with all maps, we forget the territory is more complex. That people have far more territory than a stereotype can represent.

In the early 1900s, Europeans were snapping pictures all over

Palestine, leaving a record that may have reflected their ethnographic perspective, but did not cover Karimeh Abbud's perception of her culture. She began to take photos of those around her, becoming the first female Arab to set up her own photo studio in Palestine. Her pictures reflected a different take on the territory— she rejected the European style and aimed to capture the middle class as they were. She tried to let her camera record the territory as she saw it versus manipulating the images to follow a narrative.

Her informal style and desire to photograph the variety around her, from landscapes to intimate portraits, have left a legacy far beyond the photos themselves.^{6,7} She contributed a different perspective, a new map, with which to explore the history of the territory of Palestine.

We do have to remember though, that a map captures a territory at a moment in time. Just because it might have done a good job at depicting what was, there is no guarantee that it depicts what is there now or what will be there in the future. The faster the rate of change in the territory, the harder it will be for a map to keep up to date.



—
Dividing a large chunk of the Middle East into simply A and B, the Sykes-Picot line proposed borders that paid little regard to ethnic or geographical features.

«Viewed in its development through time, the map details the changing thought of the human race, and

few works seem to be such an excellent indicator of
culture and civilization.»

Norman J.W. Thrower⁸

Consider the cartographer: Maps are not purely objective creations. They reflect the values, standards, and limitations of their creators. We can see this in the changing national boundaries that make up our world maps. Countries come and go depending on shifting political and cultural sensibilities. When we look at the world map we have today, we tend to associate societies with nations, assuming that the borders reflect a common identity shared by everyone contained within them.

However, as historian Margaret MacMillan has pointed out, nationalism is a very modern construct, and in some sense has developed with, not in advance of, the maps that set out the shape of countries.⁹ We then should not assume that our literal maps depict an objective view of the geographical territory. For example, historians have shown that the modern borders of Syria, Jordan, and Iraq reflect British and French determination to maintain influence in the Middle East after World War I.¹⁰ Thus, they are a better map of Western interest than of local custom and organization. Models, then, are most useful when we consider them in the context they were created. What was the cartographer trying to achieve? How does this influence what is depicted in the map?

« As a branch of human endeavor, cartography has a long and interesting history that well reflects the state of cultural activity, as well as the perception of the world, in different periods. ... Though technical in

nature, cartography, like architecture, has attributes of both a scientific and artistic pursuit, a dichotomy not satisfactorily reconciled in all presentations. »

Norman J.W. Thrower ¹¹

Maps can influence territories: This problem was part of the central argument put forth by Jane Jacobs in her groundbreaking work, *The Death and Life of Great American Cities*. She chronicled the efforts of city planners who came up with elaborate models for the design and organization of cities without paying any attention to how cities actually work. They then tried to fit the cities into the model. She describes how cities were changed to correspond to these models, and the often negative consequences of these efforts. “It became possible also to map out master plans for the statistical city, and people take these more seriously, for we are all accustomed to believe that maps and reality are necessarily related, or that if they are not, we can make them so by altering reality.” ¹²

Jacobs’ book is, in part, a cautionary tale of what can happen when faith in the model influences the decisions we make in the territory. When we try to fit complexity into the simplification.



—
Jacobs demonstrated that mapping the interaction between people and sidewalks was an important factor in determining how to improve city safety.

«In general, when building statistical models, we must not forget that the aim is to understand

something about the real world. Or predict, choose an action, make a decision, summarize evidence, and so on, but always about the real world, not an abstract mathematical world: our models are not the reality. »

David Hand¹³

Conclusion

Maps have long been a part of human society. They are valuable tools to pass on knowledge. Still, in using maps, abstractions, and models, we must always be wise to their limitations. They are, by definition, reductions of something far more complex. There is always at least an element of subjectivity, and we need to remember that they are created at particular moments in time.

This does not mean that we cannot use maps and models. We must use some model of the world in order to simplify it and therefore interact with it. We cannot explore every bit of territory for ourselves. We can use maps to guide us, but we must not let them prevent us from discovering new territory or updating our existing maps.

→ While navigating the world based on terrain is a useful goal, it's not always possible. Maps, and models, help us understand and relate to the world around us. They are flawed but useful. In order to think a few steps ahead we must think beyond the map.

Model of Management

Let's take a model of management. There are hundreds of them, dating back at least to the Scientific Theory of Management by Frederick Taylor, which had factory managers breaking down tasks into small pieces, forcing their workers to specialize, and financially incentivizing them to complete those tasks efficiently. It was a brute force method, but it worked pretty well.

As time went on and the economy increasingly moved away from manufacturing, other theories gained popularity, and Taylor's scientific model is no longer used by anyone of note. That does not mean it wasn't useful: For a time, it was. It's just that reality is more complicated than Taylor's model. It had to contend with at least the following factors:

1. As more and more people know what model you're using to manipulate them, they may decide not to respond to your incentives.
2. As your competitors gain knowledge of the model, they respond in kind by adopting the model themselves, thus flattening the field.
3. The model may have been mostly useful in a factory setting, and not in an office setting, or a technology setting.
4. Human beings are not simple automatons: A more complete model would hone in on other motivations they might have besides financial ones.

And so on. Clearly, though Taylor's model was effective for a time, it was effective with limitations. As with Einstein eclipsing Newton, better models came along in time.

Maps Are Necessarily Flawed

Maps, or models, are necessary but necessarily flawed. Lewis Carroll once jabbed at this in a story called *Sylvie and Bruno*, where one of the characters decided that his country would create a map with the scale of one mile to one mile. Obviously, such a map would not have the limitations of a map, but it wouldn't be of much help either. You couldn't use it to actually go anywhere. It wouldn't fit in your pocket or your car. We need maps to condense the territory we are trying to navigate.



—
Illustration from the first edition of *Sylvie and Bruno*, published in 1889

“

Specific knowledge is found by pursuing your genuine curiosity and passion rather than whatever is hot right now.

Specific knowledge is knowledge that you cannot be trained for. If society can train you, it can train someone else, and replace you.



Naval Ravikant



Naval Ravikant
@naval



 **Follow**

No one can compete with you on being you.

Most of life is a search for who and what needs you the most.

RETWEETS

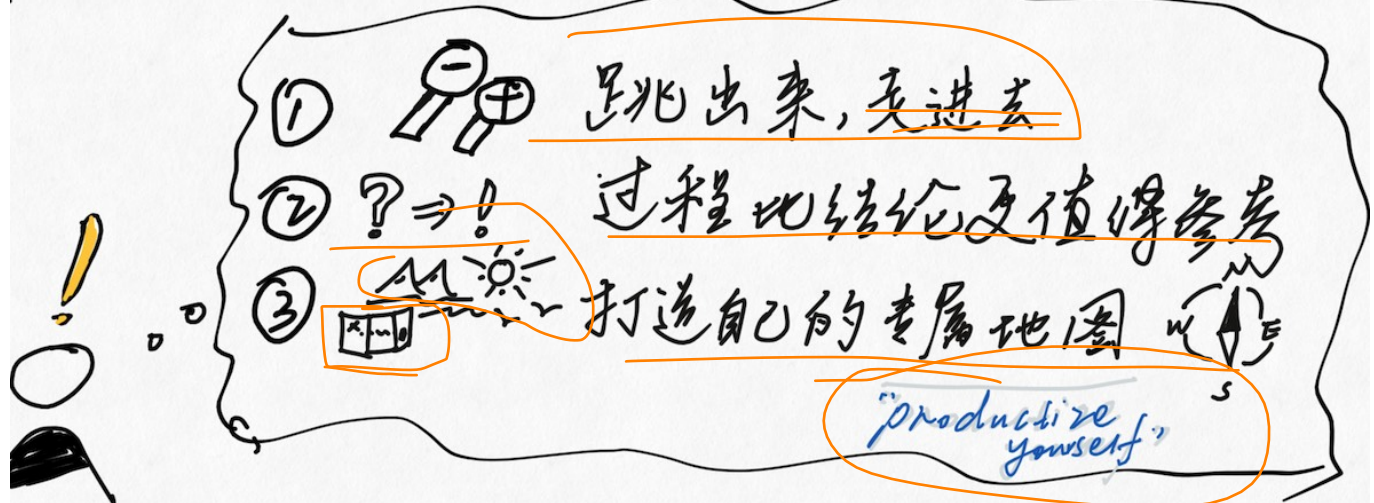
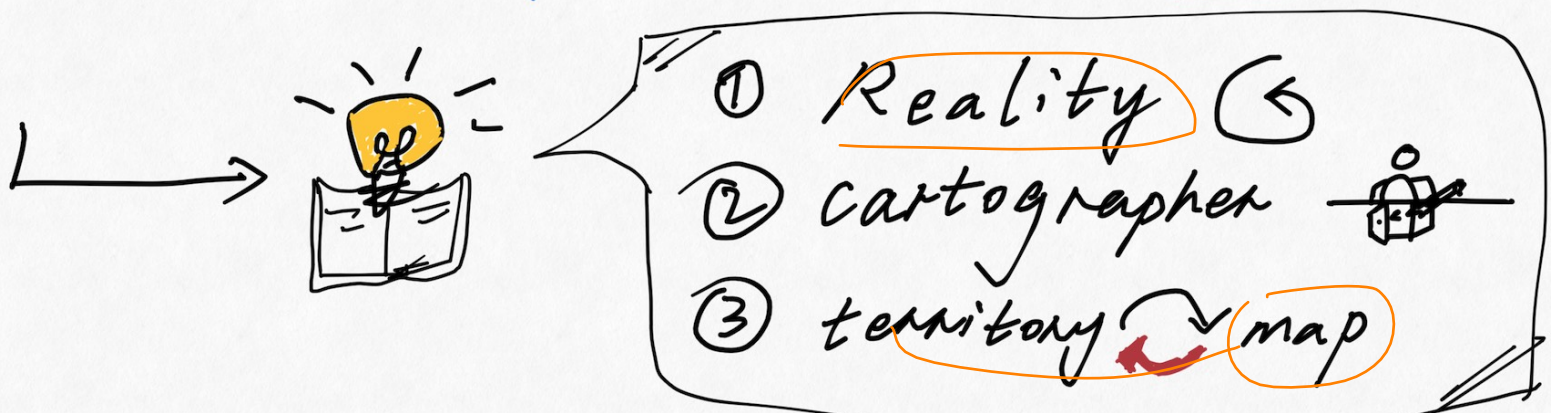
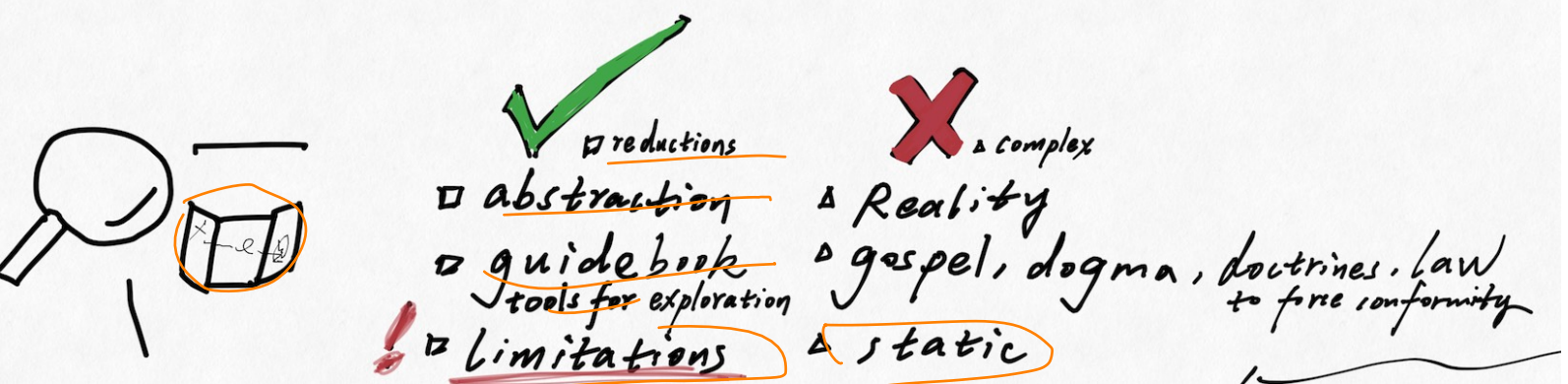
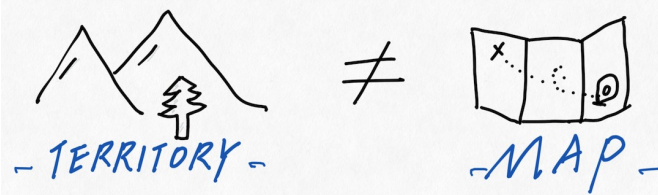
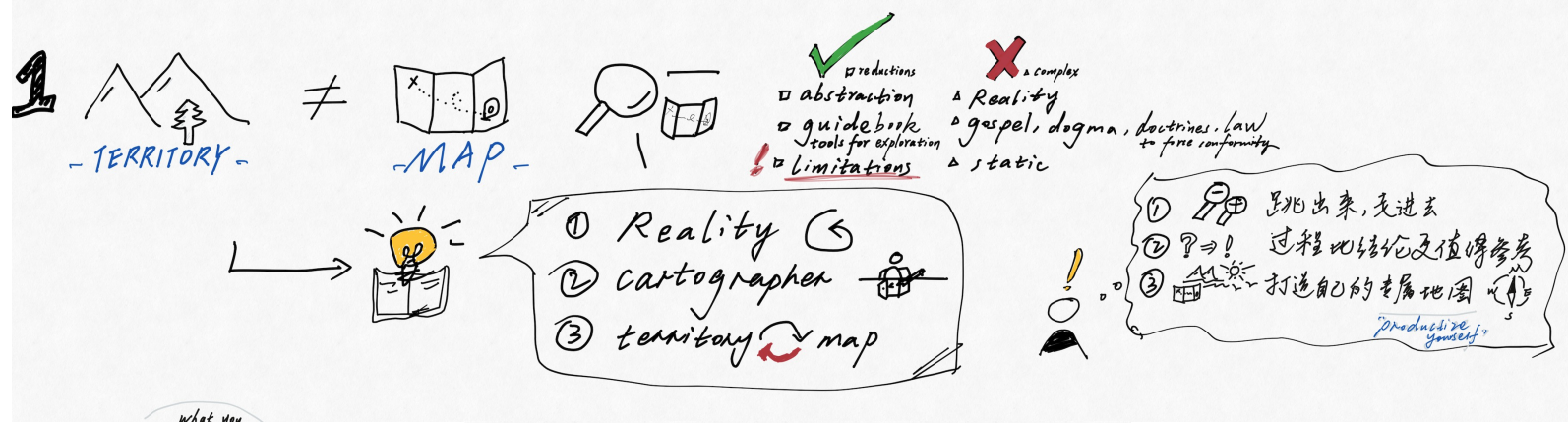
269

LIKES

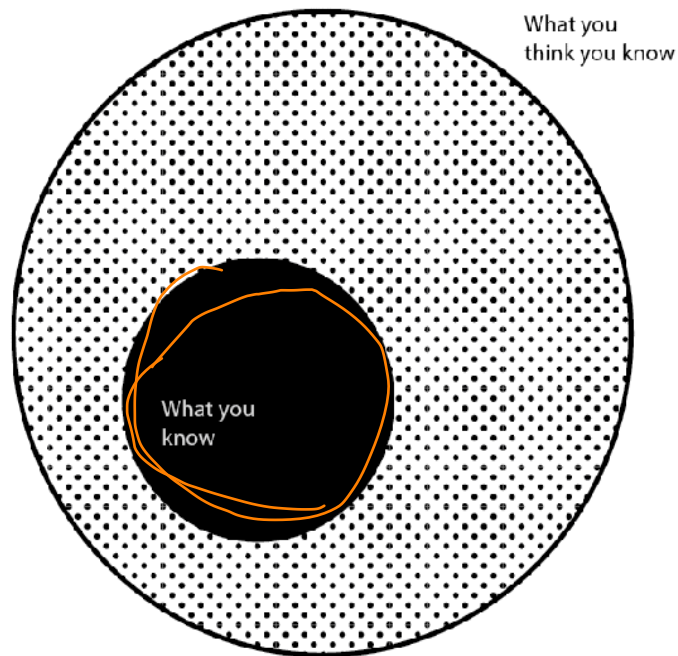
581



10:15 AM - 13 Nov 2016



Circle of Competence



—
What don't you know?

I'm no genius. I'm smart in spots—
but I stay around those spots.

Thomas Watson ¹

The People Who Appear in this Chapter

Norgay, Tenzing, born Namgyal Wangdi.

1914-1986 - Nepali Sherpa mountaineer. *Time* named him one of the 100 most influential people of the 20th century.

Gawande, Atul.

1965 - American surgeon, writer, and public health researcher. He practices medicine in Boston, is a professor at Harvard University, and has been a staff writer for *The New Yorker* since 1998.

Elizabeth I.

1533-1603 - Queen of England and Ireland. One of the most famous monarchs of all time, her image and legacy continue to capture the imagination. Elizabeth was a great orator, could speak about 11 languages, and wrote her own speeches and letters.

Circle of Competence

When ego and not competence drives what we undertake, we have blind spots. If you know what you understand, you know where you have an edge over others. When you are honest about where your knowledge is lacking you know where you are vulnerable and where you can improve. Understanding your circle of competence improves decision-making and outcomes.

In order to get the most out of this mental model, we will explore the following:

1. What is a circle of competence?
2. How do you know when you have one?
3. How do you build and maintain one?
4. How do you operate outside of one?

What is a circle of competence? Imagine an old man who's spent his entire life up in a small town. He's the Lifer. No detail of the goings-on in the town has escaped his notice over the years. He knows the lineage, behavior, attitudes, jobs, income, and social status of every person in town. Bit by bit, he built that knowledge up over a long period of observation and participation in town affairs.

The Lifer knows where the bodies are buried and who buried them. He knows who owes money to whom, who gets along with whom, and who the town depends on to keep spinning. He knows about that time the mayor cheated on his taxes. He knows about that time the town flooded, how many inches high the water was, and exactly who helped whom and who didn't.

Now imagine a Stranger enters the town, in from the Big City. Within a few days, the Stranger decides that he knows all there is to know about the town. He's met the mayor, the sheriff, the bartender, and the shopkeeper, and he can get around fairly easily. It's a small town and he

hasn't come across anything surprising.

In the Stranger's mind, he's convinced he pretty much knows everything a Lifer would know. He has sized up the town in no time, with his keen eye. He makes assumptions based on what he has learned so far, and figures he knows enough to get his business done. This, however, is a false sense of confidence that likely causes him to take more risks than he realizes. Without intimately knowing the history of the town, how can he be sure that he has picked the right land for development, or negotiated the best price?

After all, what kind of knowledge does he really have, compared to the Lifer?

The difference between the detailed web of knowledge in the Lifer's head and the surface knowledge in the Stranger's head is the difference between being inside a circle of competence and being outside the perimeter. True knowledge of a complex territory cannot be faked. The

Lifer could stump the Stranger in no time, but not the other way around.

↳ Consequently, as long as the Lifer is operating in his circle of competence he will always have a better understanding of reality to use in making decisions. Having this deep knowledge gives him flexibility in responding to challenges, because he will likely have more than one solution to every problem. And this depth increases his efficiency—he can eliminate bad choices quickly because he has all the pieces of the puzzle.

What happens when you take the Lifer/Stranger idea seriously and try to delineate carefully the domains in which you're one or the other? There is no definite checklist for figuring this out, but if you don't have at least a few years and a few failures under your belt, you cannot consider yourself competent in a circle.

«We shall be unable to turn natural advantage to account unless we make use of local guides.»

Sun Tzu²

For most of us, climbing to the summit of Mount Everest is outside our circles of competence. Not only do we have no real idea how to do it, but—even more scary—should we attempt it, we don't even know what we don't know. If we studied hard, maybe we'd figure out the basics. We'd learn about the training, the gear, the process, the time of year, all the things an outsider could quickly know. But at what point would you be satisfied that you knew enough to get up there, and back, with your life intact? And how confident would you be in this assessment?

There are approximately 200 bodies on Everest (not to mention the ones that have been removed). All of those people thought they could get up and down alive. The climate preserves their corpses, almost as a warning. The ascent to the summit takes you by the bodies of people who once shared your dreams.

Since the first recorded attempts to climb Everest in 1922, all climbers have relied on the specialized knowledge of the Sherpa people to help navigate the terrain of the mountain. Indigenous to the region, Sherpas grew up in the shadows of the mountain, uniquely placed to develop the circle of competence necessary to get to the top.

Sherpa Tenzing Norgay led the team that made the first ascent³, and a quarter of all subsequent ascents have been made by Sherpas (some going as many as 16 times).^{4,5} Although the mountain is equally risky for everyone, most people who climb Everest do it once. For the Sherpas, working and climbing various parts of the mountain is their day job. Would you try to climb Everest without their help?



—
Sherpa Tenzing Norgay and his ilk are the real lifers. Yet strangers often ignore their advice much to their peril.

The physical challenges alone of reaching the summit are staggering. It is a region that humans aren't suited for. There isn't enough oxygen in the air and the top is regularly pummeled by winds of more than 150 miles an hour—stronger than a Category 5 hurricane. You don't get to the top on a whim, and you don't survive with only luck. Norgay worked for years as a trekking porter, and was part of a team that tried to ascend Everest in 1935. He finally succeeded in reaching the summit in 1953, after 20 years of climbing and trekking in the region. **He developed his expertise through lots of lucky failures.** After Everest, Norgay opened a mountaineering school to train other locals as guides, and a trekking company to take others climbing in the Himalayas.

Norgay is around the closest someone could come to being a Lifer when it comes to the competence required to climb Mount Everest.

→ **How do you know when you have a circle of competence? Within our circles of competence, we know exactly what we don't know.** We are able to make decisions quickly and relatively accurately. We possess detailed knowledge of additional information we might need to make a decision with full understanding, or even what information is unobtainable. **We know what is knowable and what is unknowable and can distinguish between the two.**

We can anticipate and respond to objections because we've heard them before and already put in the work of gaining the knowledge to counter them. We also have a lot of options when we confront problems in our circles. Our deep fluency in subjects we are dealing with means we can draw on different information resources and understand what can be adjusted and what is invariant.

A circle of competence cannot be built quickly. We don't become Lifers overnight. It isn't the result of taking a few courses or working at something for a few months—being a Lifer requires more than skimming the surface. In Alexander Pope's poem "An Essay on Criticism," he writes:

*“A little learning is a dangerous thing;
Drink deep, or taste not the Pierian spring:
There shallow draughts intoxicate the brain,
And drinking largely sobers us again.”⁶*

There is no shortcut to understanding. Building a circle of competence takes years of experience, of making mistakes, and of actively seeking out better methods of practice and thought.

→ How do you build and maintain a circle of competence?

One of the essential requirements of a circle of competence is that you can never take it for granted. You can't operate as if a circle of competence is a static thing, that once attained is attained for life. The world is dynamic. Knowledge gets updated, and so too must your circle.

There are three key practices needed in order to build and maintain a circle of competence: curiosity and a desire to learn, monitoring, and feedback.

↪ First, you have to be willing to learn. Learning comes when experience meets reflection. You can learn from your own experiences. Or you can learn from the experience of others, through books, articles, and conversations. Learning everything on your own is costly and slow. You are one person. Learning from the experiences of others is much more productive. You need to always approach your circle with curiosity, seeking out information that can help you expand and strengthen it.

«Learn from the mistakes of others. You can't live long enough to make them all yourself.»

Anonymous

Second, you need to monitor your track record in areas which you have, or

want to have, a circle of competence. And you need to have the courage to monitor honestly so the feedback can be used to your advantage.

The reason we have such difficulty with overconfidence—as demonstrated in studies which show that most of us are much worse drivers, lovers, managers, traders (and many other things) than we think we are—is because we have a problem with honest self-reporting. We don't keep the right records, because we don't *really* want to know what we're good and bad at. Ego is a powerful enemy when it comes to better understanding reality.

But that won't work if you're trying to assess or build your circle of competence. You need to keep a precise diary of your trades, if you're investing in the stock market. If you are in a leadership position, you need to observe and chronicle the results of your decisions and evaluate them based on what you were trying to achieve. You need to be honest about your failures in order to reflect and learn from them. That's what it takes.

Keeping a journal of your own performance is the easiest and most private way to give self-feedback. Journals allow you to step out of your automatic thinking and ask yourself: What went wrong? How could I do better? Monitoring your own performance allows you to see patterns that you simply couldn't see before. This type of analysis is painful for the ego, which is also why it helps build a circle of competence. You can't improve if you don't know what you're doing wrong.

Finally, you must occasionally solicit external feedback. This helps build a circle, but is also critical for maintaining one.

A lot of professionals have an ego problem: their view of themselves does not line up with the way other people see them. Before people can change they need to know these outside views. We need to go to people we trust, who can give us honest feedback about our traits. These people are in a position to observe us operating within our circles, and are thus able to offer relevant perspectives on our competence. Another option is to hire a

coach.

Atul Gawande is one of the top surgeons in the United States. And when he wanted to get better at being a surgeon, he hired a coach. This is terribly difficult for anyone, let alone a doctor. At first he felt embarrassed. It had been over a decade since he was evaluated by another person in medical school. “Why,” he asked, “should I expose myself to the scrutiny and fault-finding?”⁷

The coach worked. Gawande got two things out of this. First, Gawande received something he couldn’t see himself and something no one else would point out (if they noticed it at all): knowledge of where his skill and technique was suboptimal. The second thing Gawande took away was the ability to provide better feedback to other doctors.

It is extremely difficult to maintain a circle of competence without an outside perspective. We usually have too many biases to solely rely on our own observations. It takes courage to solicit external feedback, so if defensiveness starts to manifest, focus on the result you hope to achieve.



How do you operate outside a circle of competence?

Part of successfully using circles of competence includes knowing when we are outside them— when we are not well equipped to make decisions. Since we can’t be inside a circle of competence in everything, when we find ourselves Strangers in a place filled with Lifers, what do we do? We don’t always get to “stay around our spots.” We must develop a repertoire of techniques for managing when we’re outside of our sphere, which happens all the time.⁸

There are three parts to successfully operating outside a circle of competence:

1. Learn at least the basics of the realm you’re operating in, while acknowledging that you’re a Stranger, not a Lifer. However, keep in

mind that basic information is easy to obtain and often gives the acquirer an unwarranted confidence.

2. Talk to someone whose circle of competence in the area is strong. Take the time to do a bit of research to at least define questions you need to ask, and what information you need, to make a good decision. If you ask a person to answer the question for you, they'll be giving you a fish. If you ask them detailed and thoughtful questions, you'll learn how to fish. Furthermore, when you need the advice of others, especially in higher stakes situations, ask questions to probe the limits of their circles. Then ask yourself how the situation might influence the information they choose to provide you.

3. Use a broad understanding of the basic mental models of the world to augment your limited understanding of the field in which you find yourself a Stranger. These will help you identify the foundational concepts that would be most useful. These then serve as a guide to help you navigate the situation you are in.

There are inevitably areas where you are going to be a Stranger, even in the profession in which you excel. It is impossible for our circles of competence to encompass the entire world. Even if we're careful to know the boundaries and take them seriously, we can't always operate inside our circles. Life is simply not that forgiving. We have to make HR decisions without being experts in human psychology, implement technology without having the faintest idea how to fix it if something goes wrong, or design products with an imperfect understanding of our customers. These decisions may be outside our circles, but they still have to get made.

The Problem of Incentives

The problem of incentives can really skew how much you can rely on someone else's circle of competence. This is particularly acute in the financial realm. Until recently, nearly all financial products we might be pushed into had commissions attached to them—in other words, our advisor made more money by giving us one set of advice than another, regardless of its wisdom. Fortunately, the rise of things like index funds of the stock and bond markets has mostly alleviated the issue.

In cases like financial advisory, we're not on solid ground until we know, in some detail, the compensation arrangement our advisor is under.

The same goes for buying furniture, buying a house, or buying a washing machine at a retail store. What does the knowledgeable advisor stand to gain from our purchase?

It goes beyond sales, of course. Whenever we are getting advice, it is from a person whose set of incentives is not the same as ours. It is not being cynical to know that this is the case, and to then act accordingly.

Suppose we want to take our car to a mechanic. Most of us, especially in this day and age, are complete Strangers in that land; we subsequently are open to be taken advantage of. There is not only an asymmetry in our general knowledge base about mechanics of a car, there is usually an asymmetry of knowledge about the actual current problem with the car. We haven't been under the hood, but the mechanic has. We know his incentive in this situation; it's to get us to spend as much as possible while still retaining us as a customer. The

only solution, at least until we reach a certain level of trust with our mechanic, is to suck it up and learn a bit of the trade.

Fortunately, these days that is easy with the aid of the internet. And we don't need to learn it ahead of time. We can learn it on an as-needed basis. The way to do it, in this case, would be to defer all decisions on major spending until you've had time to poke around the resources you can find online and at least confirm that the mechanic isn't making a major bluff.



You can't see what's wrong but trust me.

When Queen Elizabeth I of England ascended to the throne, her reign was by no means assured. The tumultuous years under her father, brother, and sister had contributed to a political situation that was precarious at best. England was in a religious crisis that was threatening the stability of the kingdom, and was essentially broke.

Elizabeth knew there were aspects of leading the country that were outside her circle of competence. She had an excellent education and had spent most of her life just trying to survive. Perhaps that is why she was able to identify and admit to what she didn't know.

In her first speech as Queen, Elizabeth announced, "I mean to direct all my actions by good advice and counsel."⁹ After outlining her intent upon becoming Queen, she proceeded to build her Privy Council—effectively the royal advisory board. She didn't copy her immediate predecessors, filling her council with yes men or wealthy incompetents who happen to have the same religious values. She blended the old and the new to develop stability and achieve continuity. She kept the group small so that real discussions could happen. She wanted a variety of opinions that could be challenged and debated.¹⁰

In large measure due to the advice she received from this council, advice that was the product of open debate that took in the circles of competence of each of the participants, Elizabeth took England from a country of civil unrest and frequent persecution to one that inspired loyalty and creativity in its citizens. She sowed the seeds for the empire that would eventually come to control one quarter of the globe.



—
Elizabeth I led her country at a time when very few women had public positions of power. It is testament to her strength and intelligence that she was able to admit what she didn't know and take counsel from others.

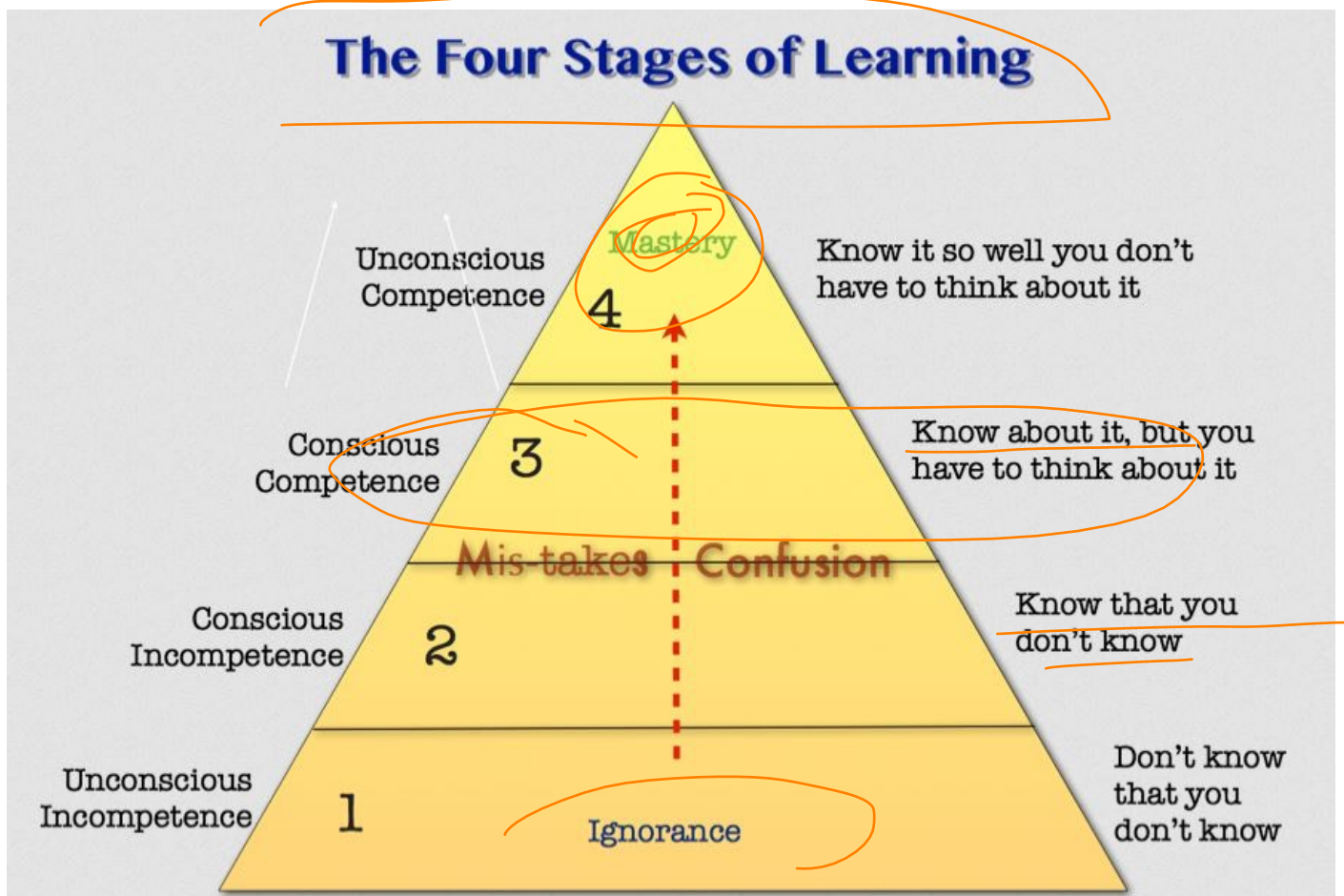
Conclusion

Critically, we must keep in mind that our circles of competence extend only so far. There are boundaries on the areas in which we develop the ability to make accurate decisions. In any given situation, there are people who have a circle, who have put in the time and effort to really understand the information.

It is also important to remember that no one can have a circle of competence that encompasses everything. There is only so much you can know with great depth of understanding. This is why being able to identify your circle, and knowing how to move around outside of it, is so important.

«Ignorance more often begets confidence than knowledge.»

Charles Darwin¹¹



Staying in Your Circle

The idea a circle of competence in the realm of investments was stated very well by Berkshire Hathaway's Warren Buffett. When asked, he recommended that each individual stick to their area of special competence, and be very reluctant to stray. For when we stray too far, we get into areas where we don't even know what we don't know. We may not even know the questions we need to ask.

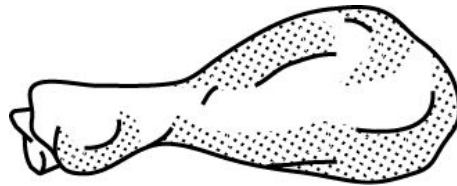
To explain his point, Buffett gives the example of a Russian immigrant woman who ran one of his businesses, the famous Nebraska Furniture Mart. The CEO, Rose Blumkin, spoke little English and could barely read or write, yet had a head for two things: numbers, and home furnishings. She stuck to those areas and built one of the country's great retailing establishments. Here it is in Buffett's words:

*I couldn't have given her \$200 million worth of Berkshire Hathaway stock when I bought the business because she doesn't understand stock. She understands cash. She understands furniture. She understands real estate. She doesn't understand stocks, so she doesn't have anything to do with them. If you deal with Mrs. B in what I would call her circle of competence.... She is going to buy 5,000 end tables this afternoon (if the price is right). She is going to buy 20 different carpets in odd lots, and everything else like that [snaps fingers] because she understands carpets. She wouldn't buy 100 shares of General Motors if it was at 50 cents a share.*¹²

Her iron focus on the things she knew best was largely responsible for her massive success in spite of the obstacles she faced.

Supporting Idea:

Falsifiability



Karl Popper wrote “A theory is part of empirical science if and only if it conflicts with possible experiences¹³ and is therefore in principle falsifiable by experience.” The idea here is that if you can’t prove something wrong, you can’t really prove it right either.

Thus, in Popper’s words, science requires testability: “If observation shows that the predicted effect is definitely absent, then the theory is simply refuted.” This means a good theory must have an element of risk to it—namely, it has to risk being wrong. It must be able to be proven wrong under stated conditions.

In a true science, as opposed to a pseudo-science, the following statement can be easily made: “If x happens, it would show demonstrably that theory y is not true.” We can then design an experiment, a physical one or sometimes a thought experiment, to figure out if x actually does happen. **Falsification is the opposite of verification; you must try to show the theory is incorrect, and if you fail to do so, you actually strengthen it. To understand how this works in practice, think of evolution.** As mutations appear, natural selection eliminates what doesn’t work, thereby strengthening the fitness of the



explain this para in simpler language: "A theory is part of empirical science if and only if it conflicts with possible experiences and is therefore in principle falsifiable by experience."



In simpler terms, a theory belongs to empirical science only if it contradicts or goes against what we can observe or experience. This means that if a theory can be proven wrong or false based on our real-life experiences, it is considered part of empirical science.



flesh it out



Sure! Let's expand on the explanation:



In the world of science, there are different types of theories. One important type is called an empirical theory. An empirical theory is one that is based on observations and evidence from the real world.

Now, to determine whether a theory belongs to empirical science, we need to consider two things: conflicts with possible experiences and falsifiability.

Conflicts with possible experiences mean that the theory contradicts what we can see, hear, touch, or otherwise experience in our everyday lives. For example, if a theory claims that objects can disappear or change color without any explanation, it would conflict with our experiences because we have never witnessed such events.

Falsifiability refers to the idea that a theory can be proven false or wrong through observations or experiments. In other words, there must be a way to test the theory and show that it doesn't match up with what we observe in the real world. If a theory cannot be tested or proven wrong, it is considered less scientific.

rest of the population.

Consider Popper's discussion of the concept of falsifiability in the context of Freud's psychoanalytic theory, which is broadly about the role of repressed childhood memories influencing our unconscious, in turn affecting our behavior. Popper was careful to say that it is not possible to prove that Freudianism was either true or not true, at least in part. We can say that we simply don't know whether it's true because it does not make specific testable predictions. It may have many kernels of truth in it, but we can't tell. The theory would have to be restated in a way to allow for experience to refute it.

Another interesting piece of Popper's work was an attack on what he called "historicism"—the idea that history has fixed laws or trends that inevitably lead to certain outcomes. This is where we use examples from the past to make definite conclusions about what is going to happen in the future.

Popper considered this kind of thinking pseudoscience, or worse—a dangerous ideology that tempts wannabe state planners and utopians to control society. He did not consider such historicist doctrines falsifiable. There is no way, for example, to test whether there is a Law of Increasing Technological Complexity in human society, which many are tempted to claim these days, because it is not actually a testable hypothesis. Instead of calling them interpretations, we call them laws, or some similarly connotative word that implies an unchanging and universal state that is not open to debate, giving them an authority that they haven't earned. Too frequently, these postulated laws become immune to falsifying evidence—any new evidence is interpreted through the lens of the theory.

«A theory is part of empirical science if and only if it conflicts with possible experiences and is

therefore in principle falsifiable by experience.»

Karl Popper

For example, we can certainly find confirmations for the idea that humans have progressed, in a specifically defined way, toward increasing technological complexity. But is that a Law of history, in the inviolable sense? Was it always going to be this way? No matter what the starting conditions or developments along the way, were humans always going to increase our technological prowess? We really can't say.

Here we hit on the problem of trying to assert any fundamental laws by which human history must inevitably progress. **Trend is not destiny.** Even if we can derive and understand certain laws of human biological nature, the trends of history itself are dependent on conditions, and conditions change.

Bertrand Russell's classic example of the chicken that gets fed every day is a great illustration of this concept.¹⁴ Daily feedings have been going on for as long as the chicken has observed, and thus it supposes that these feedings are a guaranteed part of its life and will continue in perpetuity. The feedings appear as a law until the day the chicken gets its head chopped off. They are then revealed to be a trend, not a predictor of the future state of affairs.

Another way to look at it is how we tend to view the worst events in history. We tend to assume that the worst that has happened is the worst that can happen, and then prepare for that. We forget that "the worst" smashed a previous understanding of what was the worst. Therefore, we need to prepare more for the extremes allowable by physics rather than what has happened until now.

Applying the filter of falsifiability helps us sort through which



bertrand russell chicken



Images

News

Videos

Books

Maps

Shopping

Flights

Finance

About 2,370,000 results (0.38 seconds)

The man who has fed the chicken every day throughout its life at last wrings its neck instead, showing that more refined views as to the uniformity of nature would have been useful to the chicken.



Goodreads

<https://www.goodreads.com/quotes/139747-the-man-...>

Quote by Bertrand Russell: "The man who has fed the chicken ..."



About featured snippets



Feedback

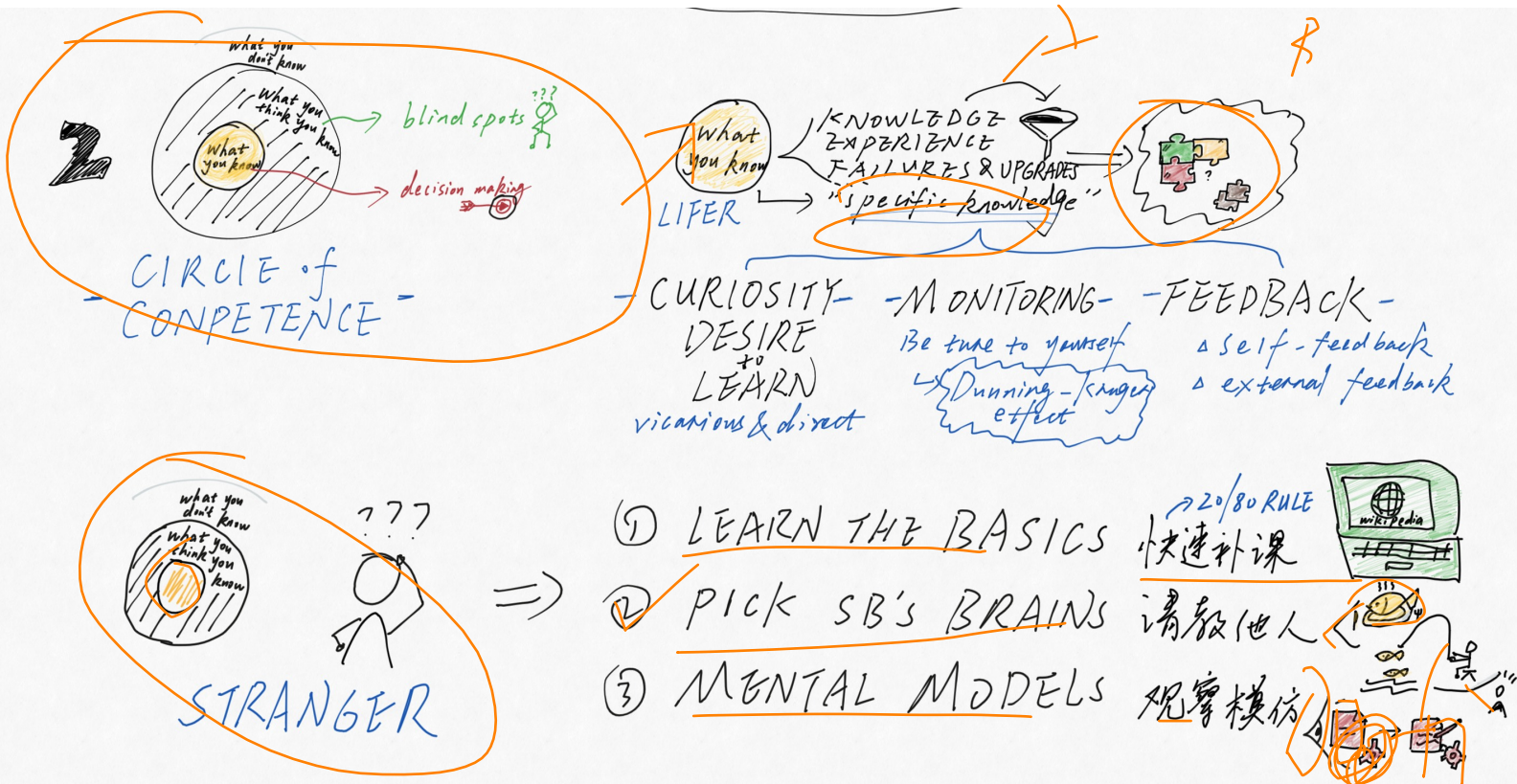
People also ask :

What is the farmer and chicken theory?

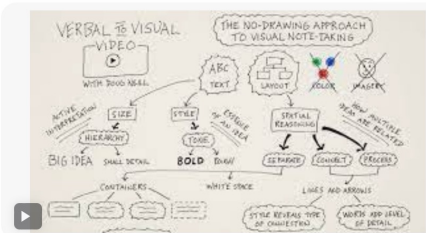


The chicken noticed that the farmer came every day to feed it. It predicted that the farmer would continue to bring food every day. Inductivists think that the chicken had "extrapolated" its observations into a theory, and that each feeding time added justification to that theory.

theories are more robust. If they can't ever be proven false because we have no way of testing them, then the best we can do is try to determine their probability of being true.



YouTube
How to Sketchnote a Book - YouTube



YouTube
How To Sketchnote Without Drawing - YouTube



Pinterest
Verbal To Visual | Visual, Sketchnotes ...

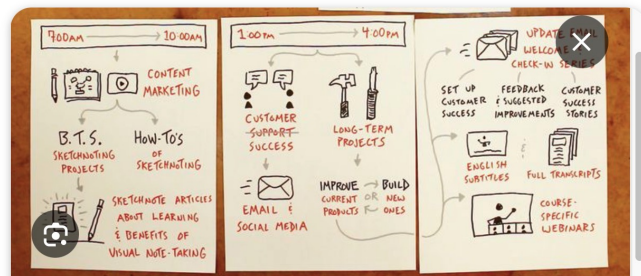
Verbal to Visual
Sketchnoting in the Classroom - Verbal ...



Verbal to Visual
An Introduction to Visual Note-Taking ...



Pinterest
Visual note taking, Sketchnotes, Classroom



Home - Verbal To Visual | Visual, Sketchnotes, Content marketing

Images may be subject to copyright. [Learn More](#)

Related content



Medium
Sketchnotes: A Guide to Visual Note-Taking



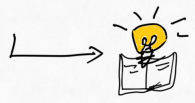
Pinterest
Part 1: Sketchnoting Skills ...

THE GREAT MENTAL MODELS - VOL 1



production
□ abstraction
□ guidebook
□ tools for exploration
□ limitations

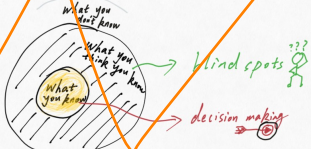
complex
x Reality
x gospel, dogma, doctrines, law
x static
x force conformity



- ① Reality
- ② cartographer
- ③ territory map

跳出出来, 走进去
过程比结论更值得思考
打造自己的专属地图
Productivity Yourself

2



CIRCLE OF COMPETENCE



KNOWLEDGE
EXPERIENCE
FAILURES & UPGRADES
"specific knowledge"



CURIOSITY
DESIRE
to LEARN
vicarious & direct

MONITORING
Be true to yourself
Dunning-Kruger effect

FEEDBACK
self-feedback
external feedback



STRANGER

- ① LEARN THE BASICS
- ② PICK SB'S BRAINS
- ③ MENTAL MODELS

20/80 RULE
快速补课

请教他人

观察模仿



1. ① F M ? → ! ✓

2. ② ? → ! ✓

3. F ? → Trans law → ! ✓