# Twitter Thread by Sahil Bloom



**Sahil Bloom**
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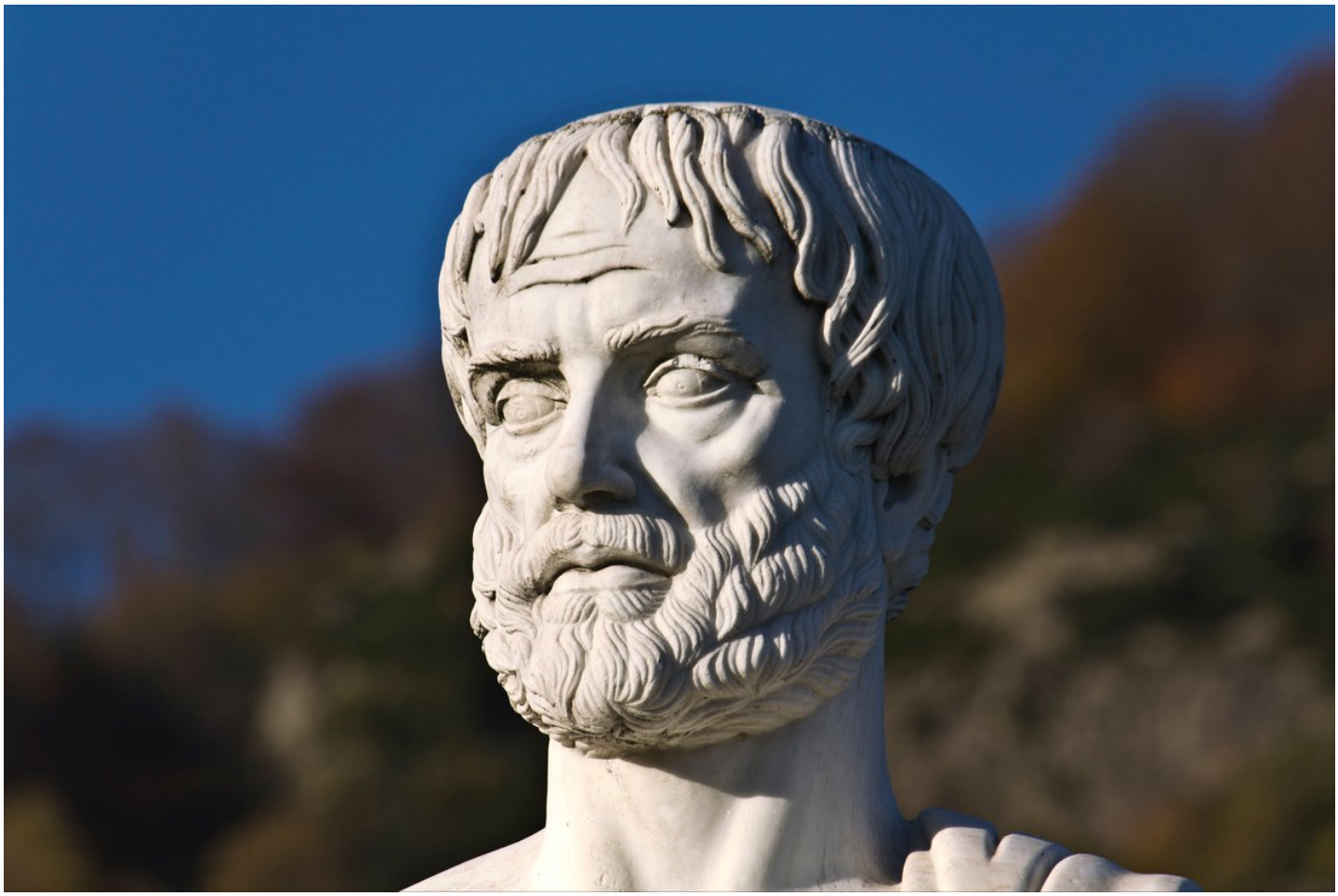
## First principles thinking is a powerful framework for deconstructing complex problems and driving non-linear outcomes.

## Here's a breakdown of what it is and how it works:

Aristotle defined a first principle as "the first basis from which a thing is known."

A first principle is a basic, foundational assumption—one that cannot be deduced or broken down any further.

First principles are foundational truths.



"First principles thinking”—or "reasoning from first principles”—is a problem-solving and innovation framework that requires you to break down a complex problem into its most foundational elements.

The aim: to ground yourself in the foundational truths and build up from there.

When we encounter challenging problems, our tendency is to rely on base level assumptions we have been told are true—or we believe to be true.

It's quick and easy to do.

But it also leads to unimaginative, linear solutions that closely resemble what has been done before.

This is called "reasoning by analogy”—it leads to solutions that are much like something else.

To be sure, it can be very useful when speed is the priority.

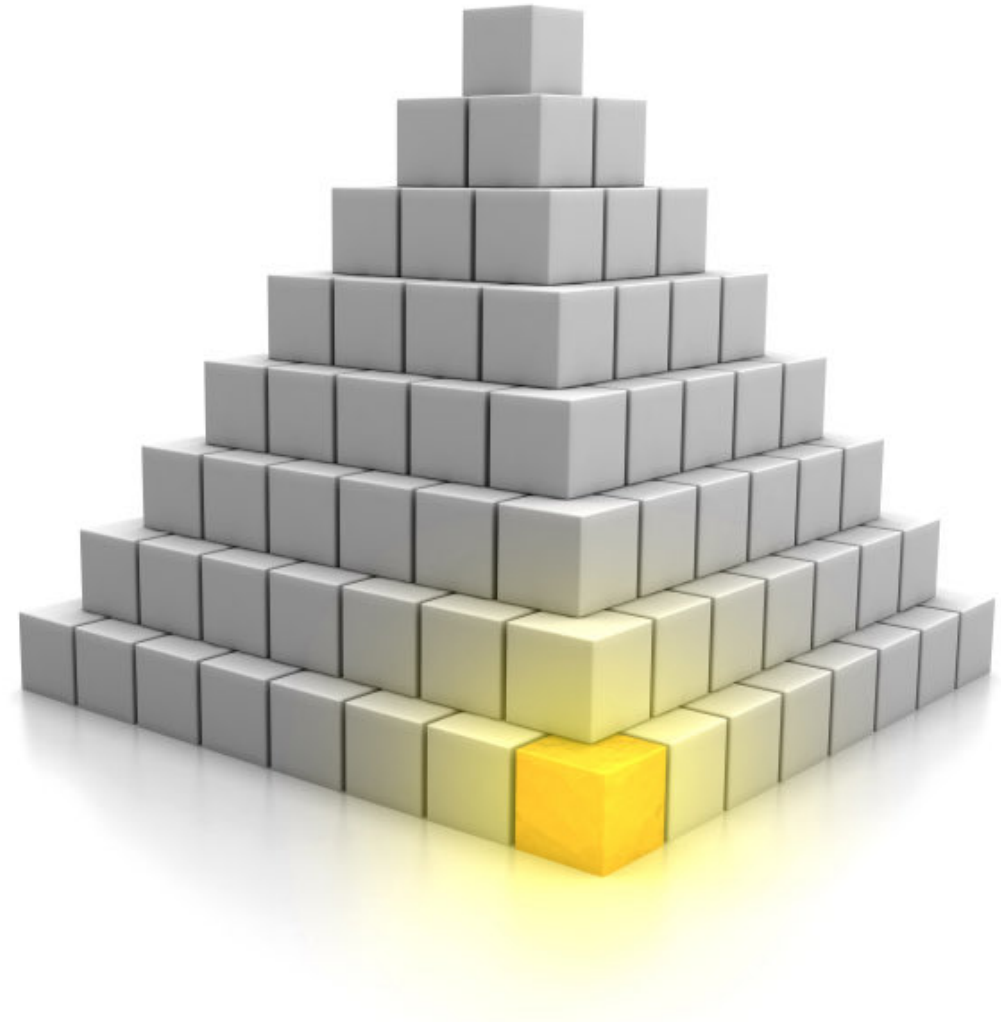
But it falls short when dealing with complex problems requiring creative, imaginative solutions.

Imagine the solution to a problem as a house.

The foundation is the assumptions upon which the solution rests.

If it's shoddy, it'll collapse. If it's sturdy, it'll thrive.

First principles form a sturdy foundation for the house—and allow you to build more creatively on top!



To bring this to life, let's look at a classic example of first principles thinking in action:

@elonmusk & @SpaceX

The problem? Sending a rocket to Mars to begin the process of making humans an interplanetary species.

Love him or hate him, that does sound pretty complex...



Musk quickly discovered the cost of buying a rocket was astronomical (pun intended)—$65 million or so.

It was not only financially untenable, it was also grounded in assumptions of how rockets have always been built and what they should cost.

So he turned to first principles.

He asked a few foundational questions:

What's a rocket made of?

Aerospace-grade aluminum alloys, titanium, copper, and carbon fiber.

What's the value of those materials on the open market?

Just ~2% of the typical rocket price!

So he decided SpaceX would build its own rocket.

Rather than accepting the established "truths" about the cost of a rocket, Musk grounded his problem solving in first principles.

Today, @SpaceX rockets are doing extraordinary things at a fraction of the historical cost—the dreams of a Mars voyage appear alive and well.




How can you leverage first principles thinking to create better outcomes?

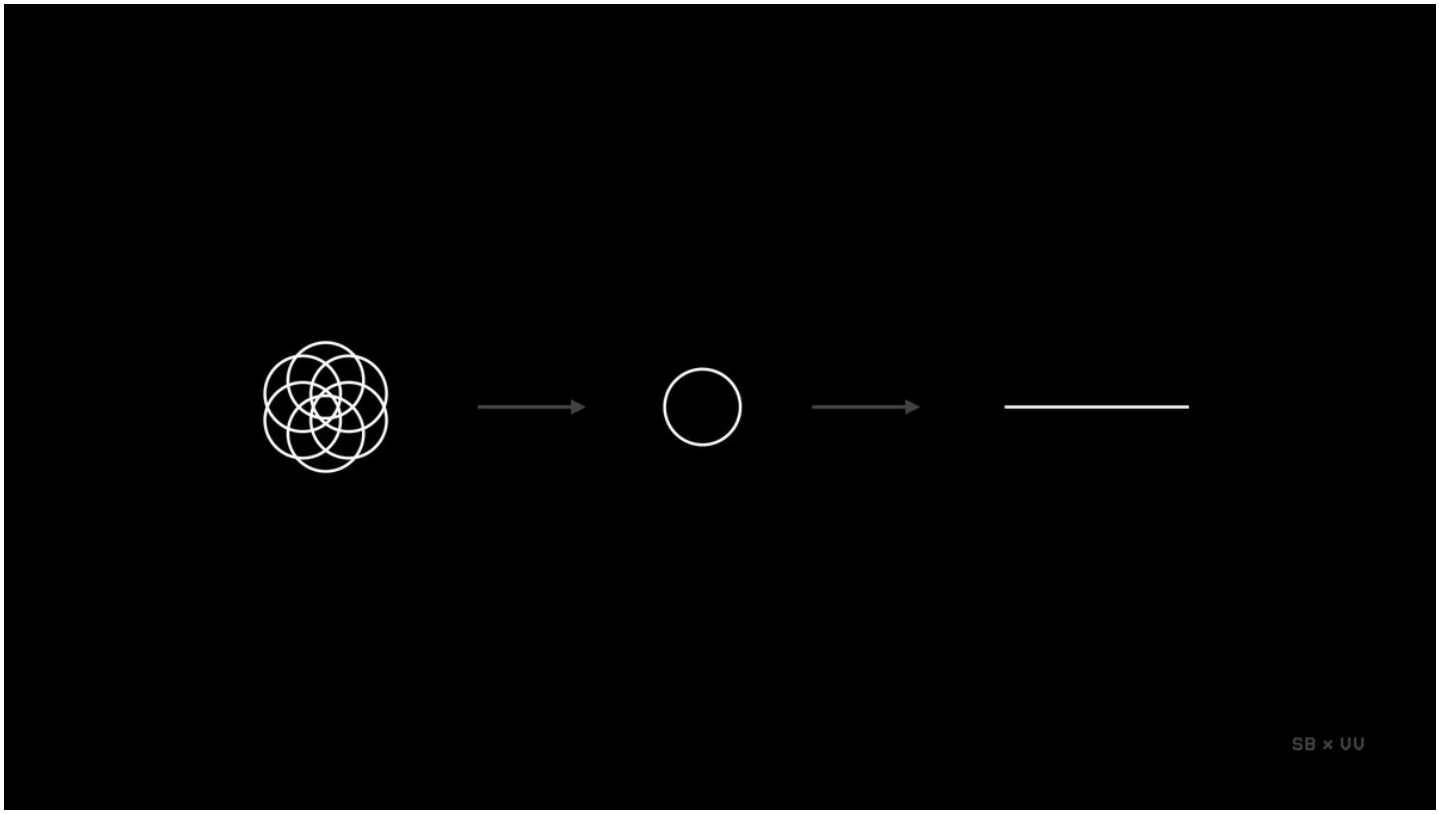
First, determine if it's necessary for your given problem, or if reasoning by analogy is a better fit.

As a rule of thumb:
• For speed/efficiency—analogy
• For creativity/innovation—first principles

Assuming first principles thinking is the appropriate path, start by asking questions to drill down into the core of the problem.

@ShaneAParrish calls this "Socratic Questioning"—think of it as resurfacing the insatiably curious child in you.

Here are a few to get you started:




What is the problem I am trying to solve?

We often waste time and energy trying to solve the "wrong" problem. Identify the "right" problem.

What do I know to be true about this problem?

Write down everything you know about the problem (and its previously attempted solutions).

Why do I believe these "truths" to be true? How do I know they are true?

Identify the source of your beliefs. Be ruthless in evaluating their integrity.

How can I support these beliefs? Is there real evidence to support them?

Seek out hard evidence that proves their truth.

Are my emotions clouding my judgment?

When emotions drive our thoughts and decisions, we rarely see good outcomes.

What alternative beliefs might exist?

Understanding alternative viewpoints is a superpower.

What are the consequences of being wrong?

Always know the stakes!

First principles thinking starts with questioning your beliefs.

Asking these questions will help you drill down to the foundational truths of a problem and ultimately build up to a more imaginative solution.

The world is filled with unimaginative, copycat solutions.

These predictably lead to linear outcomes.

Leveraging first principles thinking is intense and time consuming—but it is also a pathway to devising creative solutions that drive non-linear, asymmetric outcomes.

That was a breakdown on first principles thinking. I hope you found it useful.

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