

## **MOONSHOT THINKING**

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Dear friend,

I want to share some personal ideas on moonshot thinking -- why we must always shoot for the moon, and attempt the "impossible" and the crazy/foolish ideas we have!

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The biggest problem in modern society: we no longer have the foolish optimism we had in the past.

For example, during the Kennedy era-- there was so much optimism and hope in the future. Now with the darkness of the Trump era-- we have lost that same faith.

I get this sense of pessimism -- that everyone no longer believes in the crazy, and foolish; because we feel that "it has already been done before." But friend: realize that just because someone else has done it before doesn't mean that you shouldn't try to attempt it yourself!

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### First principles thinking

My best friend Elon Musk once said that in order to succeed as an entrepreneur, we must NOT think by analogy, or referring to what has already done in the past:

*"I think generally people's thinking process is too bound by convention or analogy to prior experiences." - Musk*

Rather, we must embrace 'first principles' thinking: using the extra brainpower we have to imagine the world from scratch. For us to take it "back to basics", and to question ourselves: **What is physically possible in reality?**

For example, Elon Musk talks about the first principles thinking when he decided to start SpaceX, and why reasoning via analogy is so dangerous (it makes us passive):

*"[People say that] historically, all rockets have been expensive, so therefore, in the future, all rockets will be expensive. But actually that's not true. If you say, what is a rocket made of? It's made of aluminum, titanium, copper, carbon fiber. And you can break it down and say, what is the raw material cost of all these components? And if you have them stacked on the floor and could wave a magic wand so that the cost of rearranging the atoms was zero, then what would the cost of the rocket be? And I was like, wow, okay, it's really small—it's like 2% of what a rocket costs. So **clearly it would be in how the atoms are arranged—so you've got to figure out how can we get the atoms in the right shape much more efficiently.** And so I had a series of meetings on Saturdays with people, some of whom were still working at the big aerospace companies, just to try to figure out if there's some catch here that I'm not appreciating. And I couldn't figure it out. There doesn't seem to be any catch. So I started SpaceX." - Elon Musk*

I love this line of thinking, because it makes us challenge pre-assumed notions, and it allows us to pave new roads! **'First principle thinking' empowers us to experiment for ourselves, for us to try new things, and to do things our own way!**

## **Do it your way**

*"I did it my way." - Frank Sinatra*

Humanity thrives on the new. Humanity thrives on new attempts, new ideas, new inventions, and new cultural shifts. If we wish to push and drive the human race before; we CANNOT think by analogy or think negative/pessimist thoughts.

I've philosophized a lot on the philosophy of nihilism; honestly, the philosophy that you cannot make a change in the world (no matter how hard you try) is silly. My idea is that even if you tried *NOT* to make a change in the world, you would "fail". Which means, just being alive and doing (anything) will make a positive change in the world.

For example, the smallest little gesture or action you will make a positive change in the world. The small smile you give to the barista at the local coffee shop. The high-five you give to a friend, or a kid you bump into in the streets.

As a photographer, your pictures can change the world for the better. How so? If your photograph can spark a little joy into the life of your viewer, you've done your duty as a photographer. If you upload/share 1 photograph that brings a smile to your viewer; you are making a positive change in the world!

Because consider-- let's say you upload/share a photograph that makes 1 other human being smile. Then that human being is gonna be a little more positive, and smile more to their friends/family/co-workers. And that will create a positive domino effect: they will be a happier/more pleasant person to their immediate community, and this will create ripple effects.

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### **Is it physically possible?**

Sorry I'm getting off-topic (like always).

To take it back to moonshot thinking: You want to live a life of optimism, hope, and shooting for the moon. Realize that the only thing which holds you back is the law of physics.

For example, Elon Musk wants to humanity to colonize Mars. His idea is audacious, and seems a bit 'crazy' -- but if we think about first principles thinking (in terms of physics), for humans to fly to Mars, and setup a base camp is "possible". Now whether it is "probable" is another discussion.

Before we went to the moon, everyone thought the idea of sending a human to moon seemed "impossible". However, the crazy ones who were crazy enough to attempt it-- took a risk, and succeeded! Now in hindsight thinking most people think, "Oh yeah of course we can go to the moon." But remember the nay-sayers in the past who said it wasn't possible.

I'm gonna take it back to Elon Musk again-- one of his ambitions was to create a new electric car company in America. Everyone thought it was impossible, because there hasn't been a successful car company in America for several decades. And there hasn't been a successful electric car company (ever). Yet, he didn't let the nay-sayers get in his way. He attempted something new. In an interview with Kevin Rose, he talked about first principles in electric cars, in which he said:

*"Someone could—and people do—say battery packs are really expensive and that's just the way they will always be because that's the way they have been in the past. They would say, 'It's going to cost \$600 per kilowatt-hour. It's not going to be much better than that in the future. [But we musk ask ourselves], 'What are the material constituents of the batteries? What is the spot market value of the material constituents?' It has carbon, nickel, aluminum, and some polymers for separation, and a steel can. Break that down on a materials basis, if we bought that on a London Metal Exchange, what would each of these things cost?" - Elon Musk*

Then Musk was able to realize that you could get those materials for around \$80 per kilowatt-hour (compared to the traditional belief that it would cost \$600 per kilowatt-hour), and innovations within the battery-energy industry could lead to making electric cars more affordable.

To me, this is inspirational because it teaches us:

*Don't ask nay-sayers for their "opinion" or ideas/thoughts. Rather, we should just use pure logic/rationality/first-principles-thinking to ask ourselves, 'Is this possible?' And almost everything is 'possible'.*

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## **Possibility vs probability**

Now, we have reasoned that almost anything (According to first principles thinking in physics) is "possible". Now, the next question is: "Is this 'probable'?"

For example, it is technically *possible* to sell a car for a billion dollars. Now, whether it is "probable" or not is a different story. Probabilistically, I don't think anyone would buy a car for a billion dollars -- but who knows, maybe 100 years into the future someone will (eyes on JAY Z).

For example, let's even bring up Leica. They sell a digital camera for \$7,000 USD+. Now, a lot of "reasonable people" would say,

*"Nobody will buy a digital camera for \$7,000!"*

But, Leica does sell a lot of them. Oh yeah, and buying a lens will cost you \$2,000+. And Leica sells a \$10,000+ lens (Noctilux).

So essentially it is your job as an entrepreneur to increase your *likelihood* of success. The way to increase your likelihood of success is to hustle harder, to use more innovative/ingenious strategies to succeed, and for you to leverage the skills/talents of other human beings who will help you achieve your dreams in life.

Now the sad reality is that you can be the smartest human being on planet Earth, the hardest hustler (working 14 hour days, 7 days a week), but you can still "fail" -- because you do need some luck to succeed as an entrepreneur. You need "luck" in terms of having the right opportunities, being born at the right time, and having the right market conditions/technologies in place to succeed.

But don't let the thought of failure hold you back. If your dream is meaningful or important enough for you to attempt it-- try. Try it out for yourself, and rely on yourself/first principle thinking to get you there.

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### **Push the human race forward!**

Let us end this essay on moonshot thinking with the famous "Crazy ones" poem by Steve Jobs/Apple:

*"Here's to the crazy ones, the misfits, the rebels, the troublemakers, the round pegs in the square holes... the ones who see things differently -- they're not fond of rules... You can quote them, disagree with them, glorify or vilify them, but the only thing you can't do is ignore them because they change things... they push the human race forward, and while some may see them as the crazy ones, we see genius, because the ones who are crazy enough to think that they can change the world, are the ones who do." - Steve Jobs (1955-2011)*

BE BOLD, ERIC