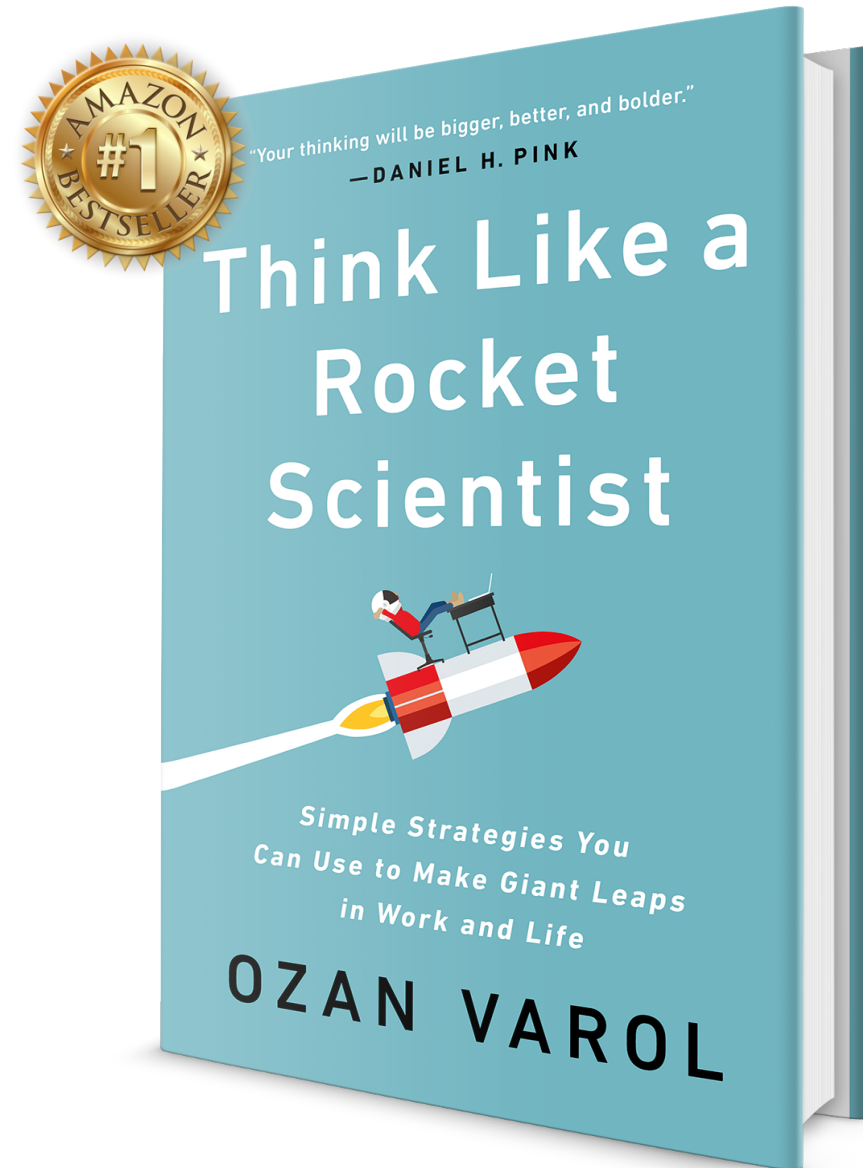


My favorite Quotes as «Bumper Stickers»

extracted from the much appraised (->)

Belp, 24. März 2021
Lars Diener-Kimmich



<https://ozanvarol.com/books/>



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For 20 years and together with a language-loving former pilot the 48-year-old **ETH engineer** has been coaching **three teenage prototypes**. He has lived and worked in **SUI/USA/MEX/FIN** and speaks 4.2 languages. From his time at **Nokia, ABB** and **Swisscom**, he knows the corporate world and how to shake it up constructively - and through his first experience with a start-up, he also knows how to fail. As the former CEO of the Bern-based innovation promotion agency **be-advanced AG**, he is very well connected locally with **High-Tech Startups** and **SMEs**. Instead of taking an MBA, he co-founded an Air Quality startup in Hong Kong in 2017, now also based in Berne. In 2019 he co-founded Relai – «The hottest Bitcoin Startup in Europe».

With his company **LUDENSFABER**, Lars supports small to large organizations as an **Agile/Lean Transformation** Coach and Sparring Partner at the **CXO** level. Among other things, he is booked specifically for his intensive, **tailor-made Workshops**.

He is passionate about **innovation handicraft**.

With **INNOROOKIE** he overcomes company boundaries and provides world-class "**innovation training camps for apprentices**".

At the same time, Lars is engaged as an **innovation advisor** in attractive start-ups. And, with his **Black Belt** in Lean Leadership, he is involved as a lecturer at the BFH in **shaping future leaders**.

To enable SME apprentices to **build up Digitalization and Innovation Competencies**, he launched the nationwide project "**1001kmu**" in 2019.

When there's **wind**, Lars is on the **water**.

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Why «Bumper Stickers»?

I read the book. It's beautifully written! And then I built Bumper Stickers from the text that I highlighted. They should ease your access to the book, and will give away a bit about myself, too. Have fun!



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Yes, even the metals needed to build the rocket hadn't been invented.

from p. 2 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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Innovation Leadership



Ideas assume a grander scale in rocket science given the stakes involved.

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«There are a thousand things that can happen when you light a rocket – and only one of them is good.» (Tom Mueller, SpaceX)

from p. 3 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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Companies fail because they stare in the rearview mirror and keep calling the same plays from the playbook.

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Just like rockets, this book
comes in stages.

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You can't win the lottery
without buying a ticket.

from p. 11 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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I found myself far more drawn to the physics of society, and I decided to go to law school.

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When you learn how to think like a rocket scientist, you won't just change the way you view the world. You'll be empowered to change the world itself.

from p. 14 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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**But there was a slight problem.
The evidence wasn't conclusive.**

from p. 18 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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**We're all programmed with the
same fear for the uncertain.**

from p. 20 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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Over time, we lose our ability
to interact with the unknown.

from p. 20 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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Innovation Leadership



In school, we're given the false impression
that scientists took a straight path to the
light switch.

from p. 23 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



Where certainty ends,
progress begins.

from p. 24 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



Fake news is not a modern phenomenon.
Between a good story and a bunch of data,
the story has always prevailed.

from p. 26 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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«The stupid are cocksure while the intelligent are full of doubt.» (Bertrand Russell)

from p. 27 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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It's far better to be uncomfortably unsure than comfortably wrong.

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**Steve Squyres is a
connoisseur of uncertainty.**

from p. 28 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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**Life offers more of itself when we
treat uncertainty as a friend, not a foe.**

from p. 30 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



The discovery of quantum mechanics, X-rays, DNA, oxygen, penicillin, and others, all occurred when scientists embraced, rather than disregarded, anomalies.

from p. 35 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



Planet is derived from a Greek word that means «wanderer».

from p. 38 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



If we figure out what we know and what we don't know, we contain uncertainty and reduce the fear associated with it.

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«Named must your fear be before banish it can be.» (Yoda)

from p. 41 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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For redundancies to work, they
must function independently.

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Redundancy, ..., can't be a
substitute for good design.

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When *Spirit's* front wheel failed in March 2006, the navigators drove the rover backward for the rest of its life.

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The secret is to start walking before you see a clear path.

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The status quo is a super magnet.

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People are biased against the way things could be and find comfort in the way things are.

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The width of the engines that powered the space shuttle was determined over 2000 years ago by a Roman road engineer.

from p. 50/51 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



Here's the problem. Process, by definition, is backward looking.

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Complying with these procedures then becomes the benchmark for success.

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«Do we own the process or does the process own us?» (Jeff Bezos)

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... nonconformity activates the amygdala
and produces what the authors describe as
«a pain of independence.»

from p. 54 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



You can't copy and paste
someone else's path to success.

from p. 55 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



The credit for first-principles thinking goes to Aristotle, who defined it as «the first basis from which a thing is known.»

from p. 55 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



You hack through existing assumptions as if you're hacking through a jungle until you're left with the fundamental components.

from p. 56 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



For Musk, using first principles meant starting with the laws of physics and asking himself what's required to put a rocket in space.

from p. 56 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



... what rocket scientist call a rapid unscheduled disassembly – or what laypeople call an explosion.

from p. 58 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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How could they possibly meditate
without tying the cat to the pole?

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«Your assumptions are your
windows to the world.» (Alan Alda)

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**But then he did something
unimaginable. He quit.**

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**«Every now and then you just need to
destroy it and rebuilt it better.» (Nick Kokonas)**

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The US military also uses a version of kill-the-company exercise in war-gaming. It's called *red teaming*.

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The soviets used a pencil.

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The simplest solution to a problem is the correct one. (Occam's Razor)

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Simplicity also reduces cost.

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«All rockets work by the same principle.
Throwing out stuff the back pushes the
spacecraft forward.» (Natalya Bailey)

from p. 73/74 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



Simple can be mighty.
But don't confuse simple with easy.

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He imagined a heavy cannonball and a light musket ball chained together to form a single, combined system to be dropped at the same time.

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Instead of making the curiosity the norm, we wait until a crisis occurs to become curious.

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Only when we are laid off do we begin
to ponder alternative career paths.

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«Why can't I see the picture
now?» (Jennifer)

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Recapturing our childlike
curiosity can boost originality.

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Without boredom, our creativity
muscles begin to atrophy from misuse.

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When we sit still, we turn into a magnetized rod that attracts ideas.

from p. 90 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



Getting bored landed a woman named Joanne her first publishing deal.

from p. 92 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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It's easier to «think outside the box»
when you're playing with multiple boxes.

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We can't combine ideas if we don't
see the similarities between them.

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**Breakthroughs almost always
involve a collaborative component.**

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**(He) calls this phenomenon the
Medici effect. (Frans Johansson)**

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«Intermittent breaks in interaction improve collective intelligence.» (Bernstein, Shoreb, and Lazer)

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«But I never worked with silk worms.» (Louis Pasteur)

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«In the beginner's mind there are many possibilities; in the expert's mind there are a few.»

from p. 103 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

STAGE ONE «LAUNCH», Chapter 4 – Moonshot Thinking



This was humanity's first actual moonshot.

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But once captured, an antelope can provide days of food for the lion.

from p. 109 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



The captain of moonshots at X
(yes, that's his real title) -> Astro Teller

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They are not smart.

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There's far less competition for antelopes.

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Everyone else is busy chasing mice in the same crowded, rapidly shrinking territory.

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The flies and the bees, respectively, represent what's known as divergent and convergent thinking.

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«*What should you do?*»

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«*What could you do?*»

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«Convergent thinking alone is dangerous because you're just relying on the past.» (Justin Berg)

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You should cycle between a fly mindset and a bee mindset.

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Instead, begin with a divergent
«This *could* be done if ...» mindset.

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Individuals who were more creative had
decreased activity in the sections of the
brain associated with evaluation.

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**Regular makes vulnerable.
Irregular makes nimble.**

from p. 118 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



«What we usually consider impossible are nothing but engineering problems. There's no law of physics preventing them.»

from p. 119 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



«You can't get to the good ideas without spending a lot of time warming up your creativity with a bunch of bad ones.» (Astro Teller)

from p. 123 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



And getting to the future often requires moving back from it – by using a little-known strategy backcasting.

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When we backcast, we take our bold ambition and introduce actionable steps.

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Amazonians write internal press releases for products that don't yet exist.

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If the project has an Achilles heel
... you want to know up front.

from p. 131 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

STAGE TWO «ACCELERATE», Chapter 5 – What If We Sent Two Rovers Instead of One?



Instead of acknowledging that problems
have multiple causes, we stick to the first
cause that pops to mind.

from p. 139/140 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



85% agreed or strongly agreed that their businesses were bad at defining problems and that this weakness, in turn, imposes significant costs.

from p. 141 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



Premature babies didn't need incubators.
Premature babies needed warmth.

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The result was the Embrace infant warmer.

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If you have problems zooming out, bring outsiders into the conversation.

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To teach the difference between strategy and tactics to her students, Tina Seelig, uses what she calls the 5 dollar challenge.

from p. 152 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



The teams that make the most money don't use the 5 dollars at all.

from p. 153 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



«Show how it is possible to determine the height of a tall building with the aid of a barometer.»

from p. 154 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



Amazon reframed them* as distribution centers located in densely populated urban hubs. (*Whole Foods Market stores)

from p. 157 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



It only took 3 years after the launch of *Sputnik* for the US to implement this thought experiment and launch 5 satellites into orbit to guide its nuclear submarines.

from p. 159 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

STAGE TWO «ACCELERATE», Chapter 6 – The Power of Flip-Flopping



We'll explore the benefits of switching ...
from convincing others that we are right to
convincing ourselves that we are wrong.

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The mind doesn't follow the facts.

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Facts are stubborn things, but our minds are even more stubborn. (John Adams)

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Confirming our theories feels good.

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«The best response to false beliefs is not necessarily providing correct information.» (Brendan Nyhan et al.)

from p. 167 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



«The first principle is that you must not fool yourself – and you are the easiest person to fool.» (Richard P. Feynmann)

from p. 170 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



From a scientific perspective, opinions present several problems.

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Over time our beliefs begin to
blend into our identity.

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When your beliefs and your identity are one
and the same, changing your mind means
changing your identity.

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(..) Scientists refrain from stating opinions.
Instead, they form what's called a working
hypothesis.

from p. 173 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



Opinions are defended, but
working hypothesis are tested.

from p. 173 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



One remedy (...) is to have
multiple children.

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To make sure you don't fall in love with
one hypothesis, generate several.

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If you can hold conflicting thoughts in your head and let them dance with each other, they'll produce a symphony that will bring out additional notes ... far superior to the original ones.

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Every yes gets us a gold star and a hit of dopamine.

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**But every no brings us one
step closer to the truth.**

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**The point of proving yourself
wrong isn't to feel good.**

from p. 181 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



The point is to make sure your spacecraft doesn't crash, your business doesn't fall apart or your health doesn't break down.

from p. 181/182 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



«Nothing in the physical world seems to be constant or permanent.» (Alan Lightmann)

from p. 182 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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**Falsification is what separates
science from pseudoscience.**

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**What fact would change
your mind?**

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«I'd rather be right, than
consistent.» (John Marshall Harland)

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«One thing a person cannot do, no matter how
rigorous his analysis or heroic his imagination ... is to
draw a list of things that would never occur to him.»
(Thomas Schelling)

from p. 186 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



Instead of using a straw man tactic,
engage in its opposite, the steel man.

from p. 189 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

STAGE TWO «ACCELERATE», Chapter 7 – Test as You Fly, Fly as You Test



«If it disagrees with experiment,
it is wrong.» (Richard P. Feynmann)

from p. 193 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



The iPhone didn't prove the survey wrong. ... the survey accurately measured participants' «indifference to a product they had never seen and did not understand.

from p. 207 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



How much would you pay for this pair of shoes? Think about it.

from p. 207 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com

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He (Gallup) sent a team of interviewers into people's homes to watch them read newspapers and mark each part of the paper as read or unread.

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What they got was a mind-numbing six-minute video clip.

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When people know they're being
observed they behave differently.

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Consider Clever Hans
the horse.

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It's not unusual for X to kill over a hundred ideas in a single year.

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Treating failure as an option is the key to originality.

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Pablo Picasso produced 1'800 paintings, 1'200 sculptures, 2'800 ceramics and 12'000 drawings.

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We don't focus on the troughs.
We focus on the peaks.

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The success rate of first-time entrepreneurs was nearly equal to the success rate of entrepreneurs who had previously failed in business.

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When we fail, we often conceal it, distort it, or deny it.

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The goal isn't to fail fast.
It's to learn fast.

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We should be celebrating the lessons
from failure – not the failure itself.

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Failure is data.

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Failure is success if we learn from it.

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We repeatedly fell.

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In conditions of uncertainty, outcomes aren't completely within your control.

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The goal, then, is to focus on the variables you can control – the inputs – instead of the outputs.

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«Watch the ball as long as you can, and zero in on the inputs.» (Maria Scharapowa)

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Success becomes a consequence, not the goal.

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When we switch to an input-focused mindset, we condition ourselves to derive intrinsic value out of the activity.

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And Viagra was born.

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Curiosity ... makes failure interesting.

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Every time you make a mistake, ... you should throw your arms in the air and say, «How fascinating!»

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Most organizations suffer from collective amnesia over their failures.

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NASA catalogs mistakes in human spaceflight in a document called «Flight Rules».

from p. 239 «Think Like a Rocket Scientist», Ozan Varol (2020) – made to Bumper Sticker by www.ludensfaber.com



But as with any set of rules these should be guardrails, not handcuffs.

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«There's 2 parts to failure.
There's the event itself and there is our
reaction to it.» (Ed Catmull)

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Better teams weren't *making* more
mistakes. Instead, they were simply
reporting more mistakes.

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**Psychological safety
stimulates innovation.**

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**Psychological safety also
increases team learning.**

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«By ending their project, this team has done more to speed up innovation at X this month than any other team in this room.» (Astro Teller)

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It's one thing to tolerate failure,
but something else to reward it.

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You must establish your competence
before revealing your failures.

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The road to success is filled
with potholes.

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We must expose ourselves to failure regularly.

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Each dose builds resilience and breeds familiarity.

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**Each crisis becomes training
for the next one.**

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**Where failure ends,
complacency begins.**

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Each success reinforced the belief in the status quo.

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«Success is 'a lousy teacher' because it seduces smart people into thinking they can't lose.» (Bill Gates)

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When you're ranked second ... you're less likely to grow complacent.

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The modern world doesn't call for finished products.

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«Regularity and uninterrupted success are a problem and a sign of weakness rather than an unequivocal sign of strength.» (Sim Sitkin)

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Regular success ... can
portend long-term trouble.

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When we succeed, we stop pushing boundaries.

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One way to stay humble is to pay attention to near misses.

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If we wait until disaster strikes to conduct a postmortem, the string of failures and near misses ... go unnoticed.

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What went *wrong* with this success?
What role did opportunity and privilege and luck play? What can I learn from it?

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«You have just decided to launch the shuttle *Challenger.*» (Jack Brittain/Sim Sitkin)

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There's a trick to putting blind analysis into practice without playing it stupid: the premortem.

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In a premortem, we travel forward in time and set up a thought experiment where we assume the project failed.

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The premortems we compile should be easily accessible.

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Skunks, like messengers, have a habit of getting shot.

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Premortems ... assume a bad outcome ... and ask people to generate reasons for the failure.

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Remedying only the 1st order causes leaves the 2nd and 3rd order causes intact.

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The *Challenger* accident happened precisely because the managers did their jobs.

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NASA didn't just have an O-ring problem.
It also had a conformity problem.

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If we leave the deeper causes unaddressed,
the cancer will keep coming back.

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We confuse a symptom with a cause
and leave the deeper causes intact.

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Painkillers won't cure your
back pain.

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Measures to decrease risk sometimes backfire.

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The drivers of the ABS-equipped cars became far more reckless.

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«It remains Day 1.» (Jeff Bezos)

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The rocket-science mindset
requires remaining in Day 1.

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About these Bumper Stickers

I love books.

But as it takes **10 to 30 hours** to read one, it is really rare to find someone to discuss it with.

So, just let it be?

I opt to find ways to share – like with these Bumper Stickers.

Once I got started, I ended up working hours on them.

A stubborn trait of mine.

I hope you had some fun with them.

Maybe you picked a few as your favorites – and hung them up in your office, used them in a presentation?

Let me know.

And, I wish to reach ambitious leaders and makers to engage and to find challenges to bring my skill-set as an Innovation Coach and Agile/Lean Practitioner to the game.

- Lars Diener-Kimmich, CEO / Chief Passion Officer
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