

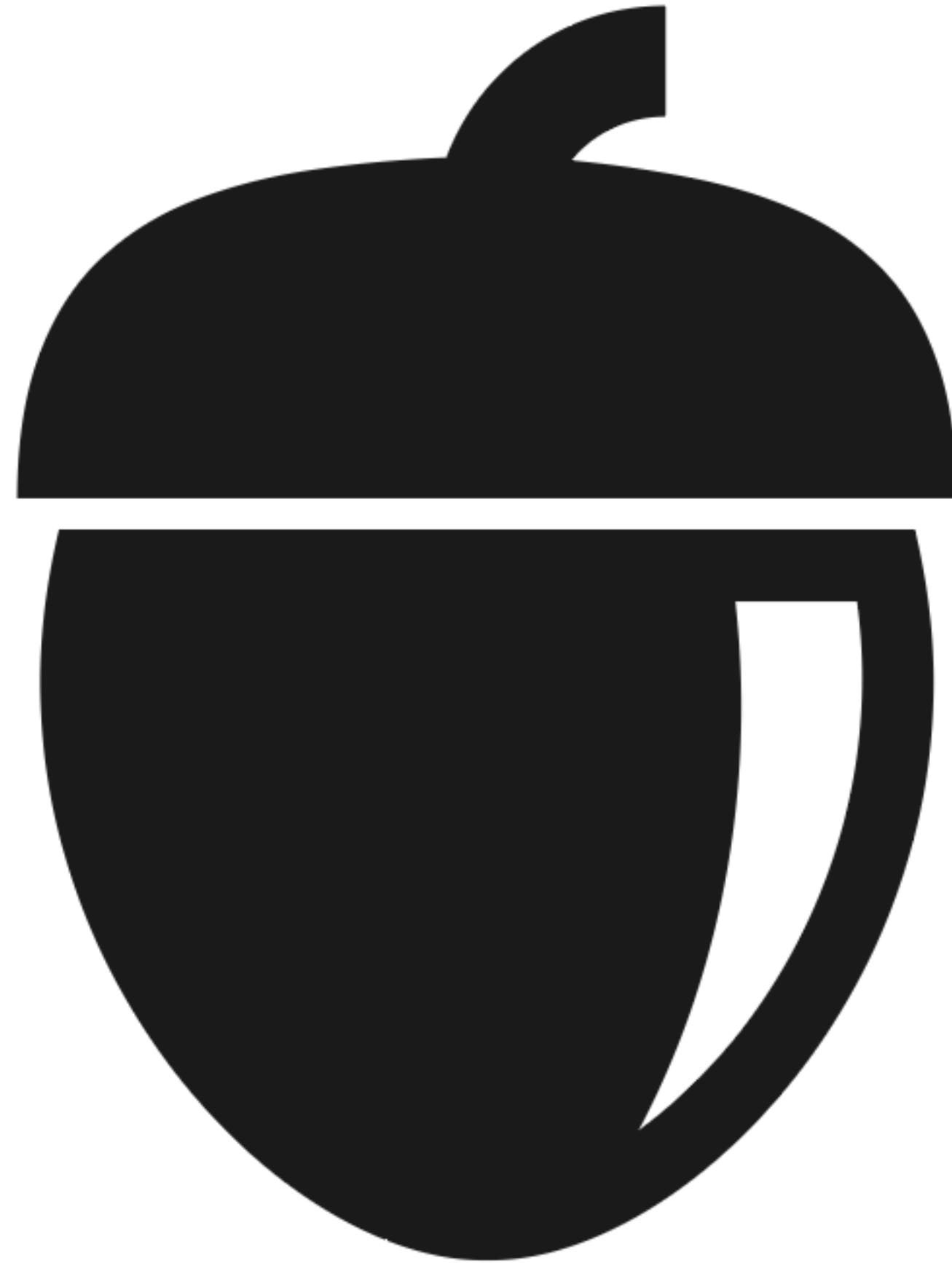
# Feedback and the story of Phineas Gauge

How to leverage the KMM  
to make SAFe shop Safer



# Feedback and the story of Phineas Gauge

How to leverage the KMM  
to make SAFe shop Safer



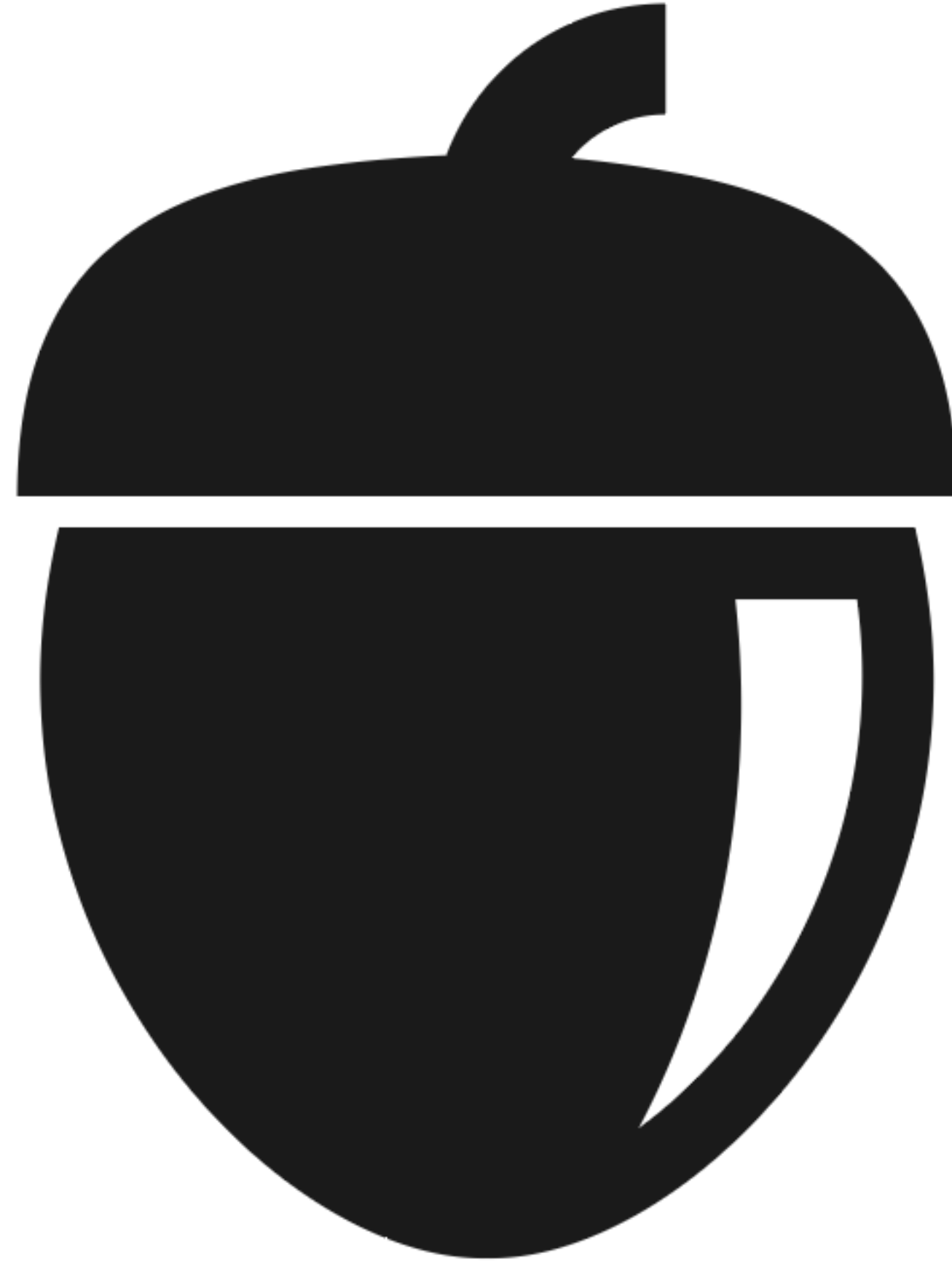


**The story, all names, characters, and incidents portrayed in this production are fictitious. No identification with actual persons (living or deceased), places, buildings, and products is intended or should be inferred.**

**No squirrels were harmed in the making of this production.**

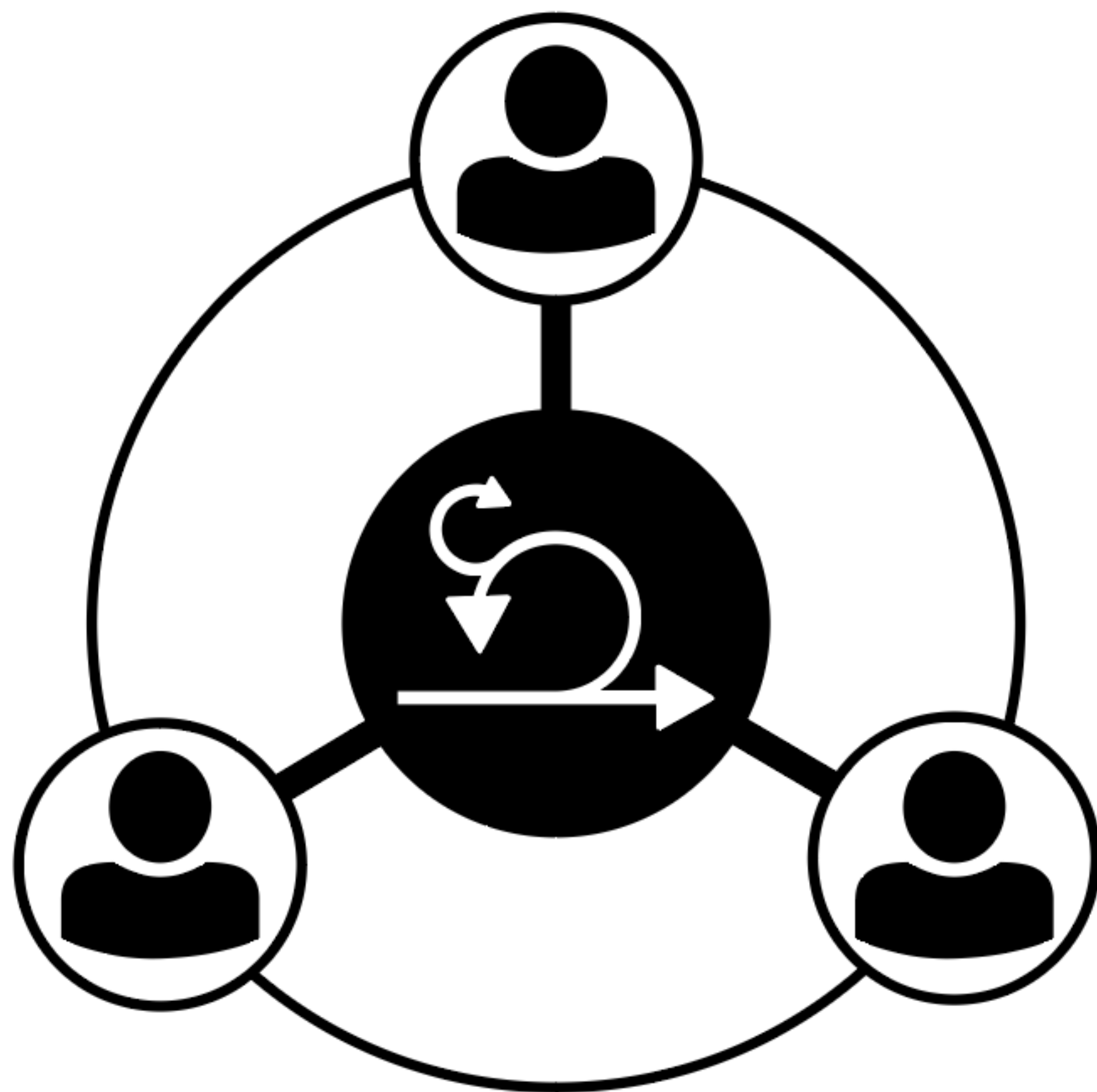
“Learning is not compulsory...  
... neither is survival.”

— W. Edwards Deming



# “The results can be extraordinary!”

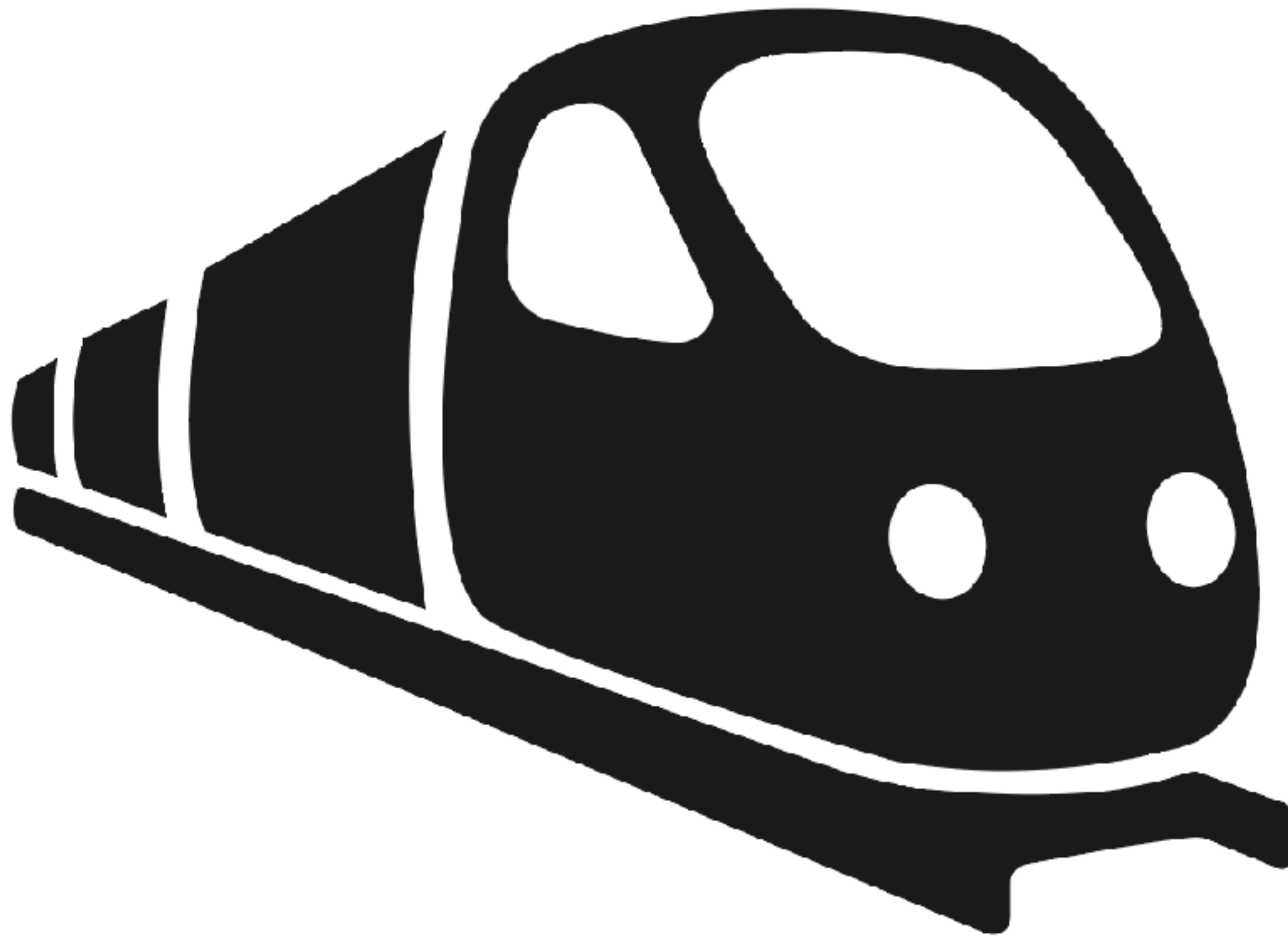
— SAFe Whitepaper



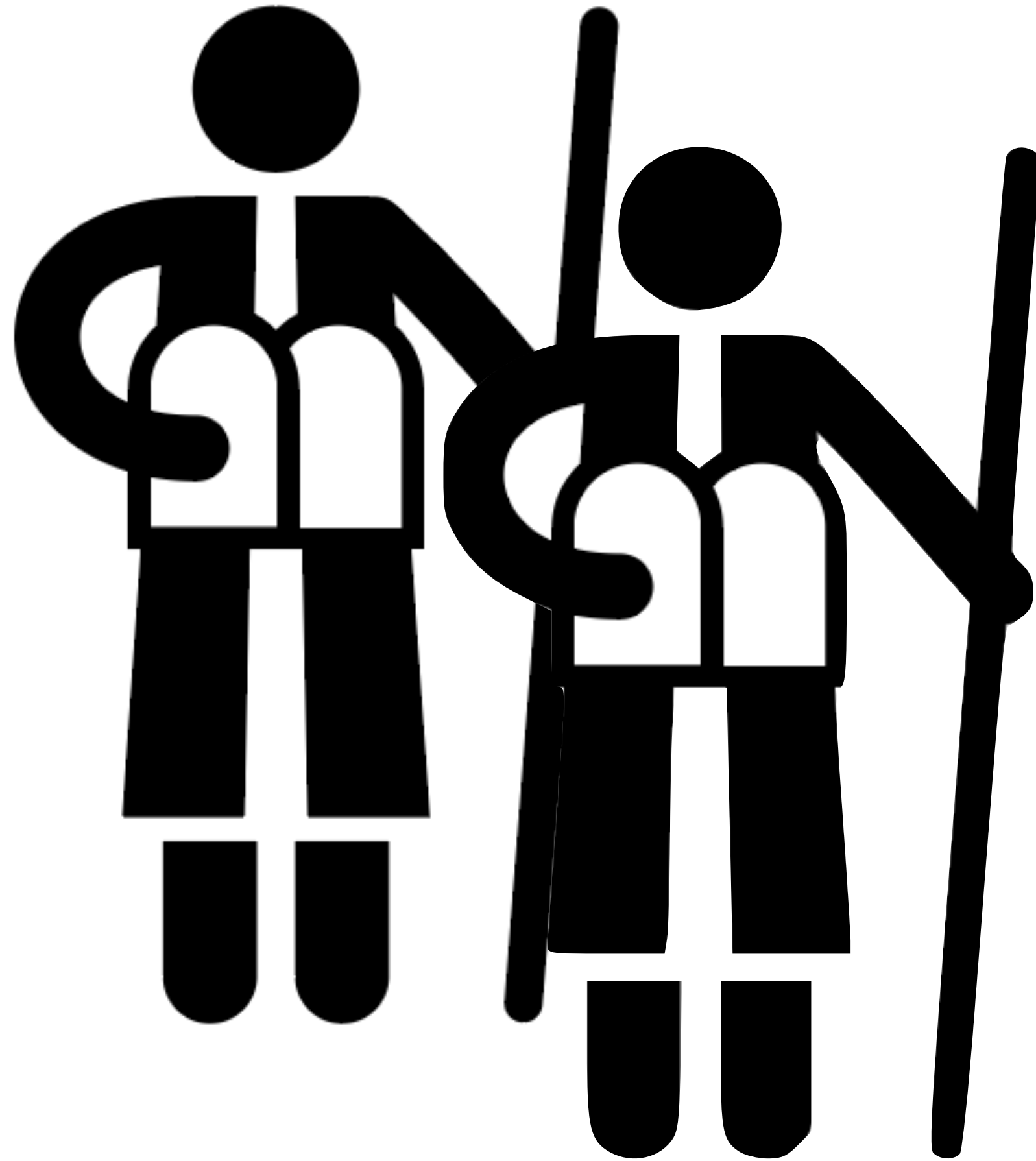
# Agile for everyone!

“Real knowledge is to know the extent of one’s ignorance.”

— Confucious

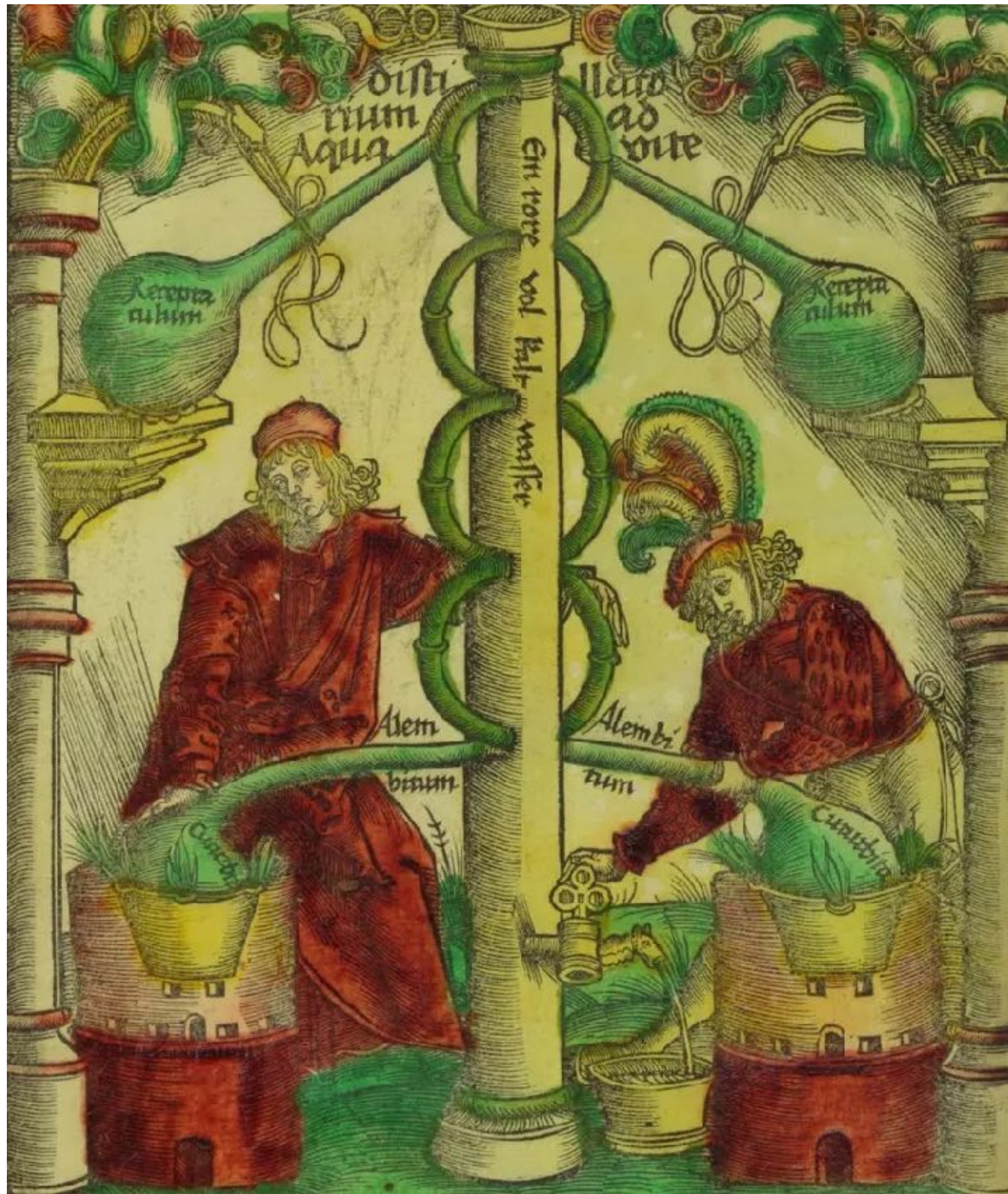


# The Land of Milk and Scrum





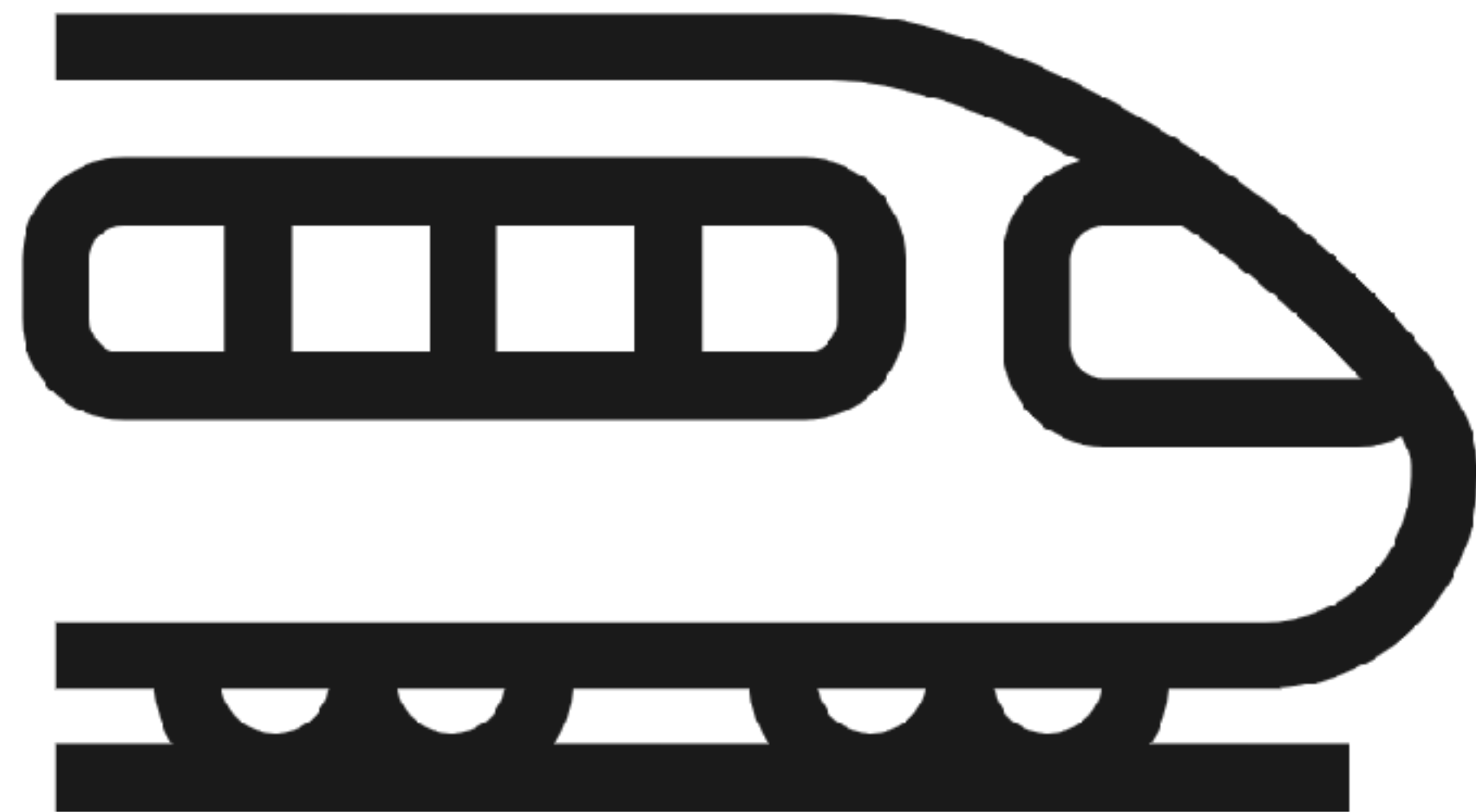
Bernie Madoff had quite a long run with his scheme,  
and Sprint Velocity can be made to work for you, too.





**There are good practices in context,**  
but there are no “best practices.”

— Cem Kaner



# Theory and practice meet under a flag of truce





# Theory and practice, hand in hand



# Start From Where You Are

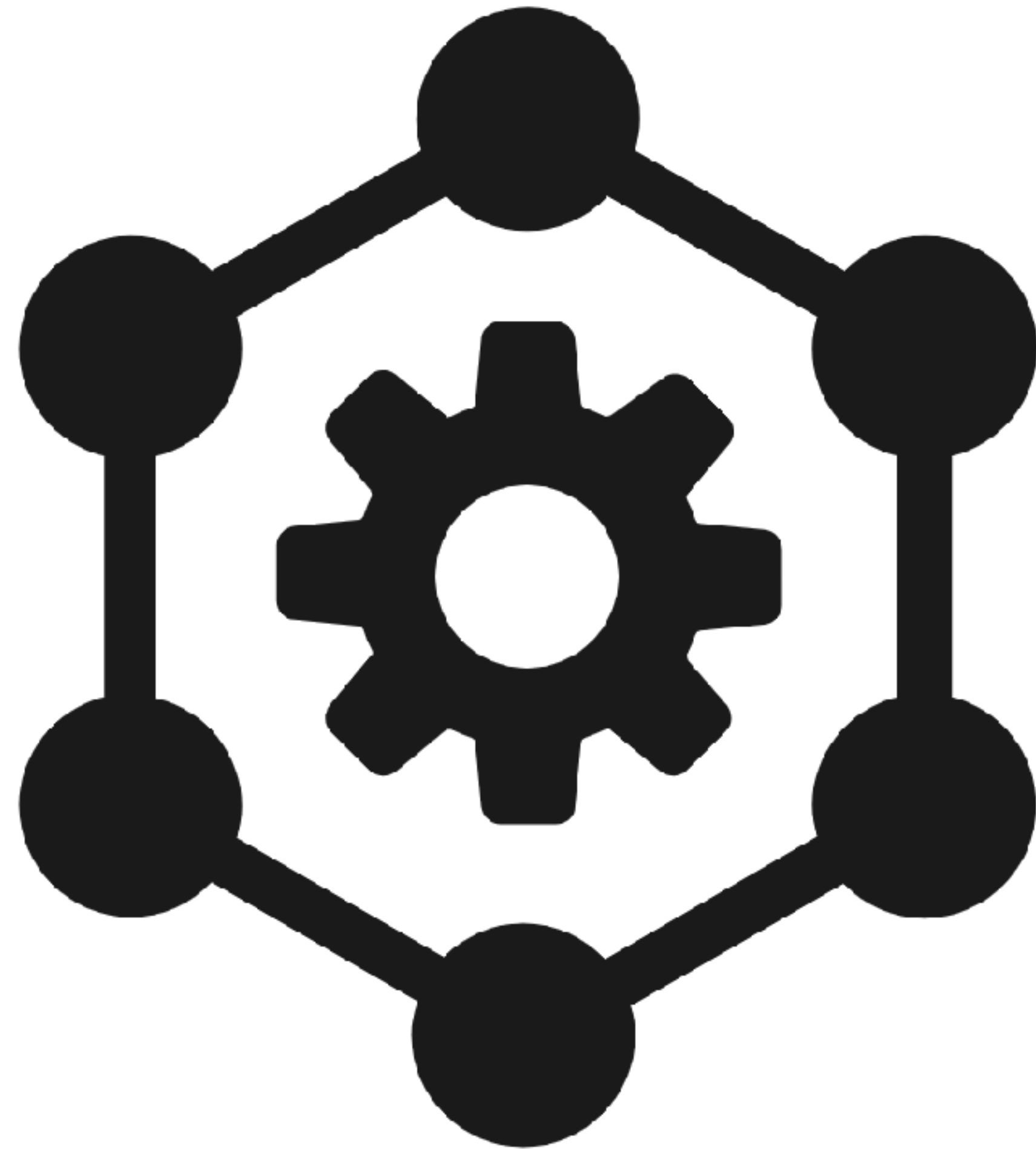
“Of course, speed is most useful if it is in the correct direction.”

— David J. Anderson





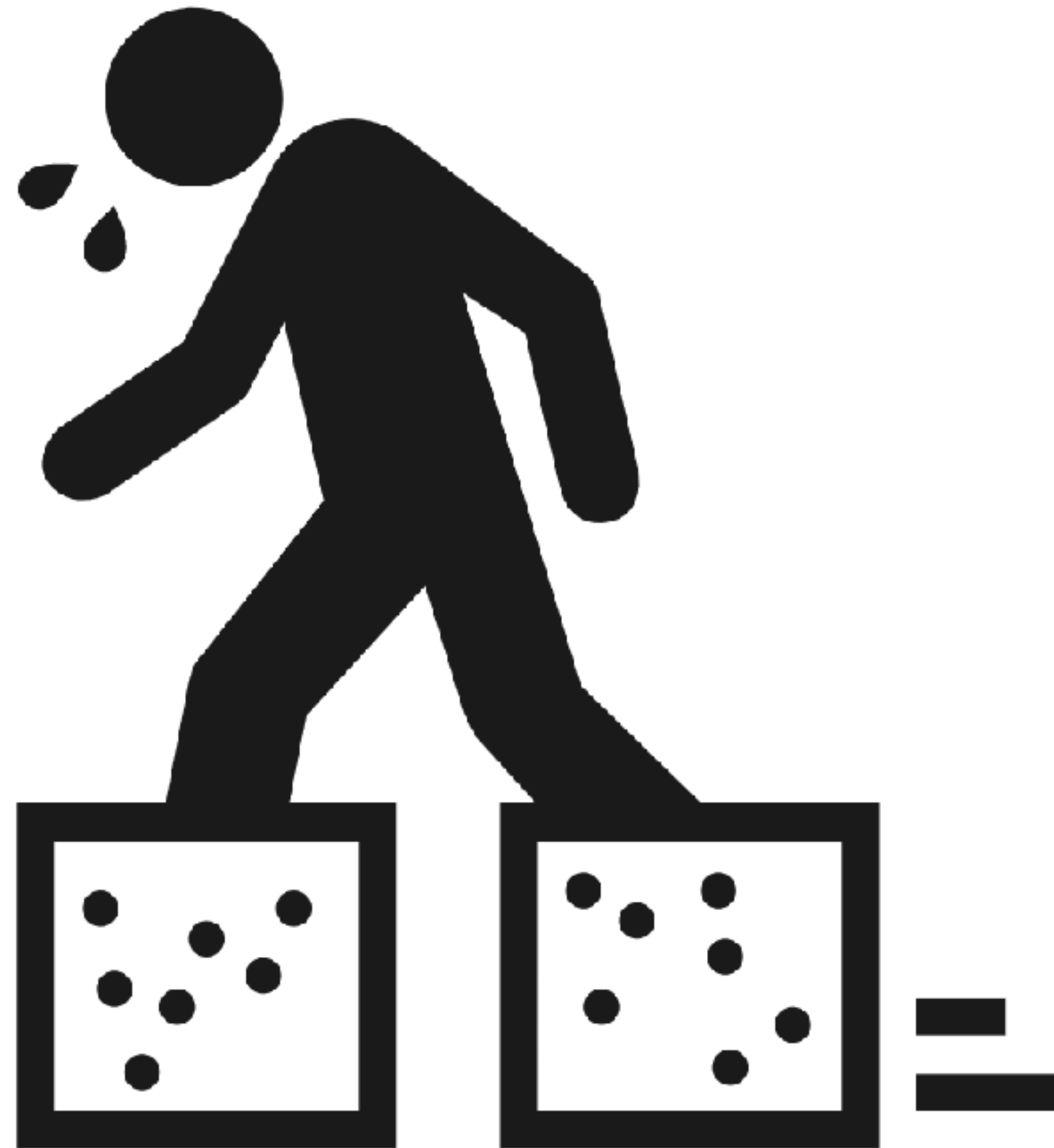
# Piling on practices...



“...a systematic protocol to determine when to intervene ...”  
— Nassim Taleb

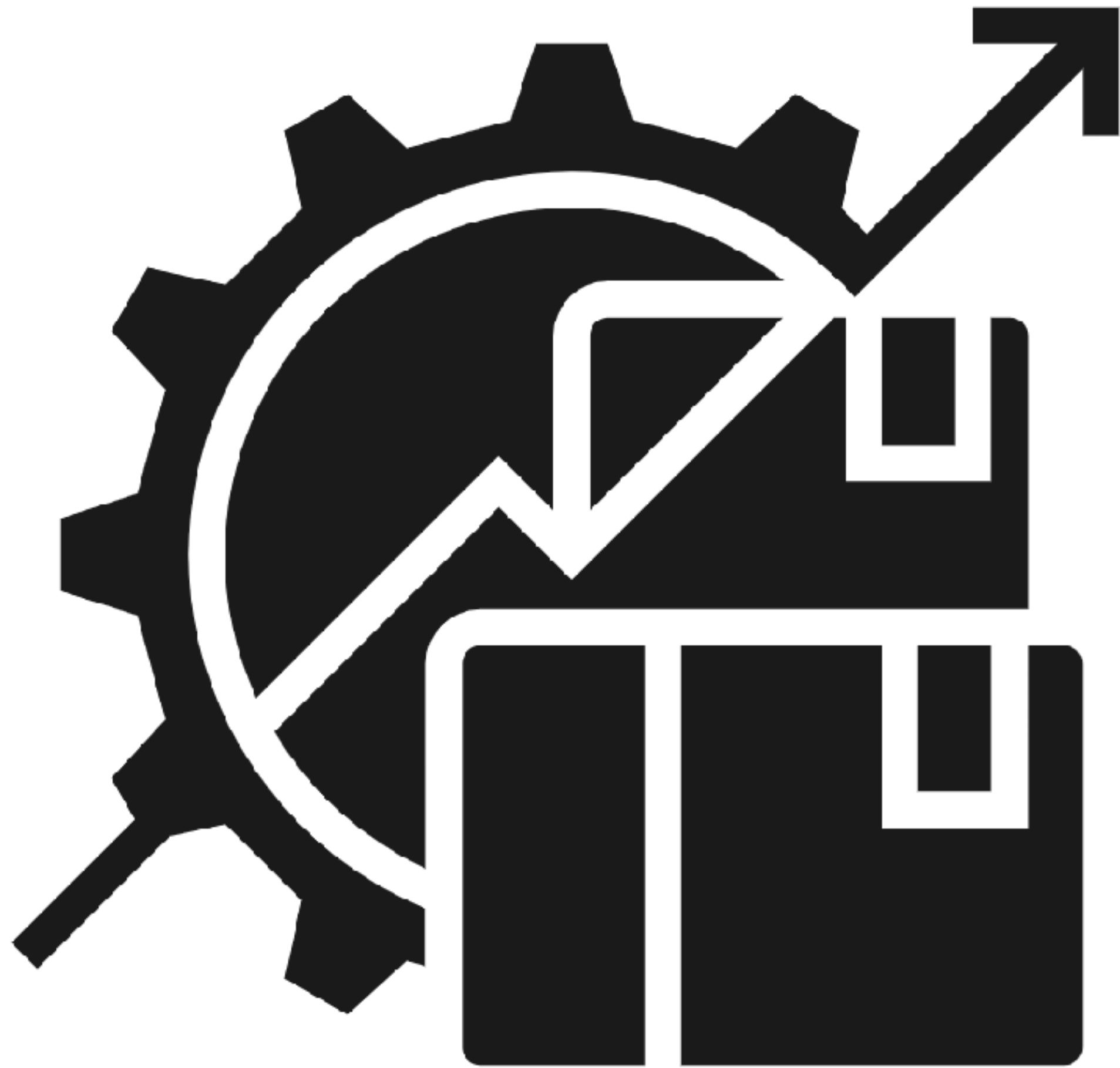
# Is work pushed into the system?

Is the process stream overloaded?





# Little's Law



Length of queue

Average wait time

$$L = \lambda W$$

Arrival Rate

# Little's Law



Length of queue

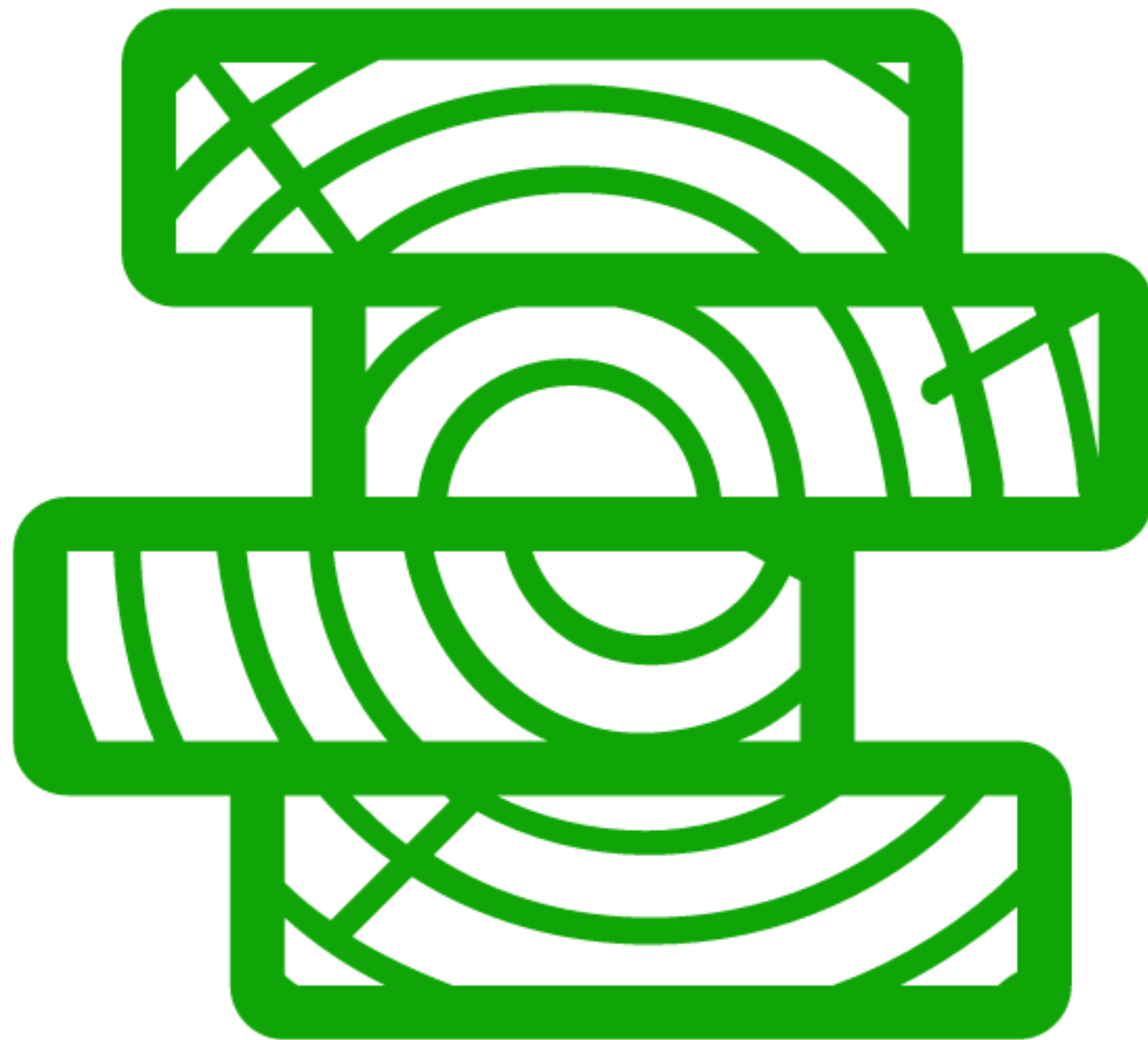
Average wait time

$$L = \lambda W$$

Arrival Rate



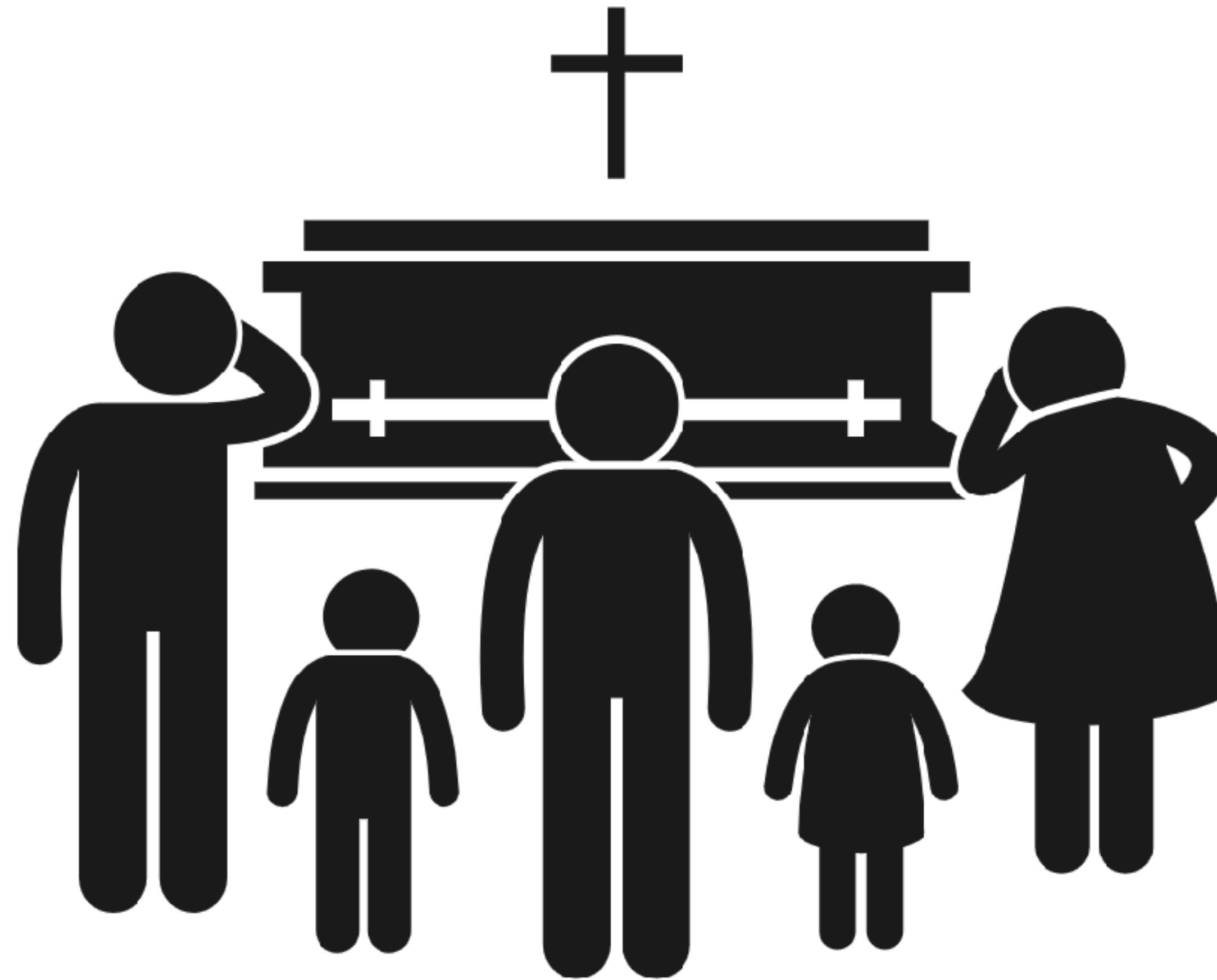
# Green Lumber



“Clearly, it is unrigorous to equate skills at doing with skills at talking..”

— Nassim Taleb

# Another expert bites the dust



# Acceleratum!



“My greatest strength as a consultant is to be ignorant and ask a few questions.”

— Peter Drucker



# Best Practices!

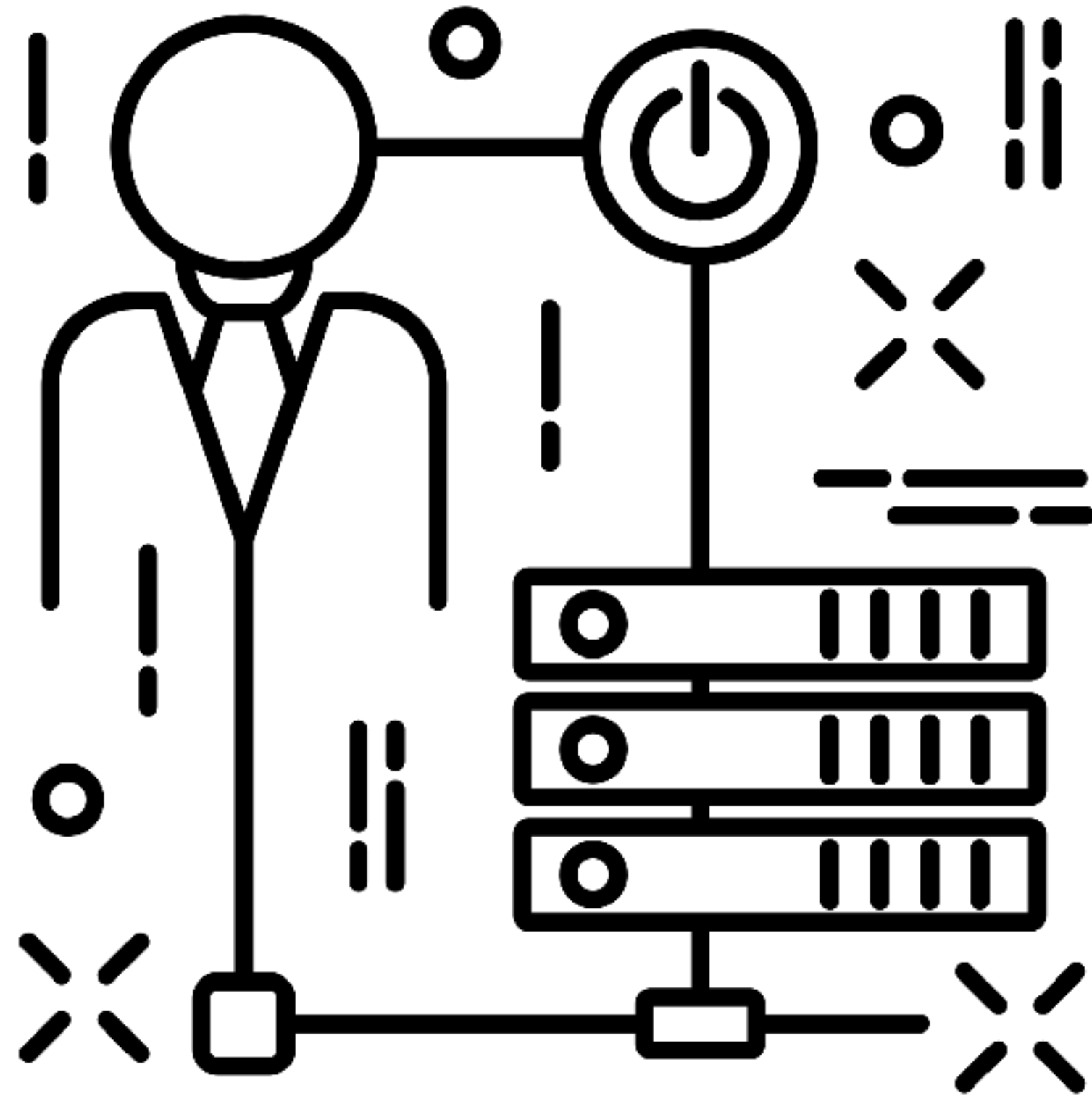
Get'm while they're hot!



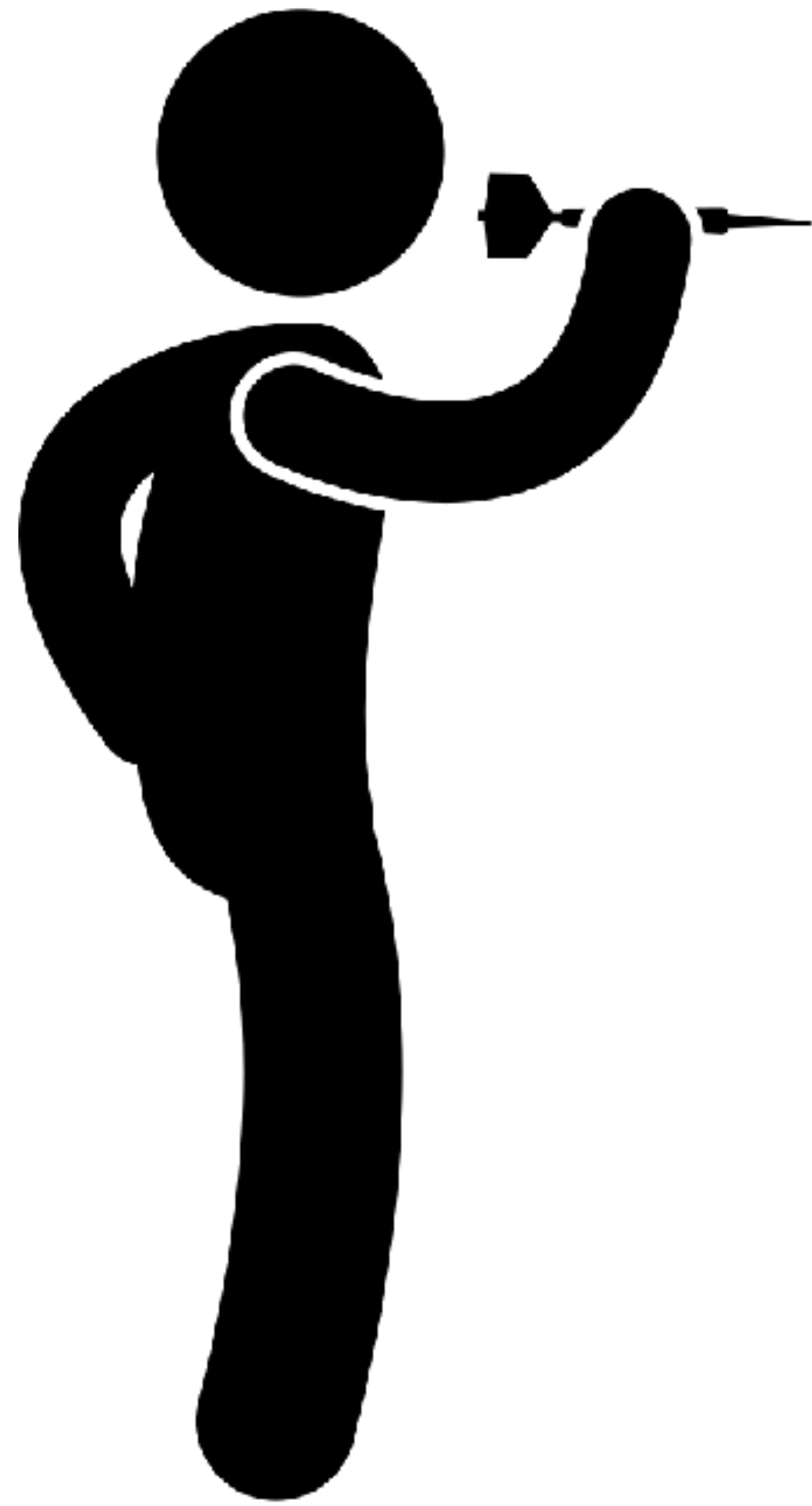
# Giving a story to intuition...

“The world makes much less sense than you think.”

— Daniel Kahneman



# An expert at the top of her field...



“The coherence comes mostly  
from the way your mind works.”

— Daniel Kahneman



# The Fitness Landscape

“Problem-solving on a contoured fitness landscape means trying to find the high peaks.”

— Tim Harford



# The Fitness Landscape

“Problem-solving on a contoured fitness landscape means trying to find the high peaks.”

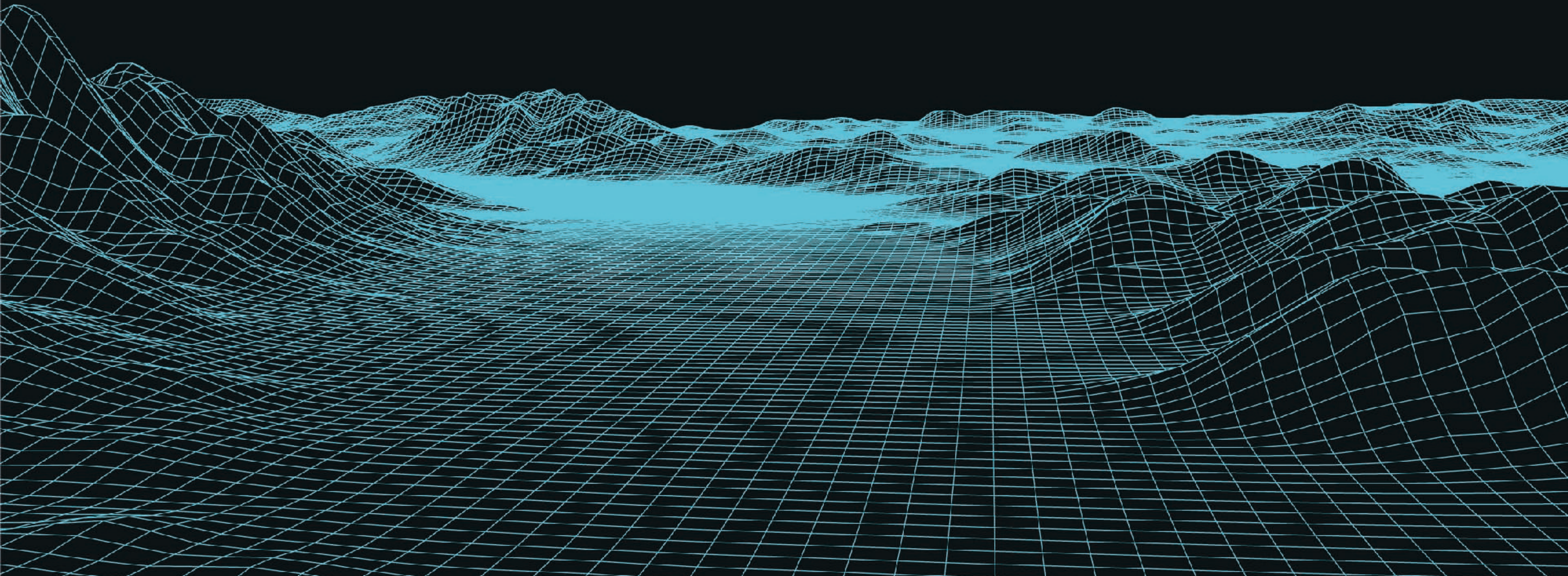
— Tim Harford



# The Fitness Landscape

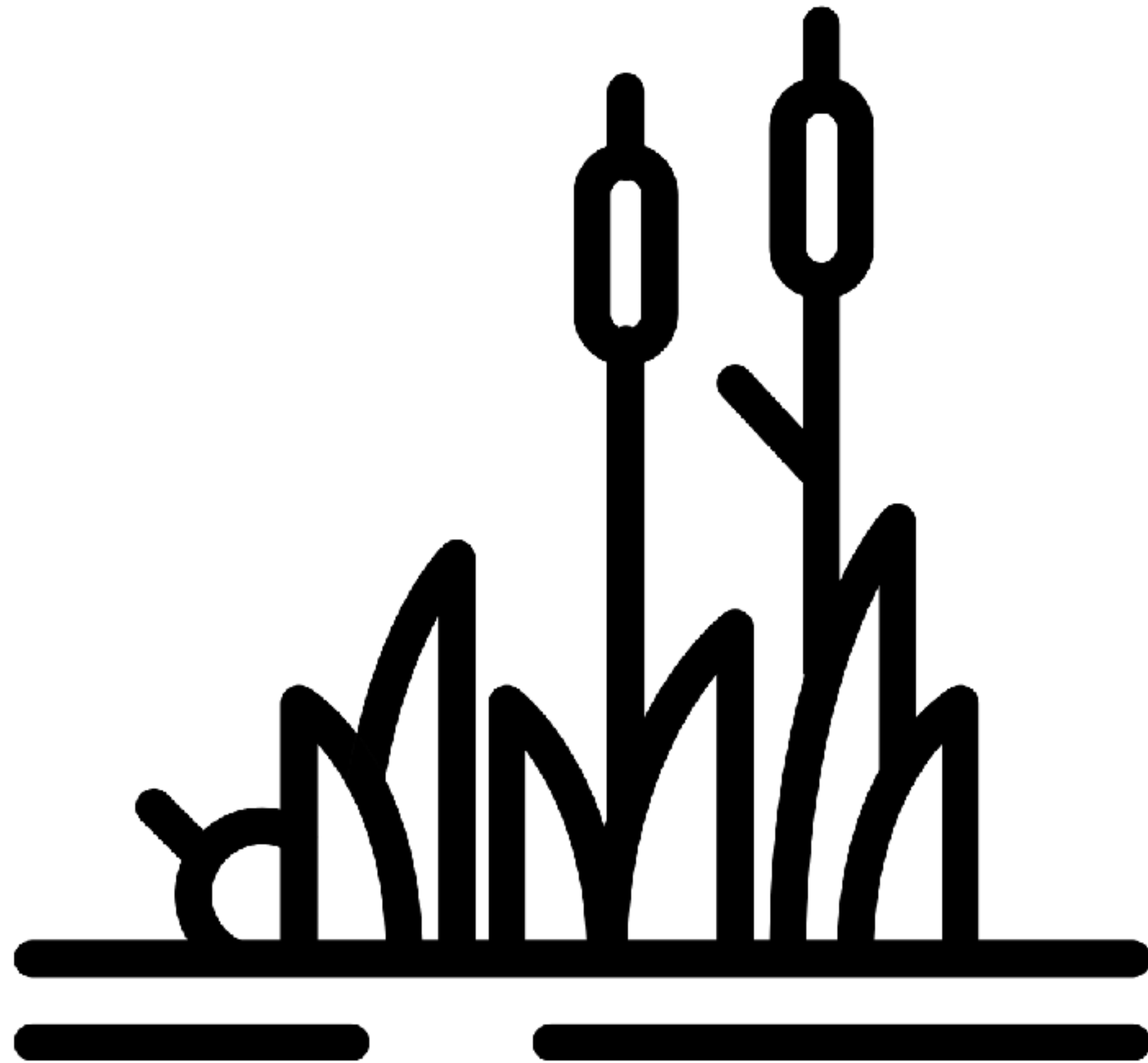
“Problem-solving on a contoured fitness landscape means trying to find the high peaks.”

— Tim Harford





# Keeping out of the weeds

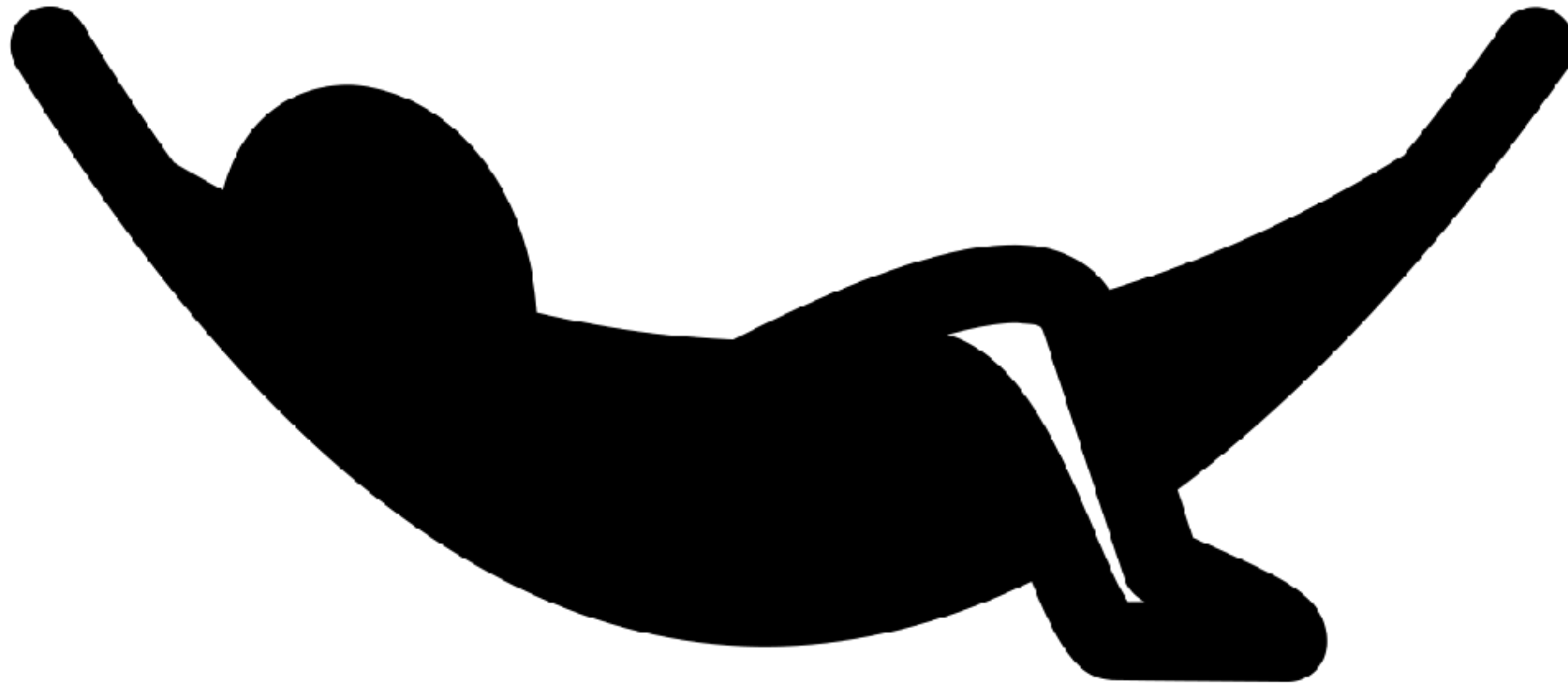


“...the big problems are where people don’t realize they have one in the first place”

— W. Edwards Deming

# “Nothing happens until something moves.”

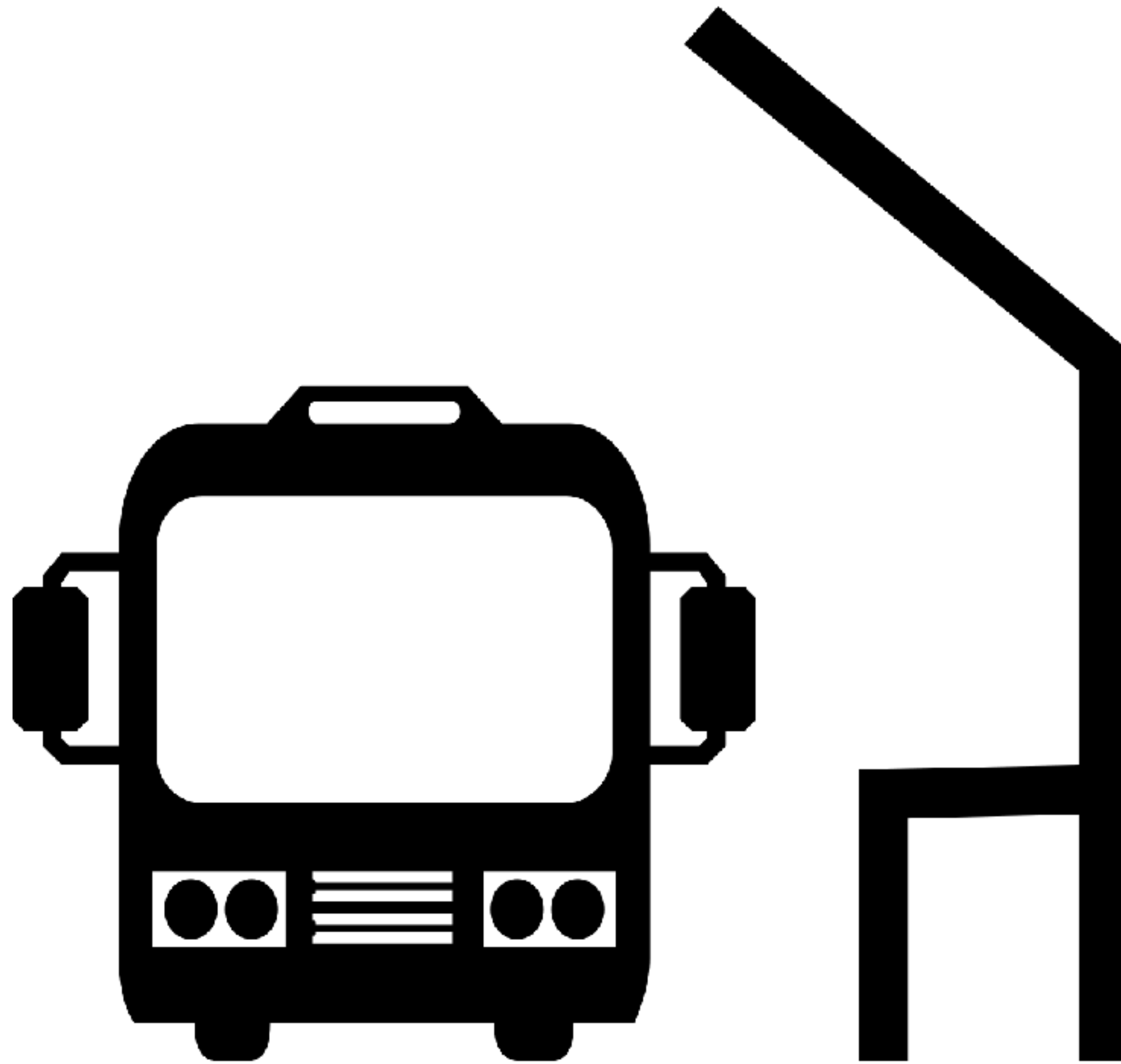
— Albert Einstein



# Start from where you are

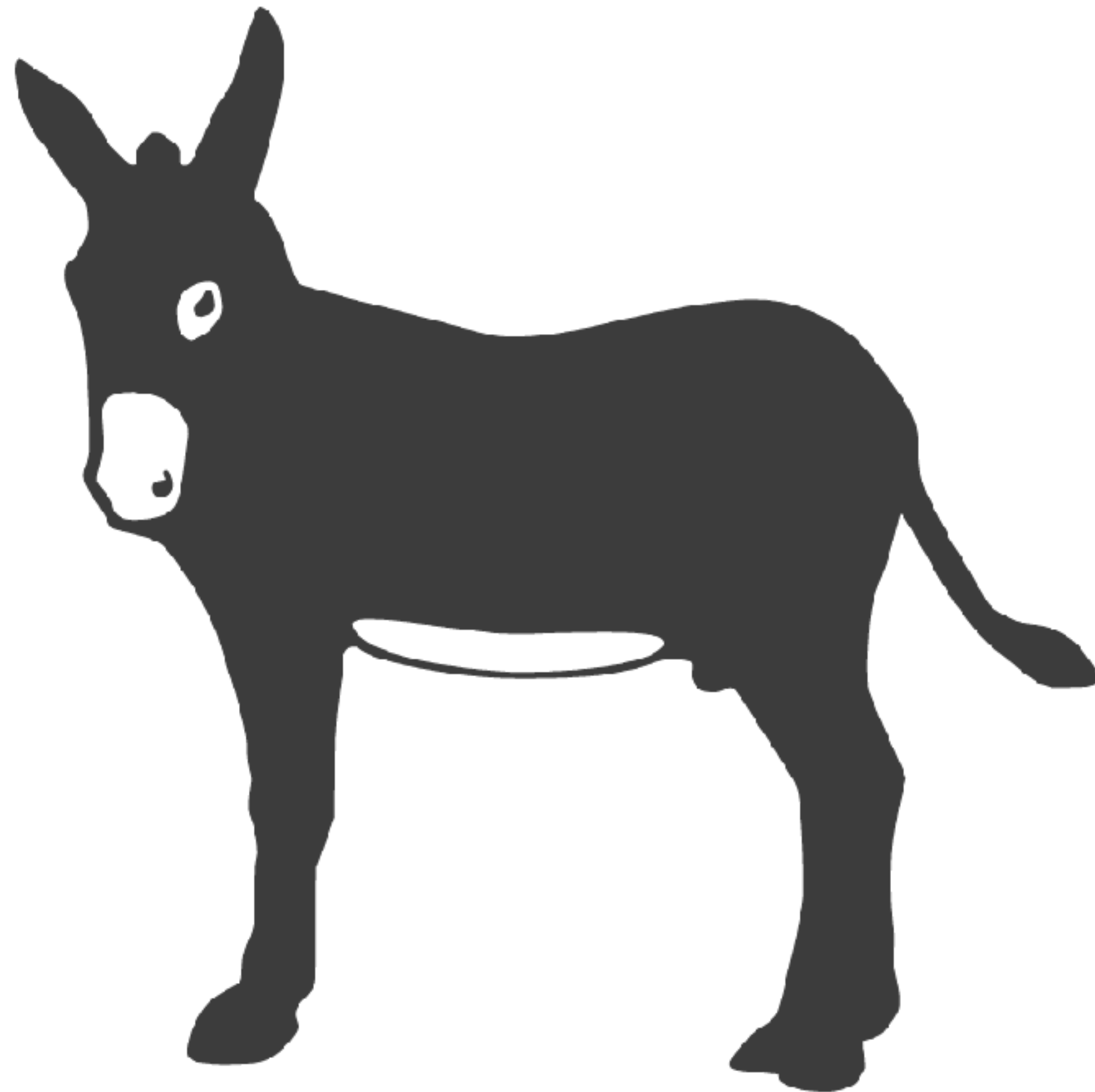
“...the big problems are where people don’t realize they have one in the first place”

— W. Edwards Deming



# The Donkey's Dilemma

— Aristotle, *On the Heavens*, c. 350 BC





# It's all about the stressors, baby...



“True intuitive expertise is learned from prolonged experience with good feedback on mistakes.”

— Daniel Kahneman

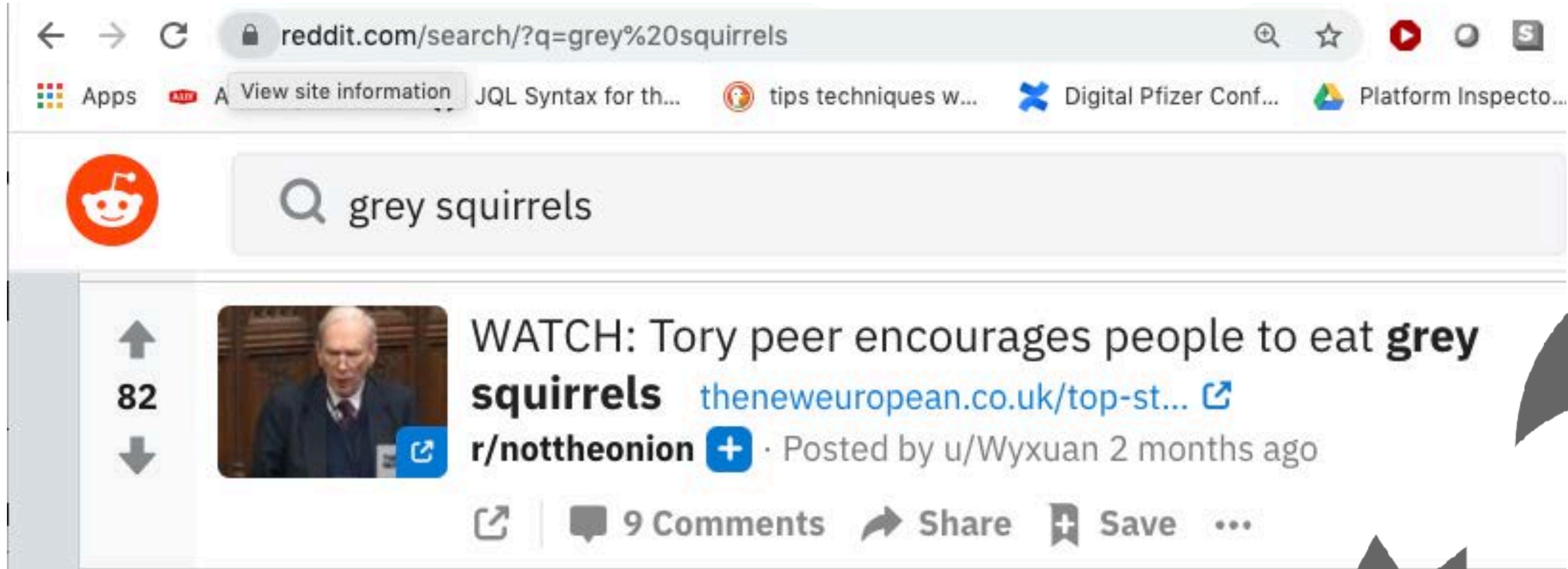
# The Metaphor of the Gray Squirrel



“Nothing happens until something moves.”

— Albert Einstein

# Not the onion





# Ethnology Journal

## Grey squirrel *Sciurus carolinensis* management in Italy - squirrel distribution in a highly fragmented landscape

Luc A. Wauters, John Gurnell, Italo Currado & Peter J. Mazzoglio

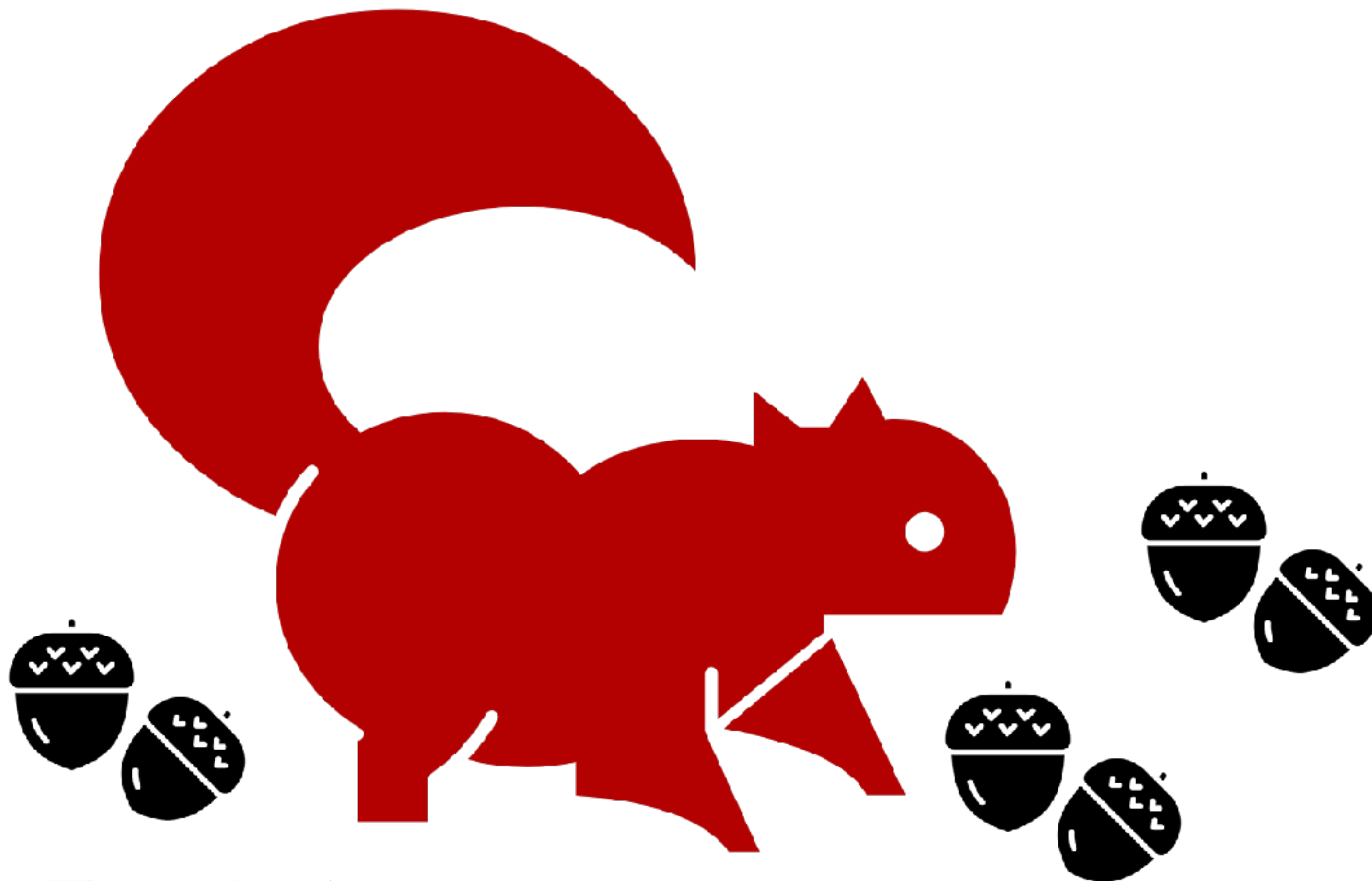
Wauters, L.A., Gurnell, J., Currado, I. & Mazzoglio, P.J. 1997: Grey squirrel *Sciurus carolinensis* management in Italy - squirrel distribution in a highly fragmented landscape. - Wildl. Biol. 3: 117-124.

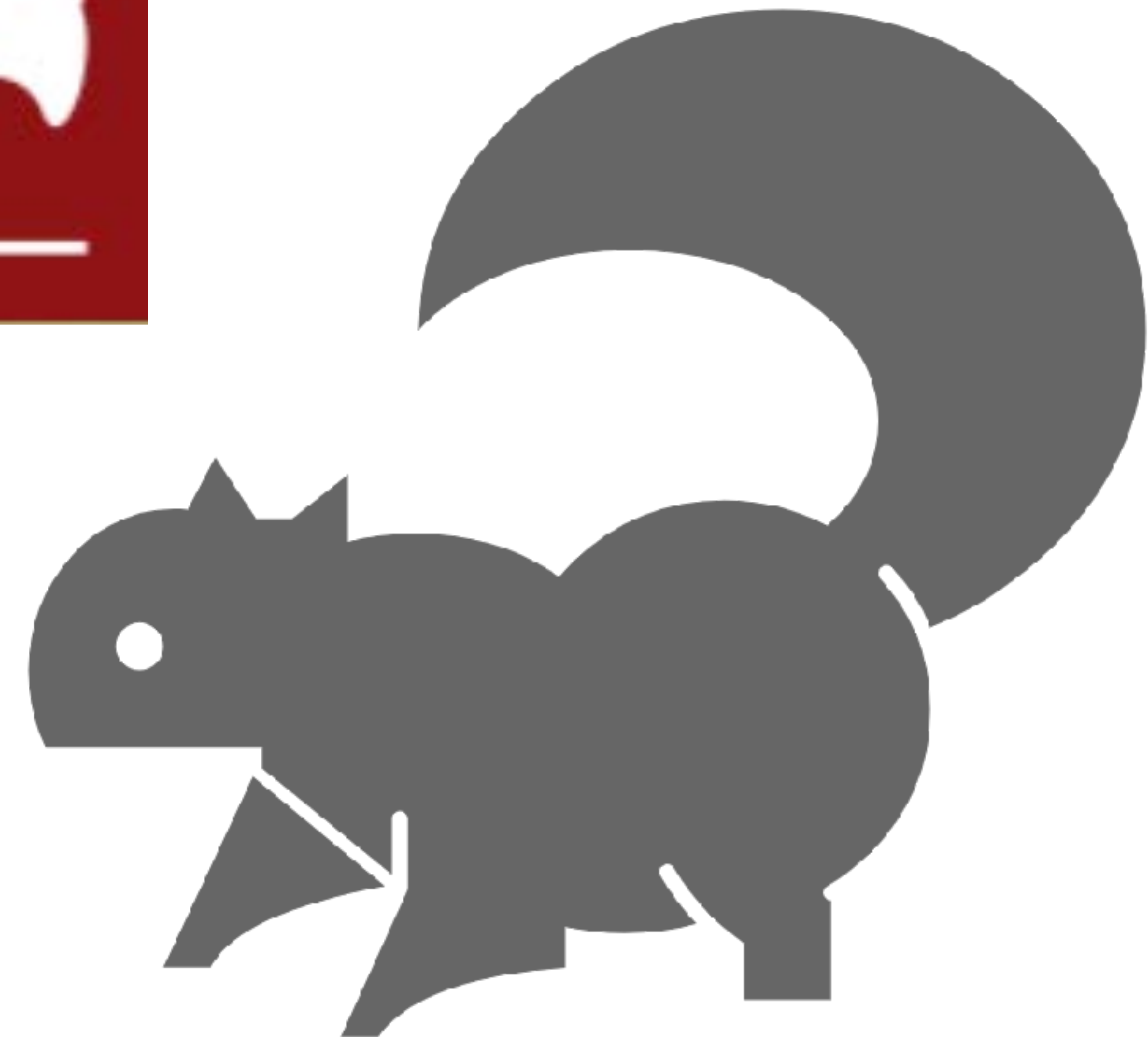
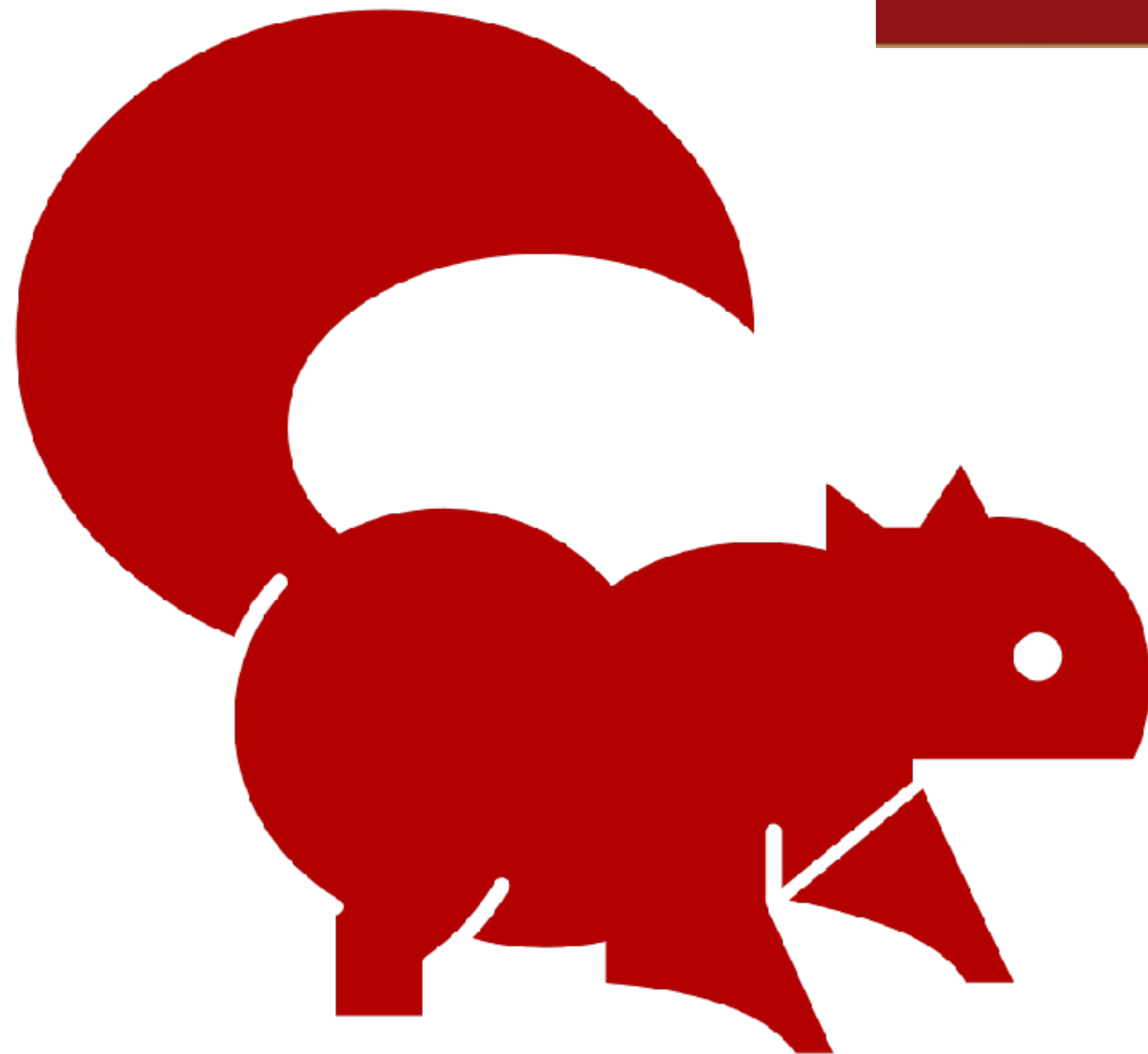
American grey squirrels *Sciurus carolinensis* introduced to northern Italy in 1948 have caused damage to commercial poplar plantations and have replaced the native red squirrel *Sciurus vulgaris* from most of the 350 km<sup>2</sup> of the Piedmont Po-plain they currently occupy. In order to plan a control programme aiming to stop grey squirrels from further spreading and to decrease their numbers, the current distribution and population size in the highly fragmented landscape of the Po-plain were studied. The probability of finding grey squirrels in woodland fragments increased with habitat quality (producing large, consumable seeds), woodland size and adding isolation variables (e.g. distance from roads). The density of grey squirrels in woodlots assessed for squirrel presence was modelled that predicted squirrel density. An estimate of the minimum population density needed to increase their range to the Piedmont Po-plain was calculated. Grey squirrels continue to spread close to the continuous mixed forests of the pre-Alps and to plantations. Control measures to stop the spread of grey squirrels to eradicate them, should be implemented immediately.

Wauters & John Gurnell, School of Biological Sciences, Queen Mary University of London, London E1 4NS, U.K.  
Italo Currado & Peter J. Mazzoglio, Di. Va. P.R.A. - Entomologia applicata all'Ambiente, Università di Torino, 10125  
Received 13 January 1997, accepted 16 March 1997  
Associate Editor: Henrik Andrén



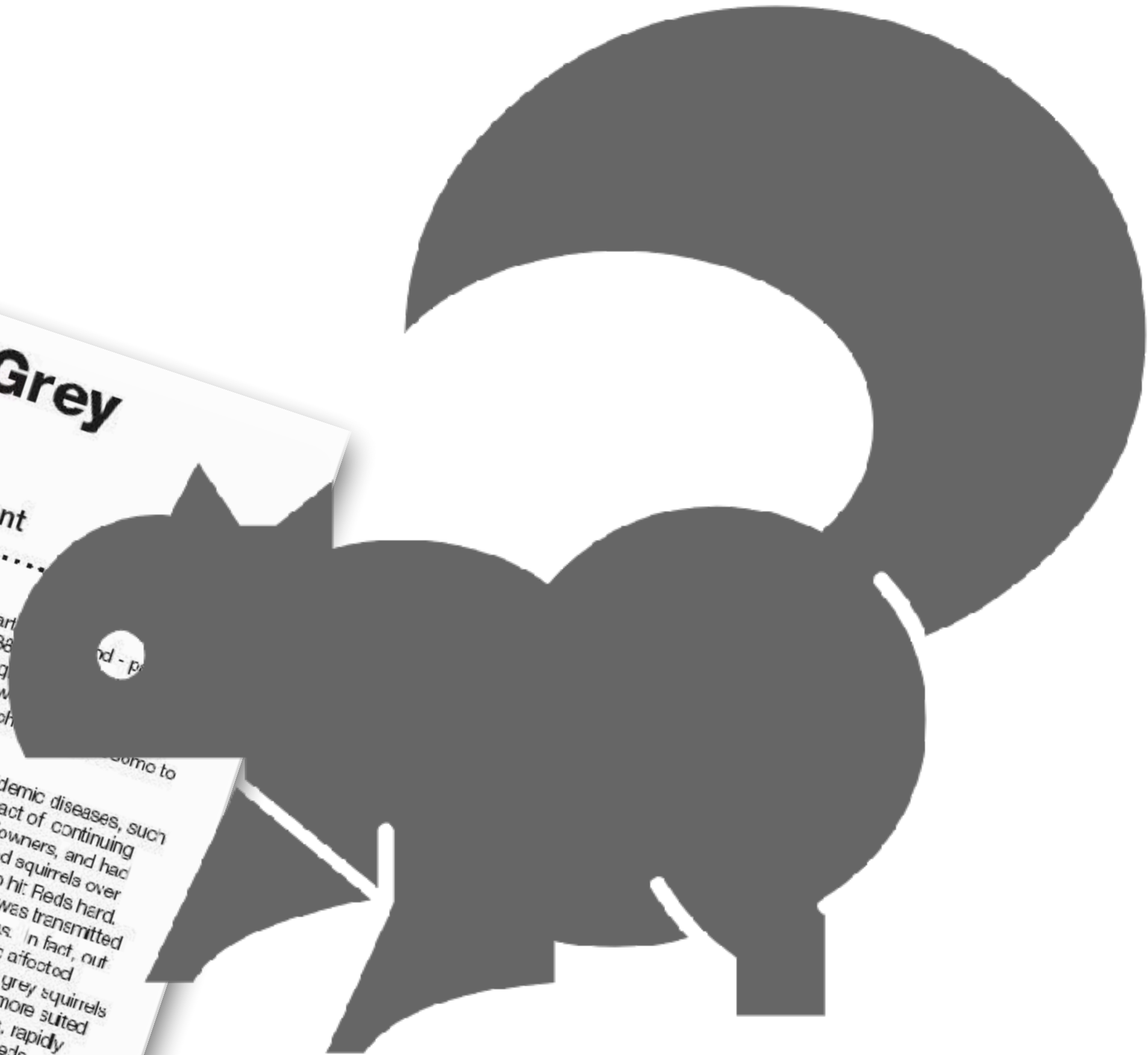
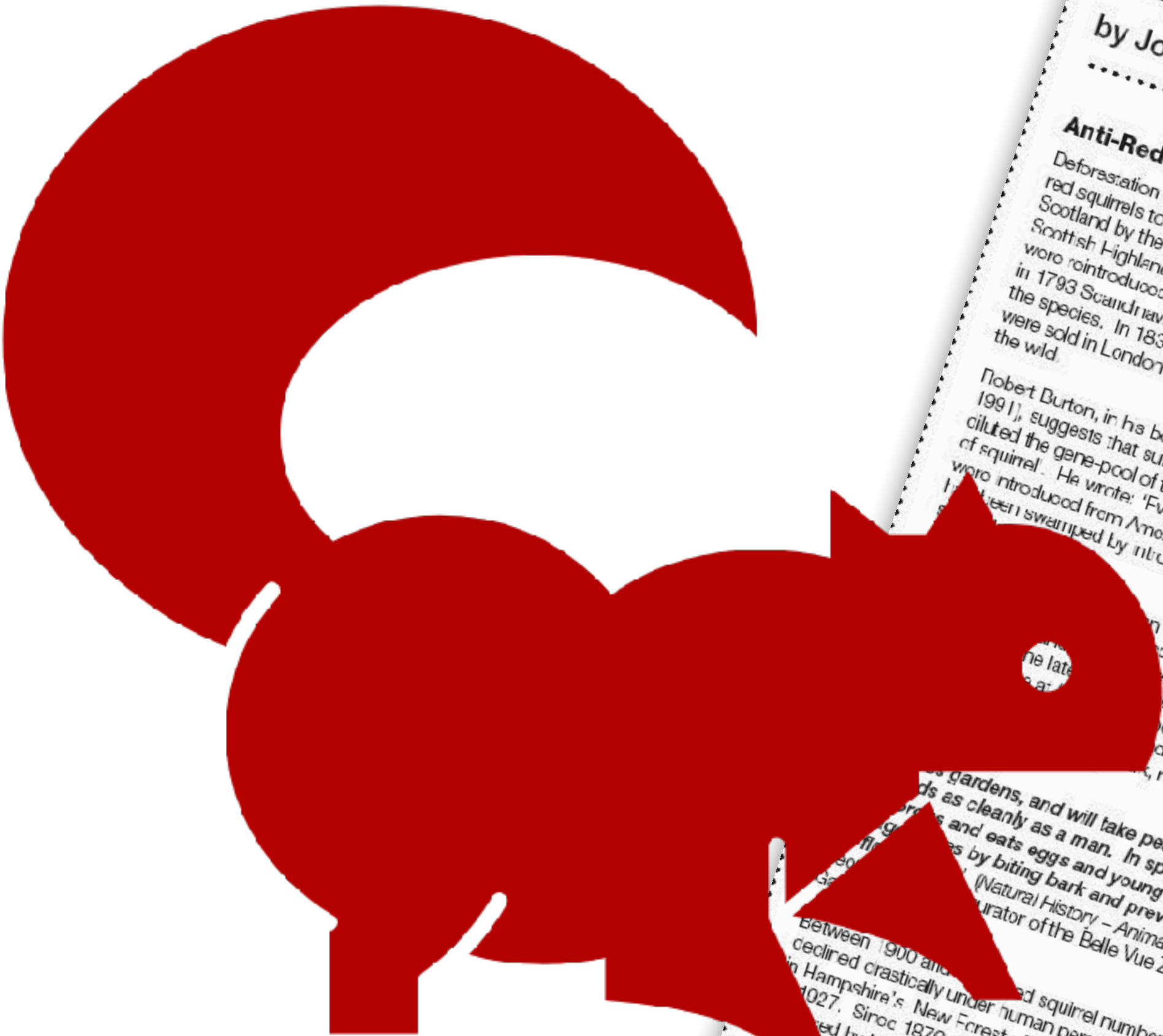
# Scatter Hoarding





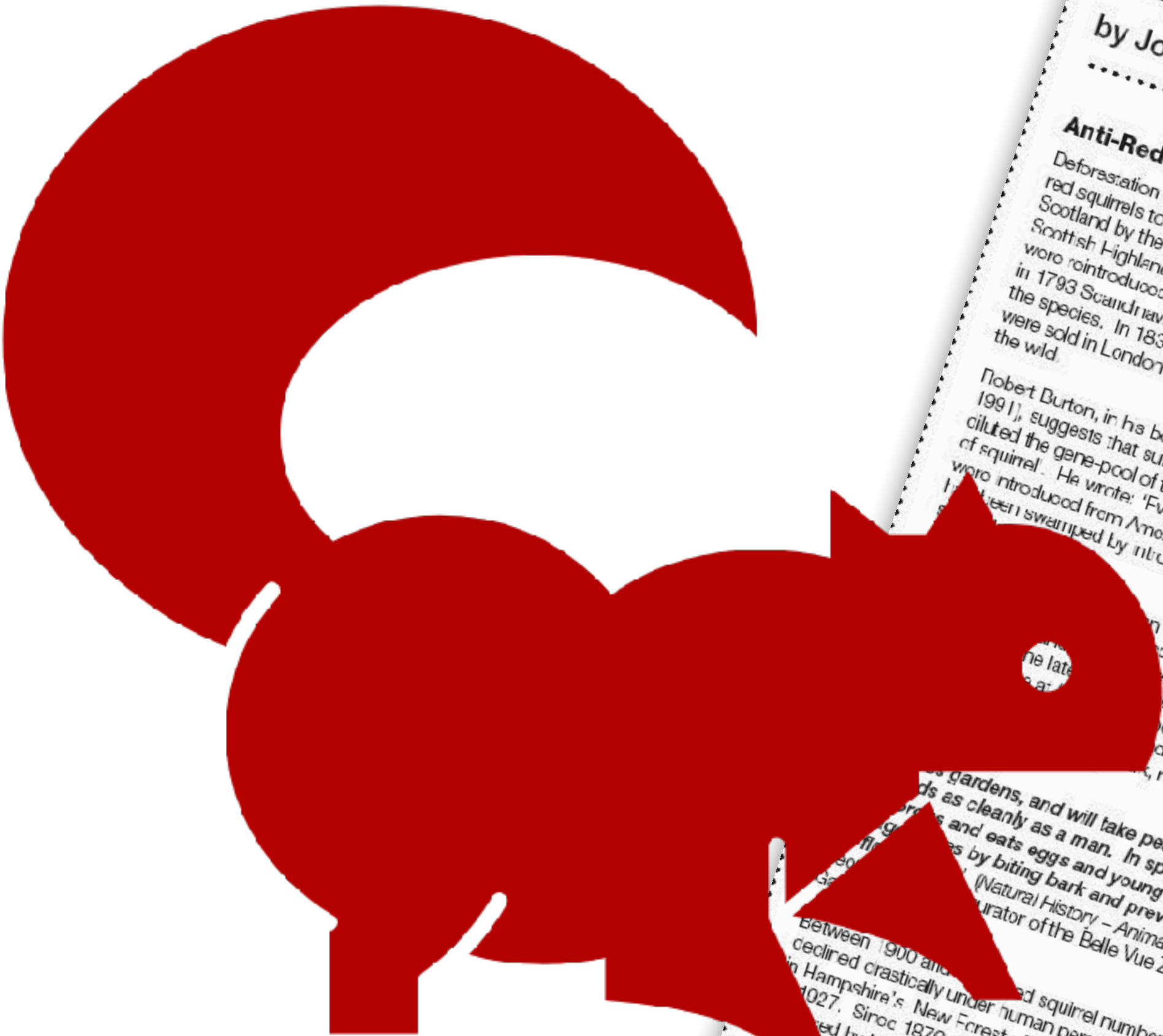


# Root Cause Analysis



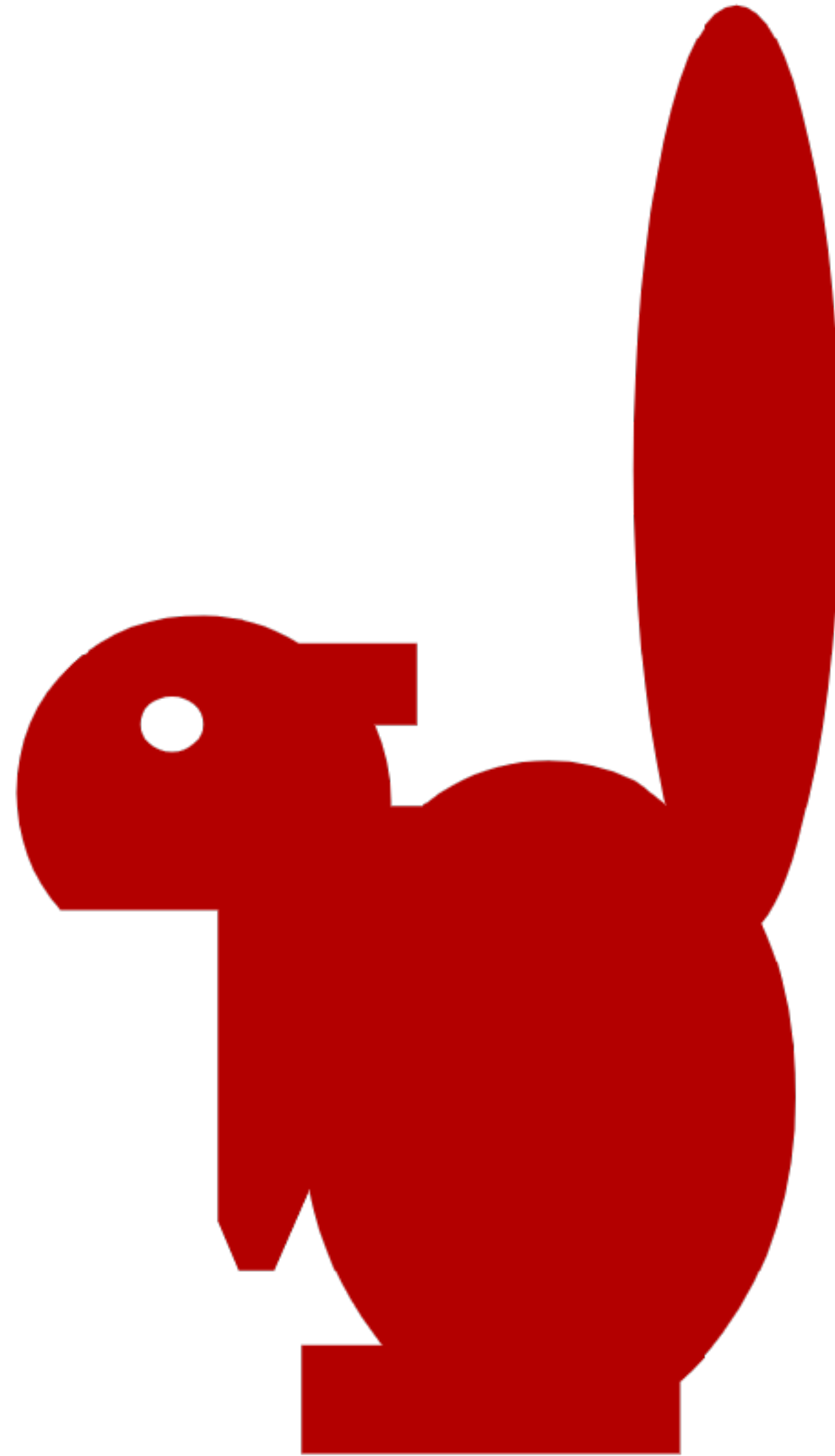


# Root Cause Analysis





# The Journal of Animal Ecology





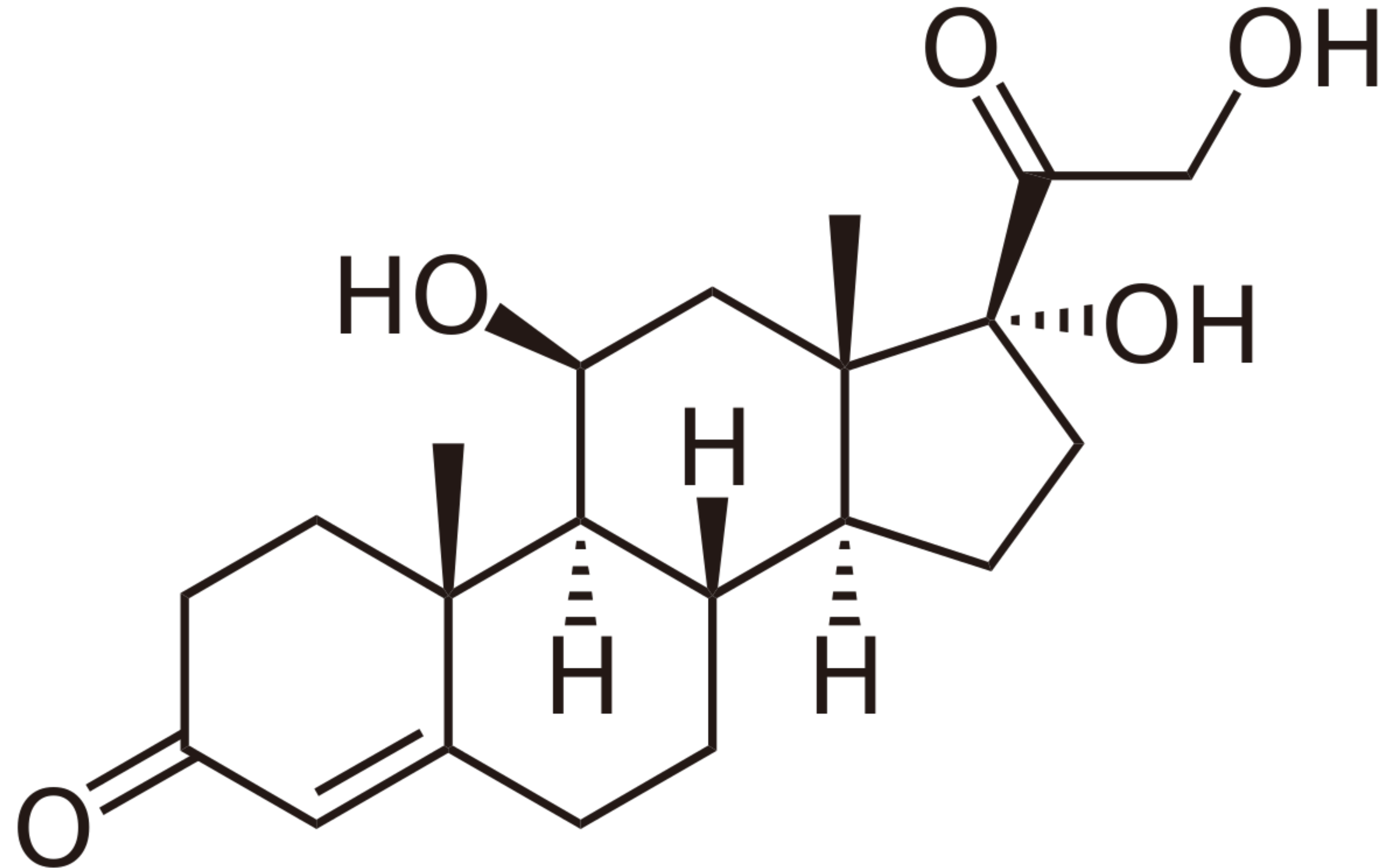
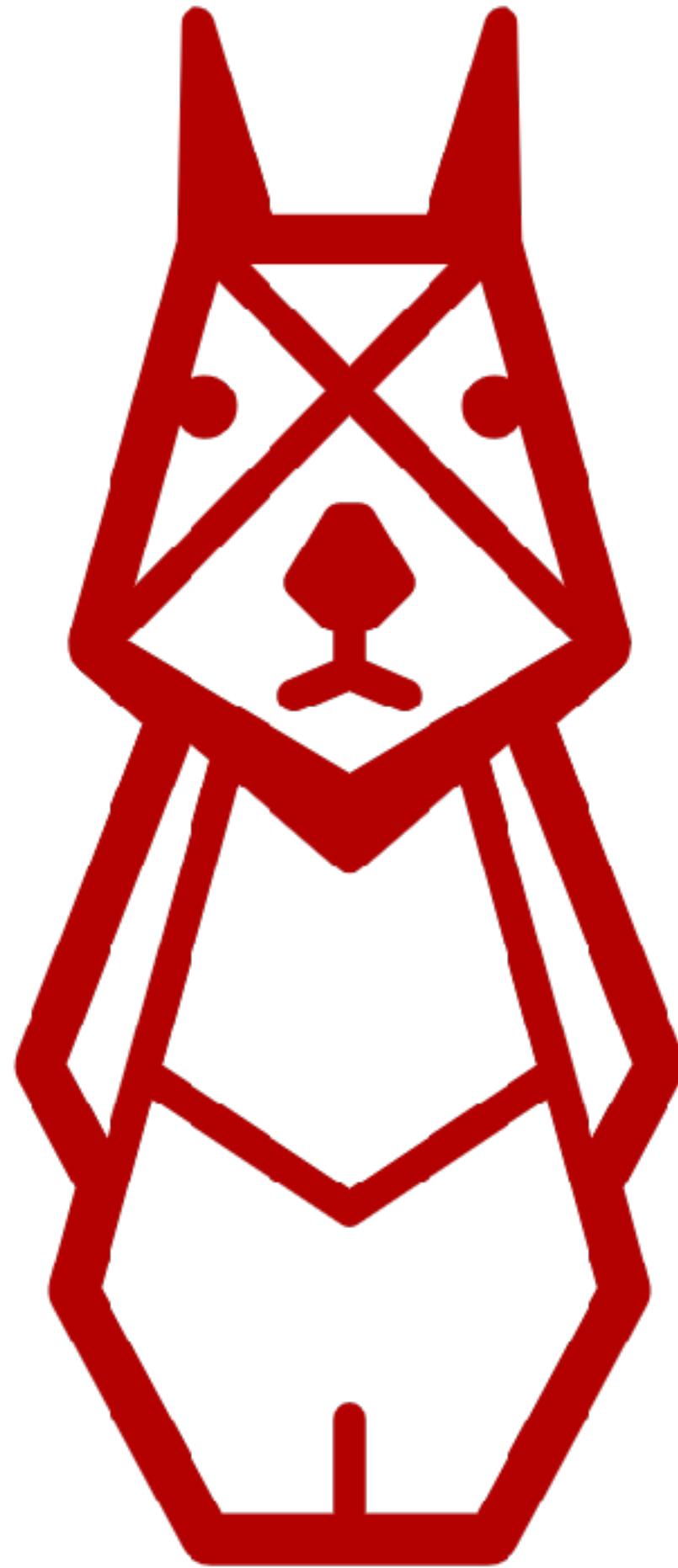
# A Feedback Mechanism



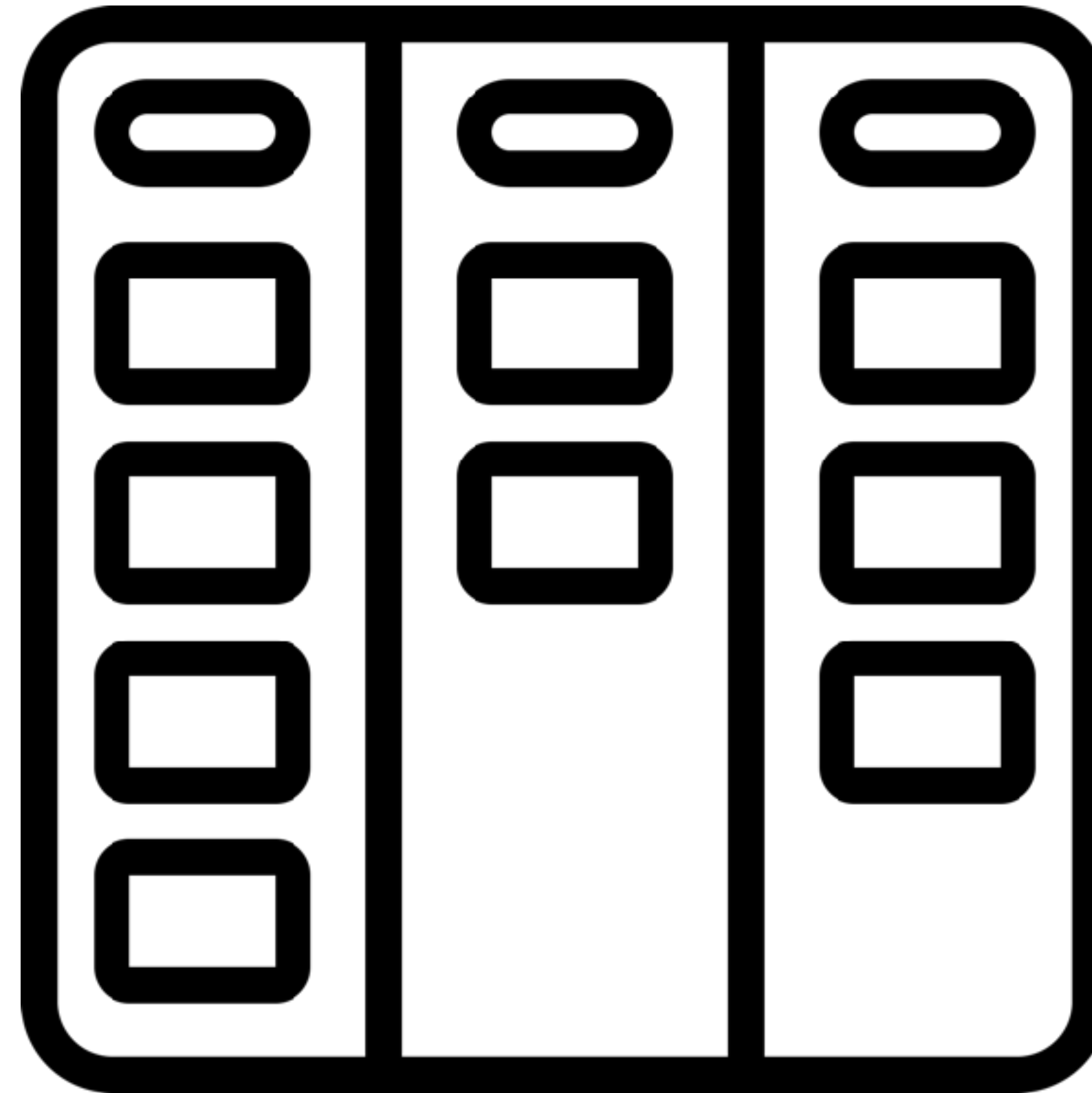
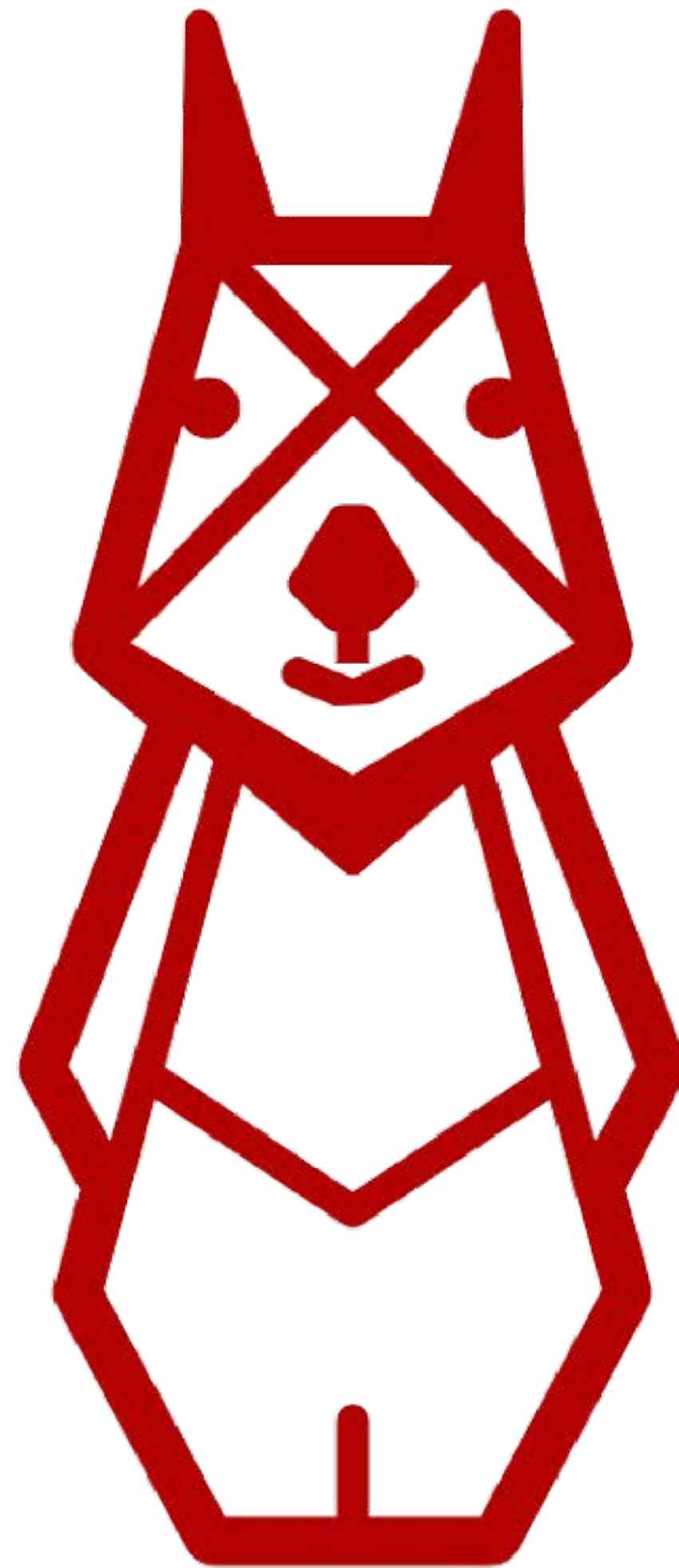
“The big problems are where people don’t realize they have one in the first place.”

— W. Edwards Deming

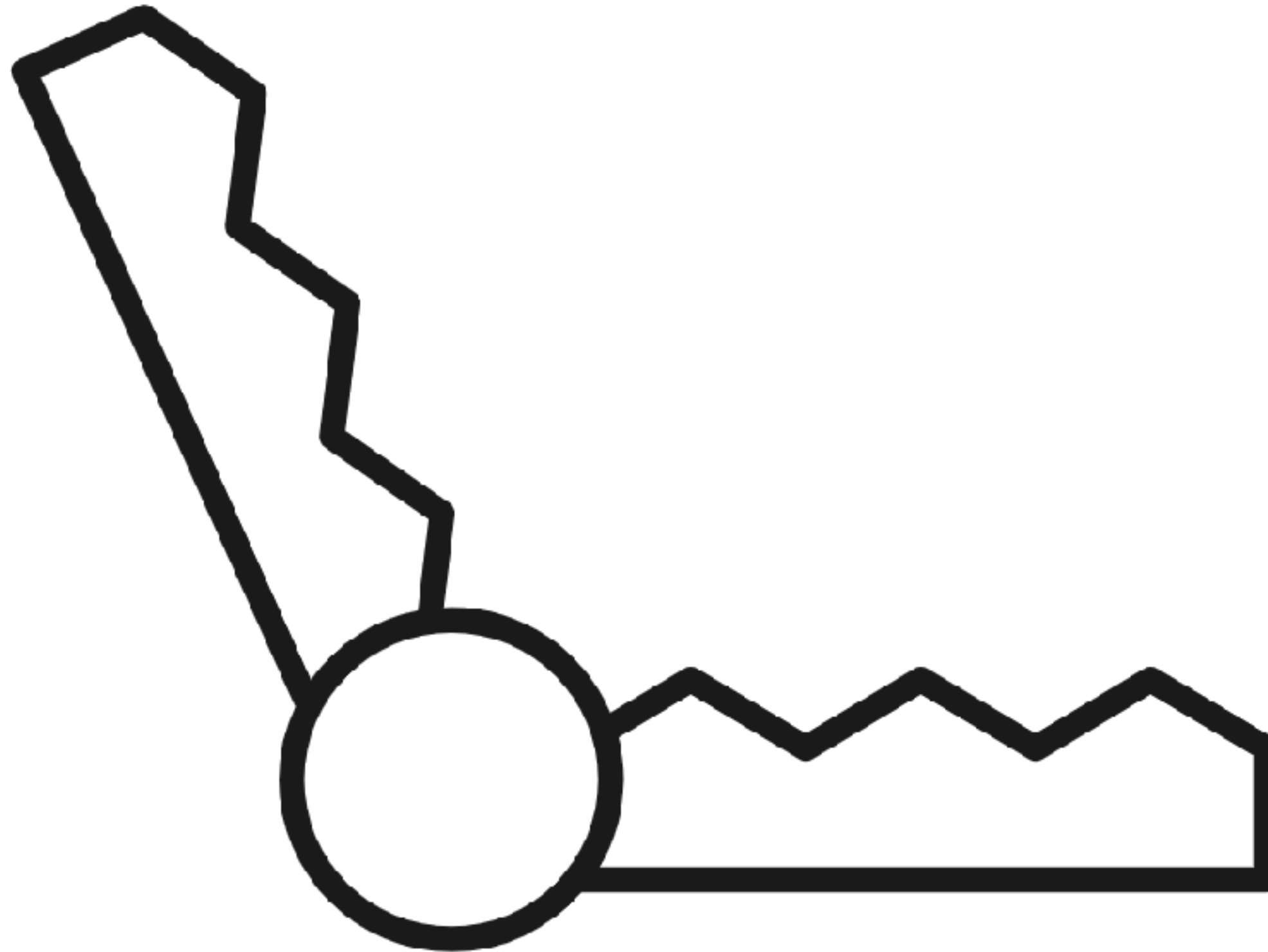
# Glucocorticoid



# Kanban promotes practices proven to reduce stress

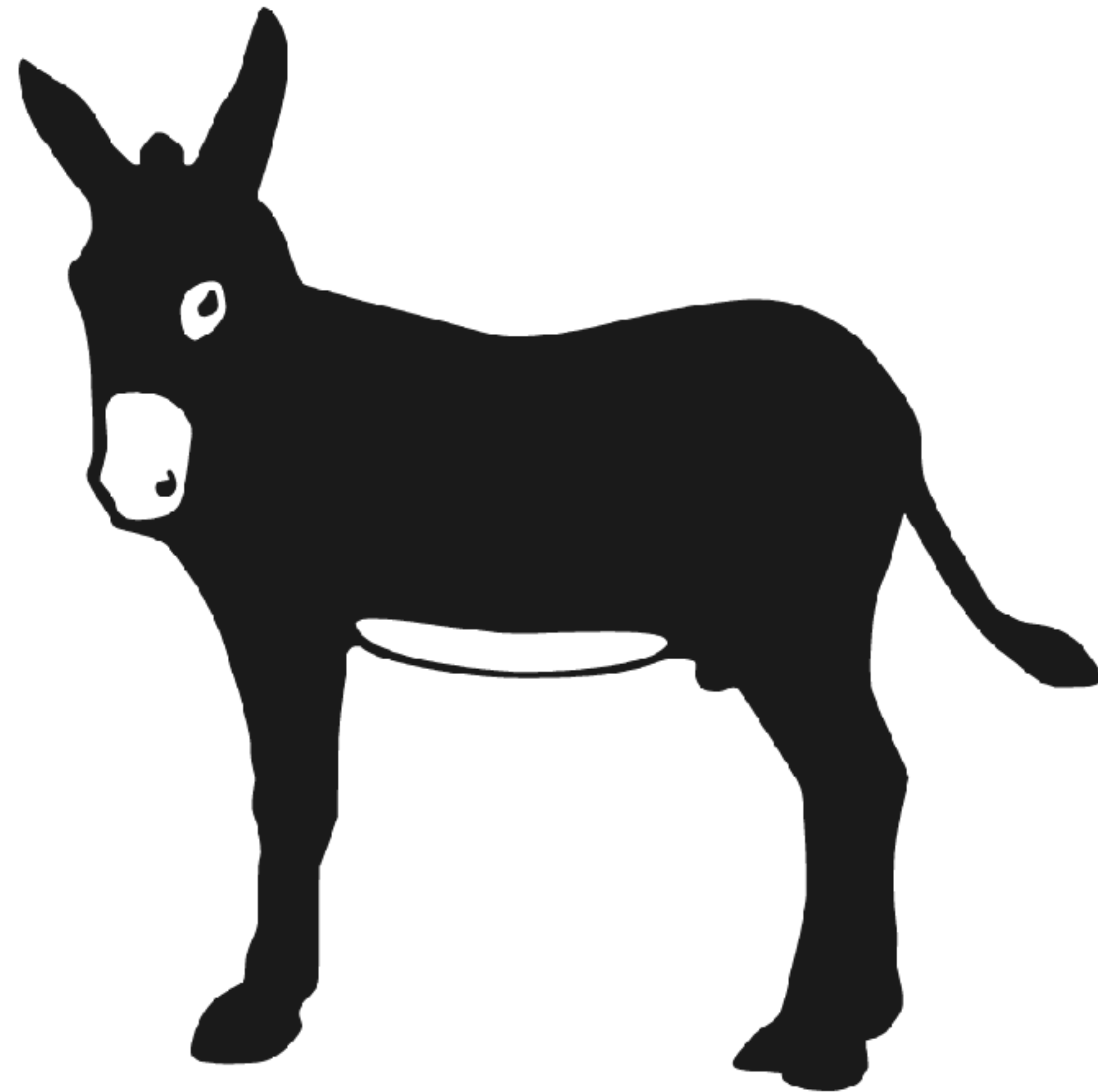


# On Retrospective Narrative





# The Donkey's Dilemma, revisited



“...*Ex nihilo nihil fit*: Nothing comes out of nothing.”

— Gottfried Leibniz

# Put on your expert hat and gown

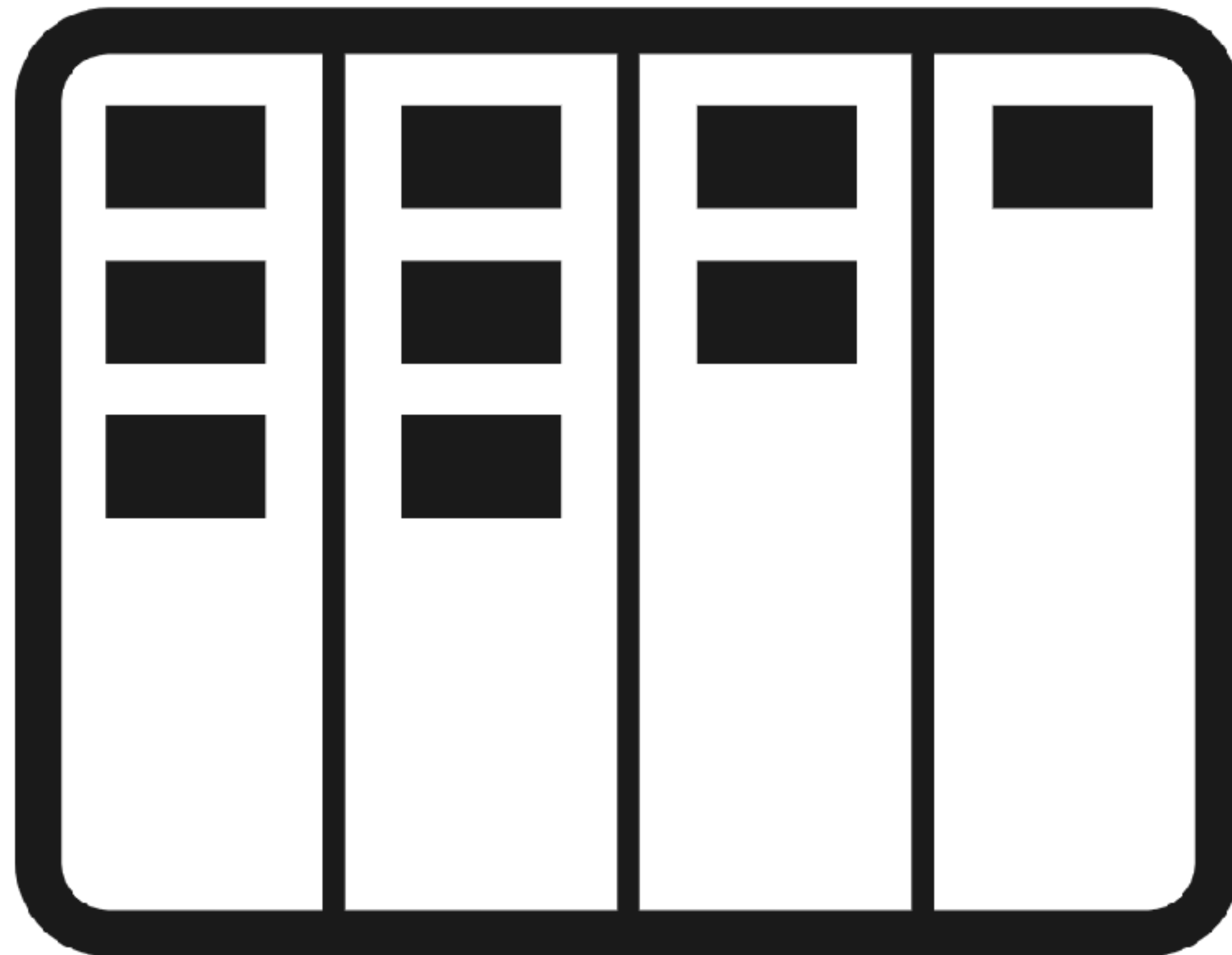


“...people don’t resist change,  
they resist being changed”

— Peter Senge



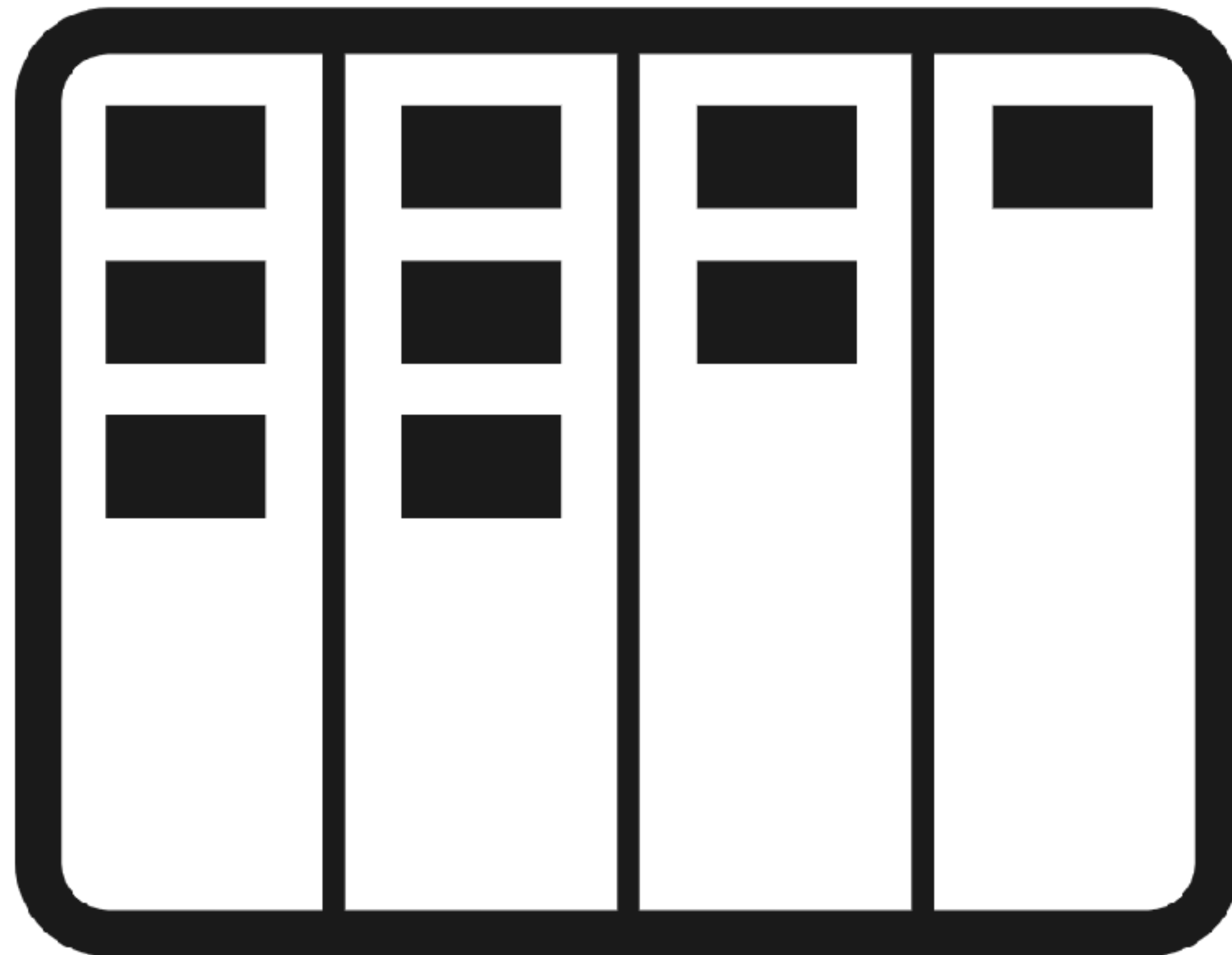
# Transition vs Consolation Phases



“Developing an increased level of trust with other teams can enable the harder things.”

— David J. Anderson

# Transition vs Consolation Phases

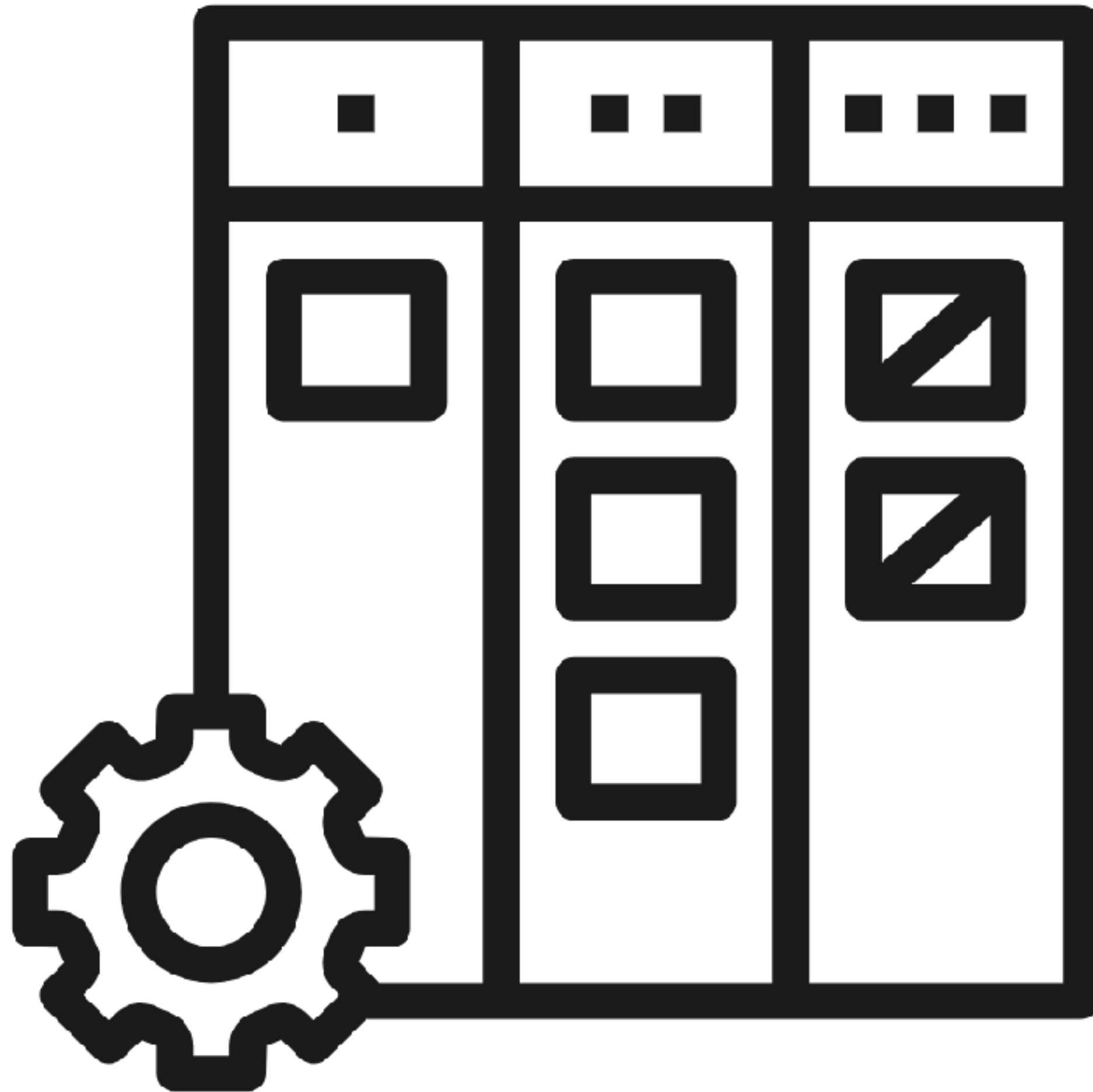


“Developing an increased level of trust with other teams can enable the harder things.”

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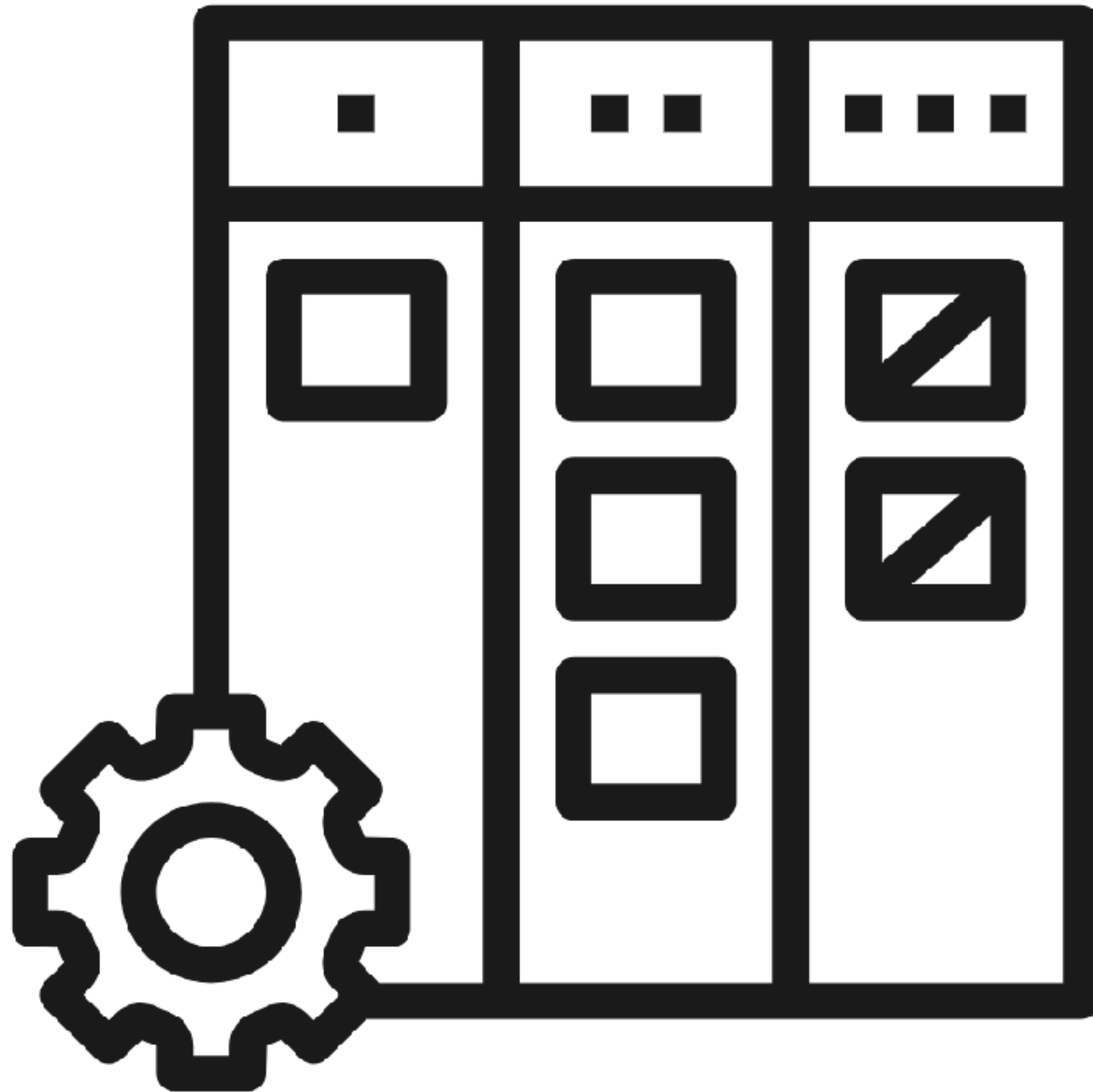
# Normative vs Structural Changes



“Predictability builds and holds trust, a core Agile value, better than does delivering more with less reliability.”  
—

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# Normative vs Structural Changes

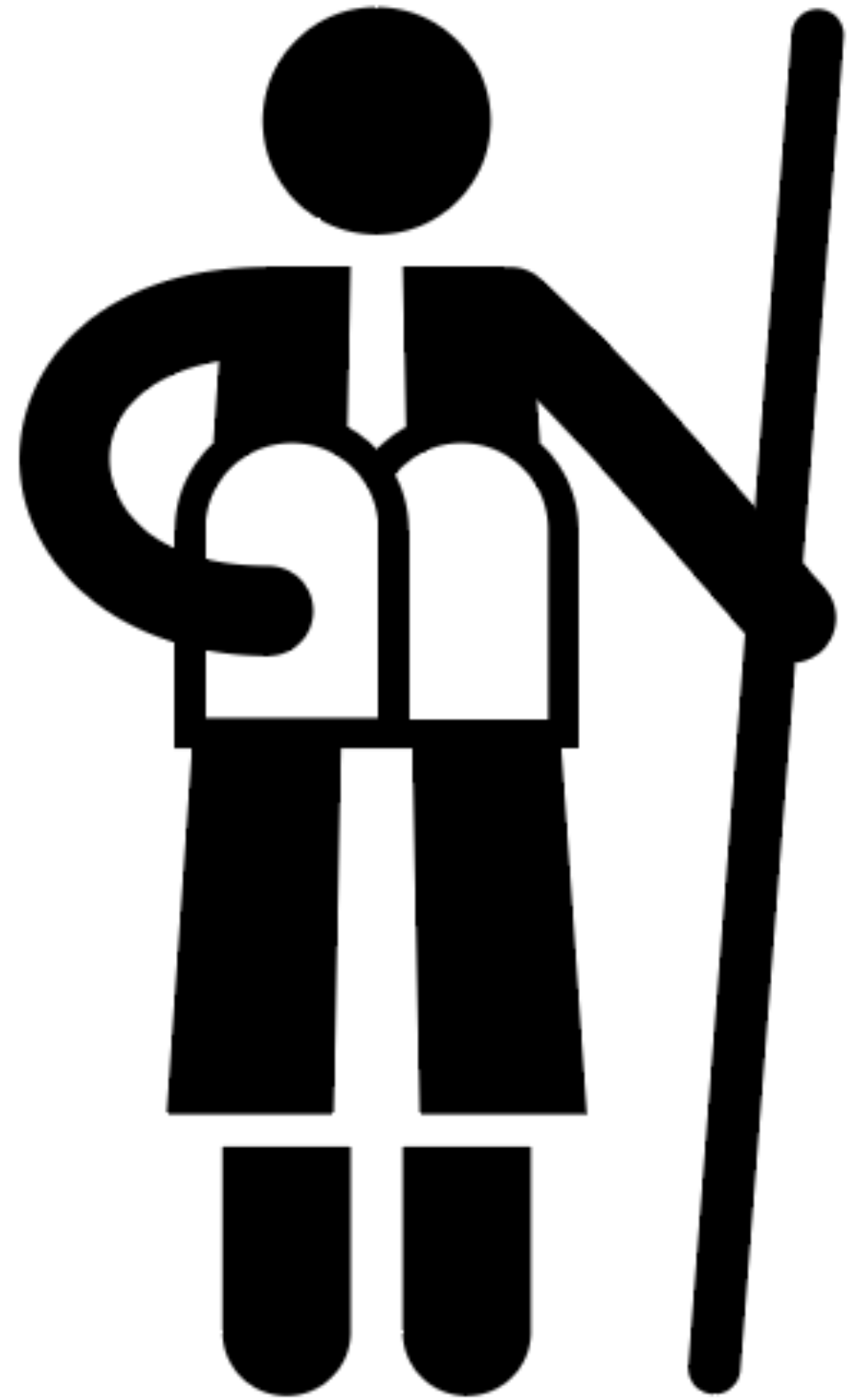


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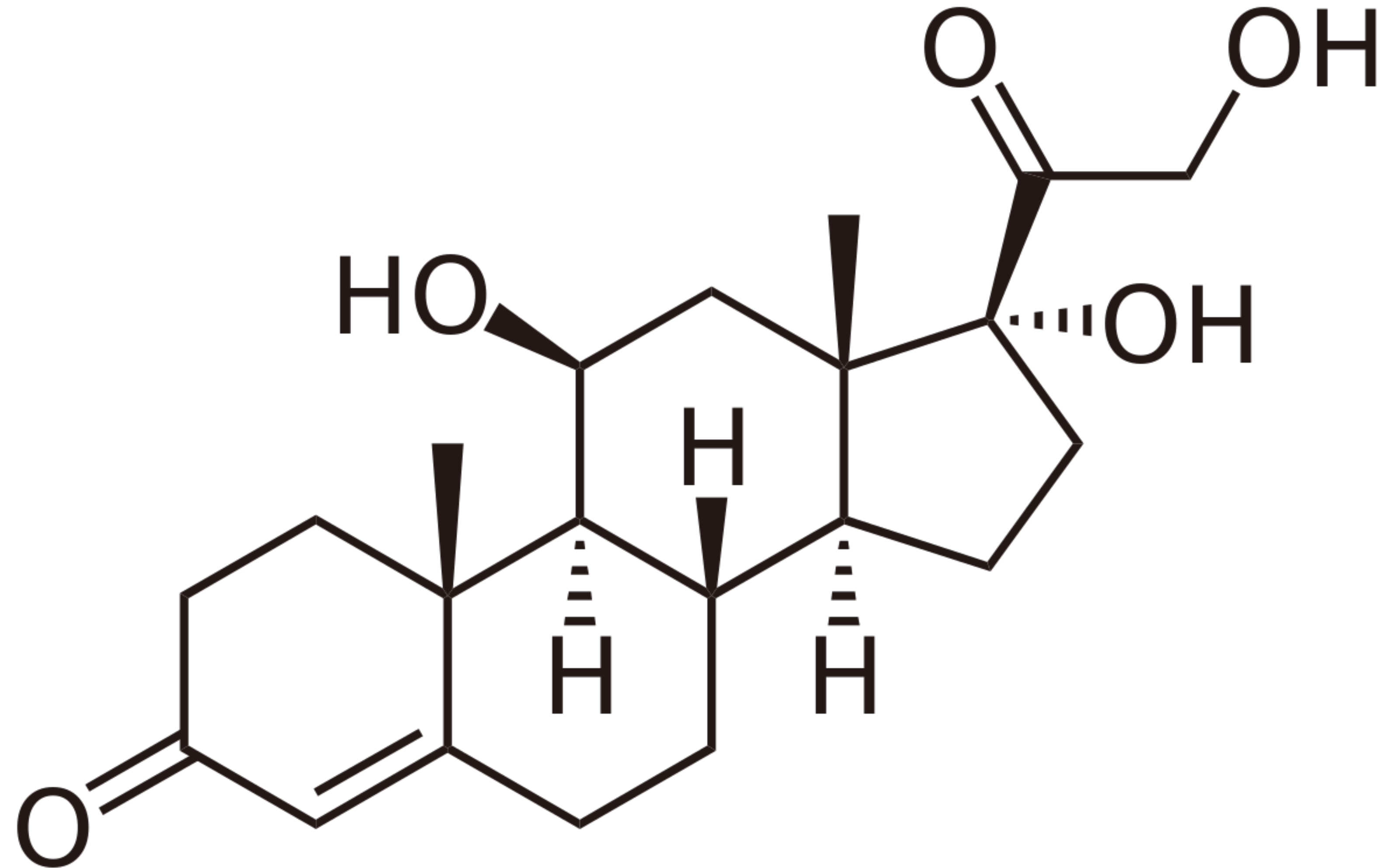
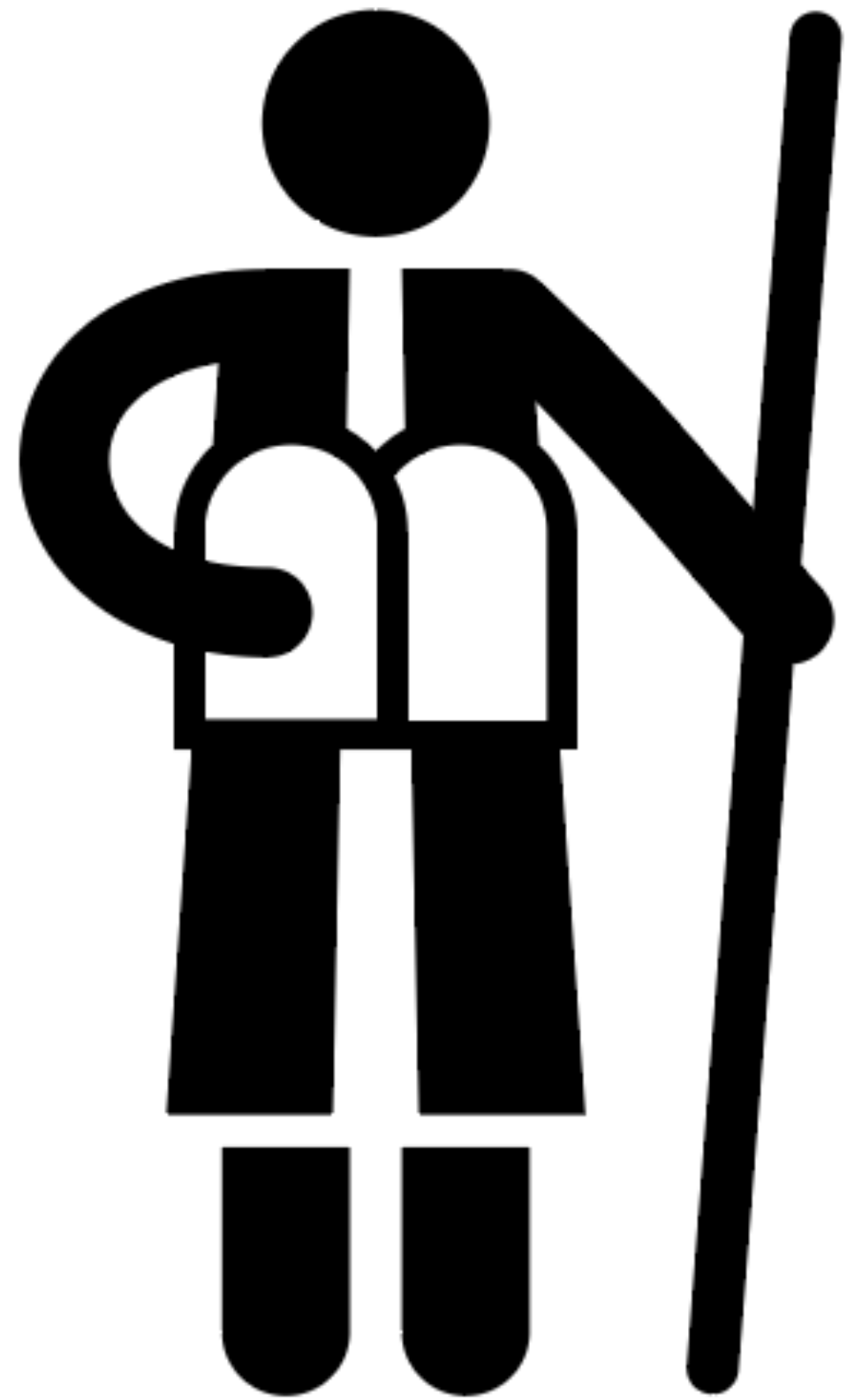
— David J. Anderson



# Observing other telltale signs...

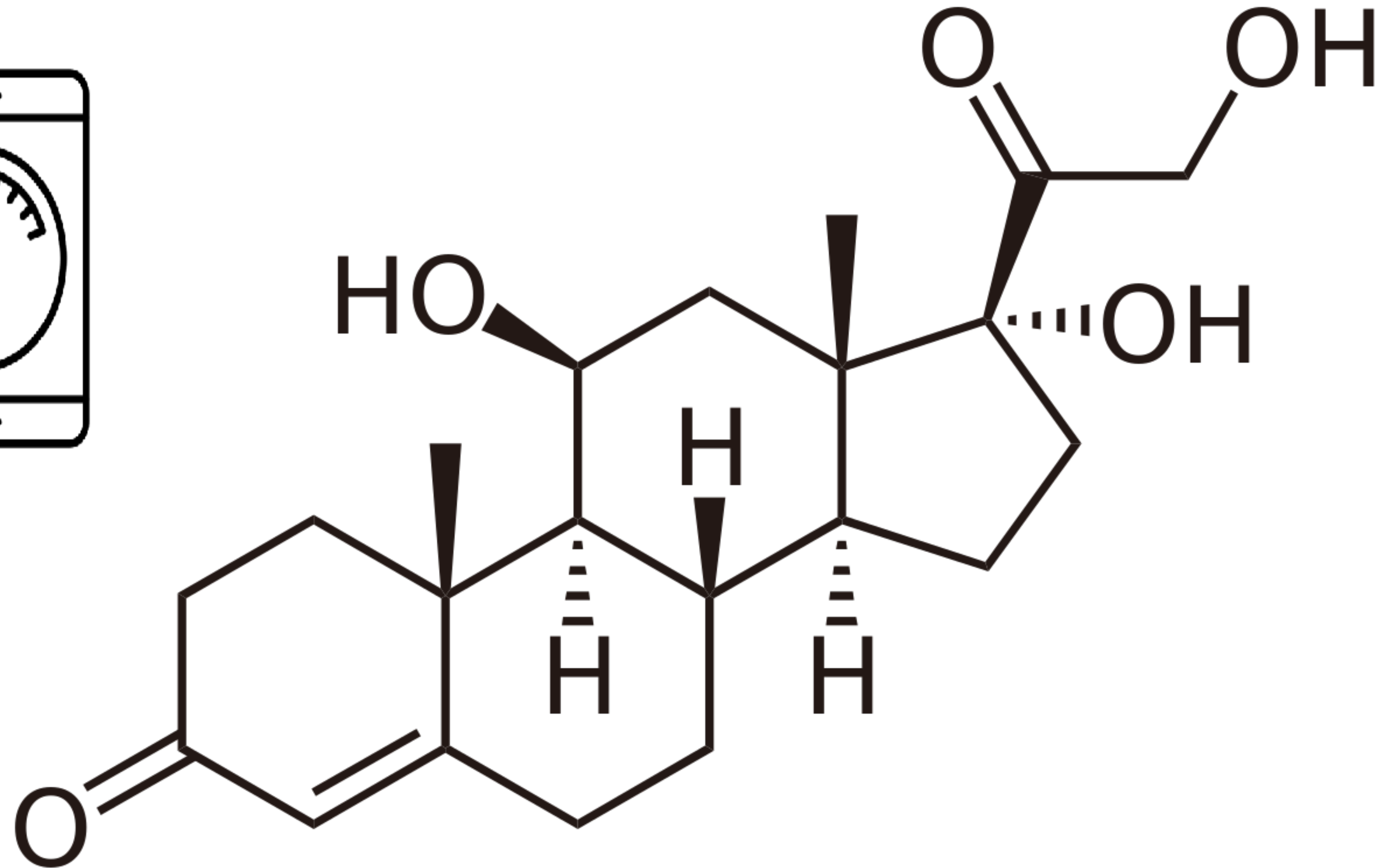
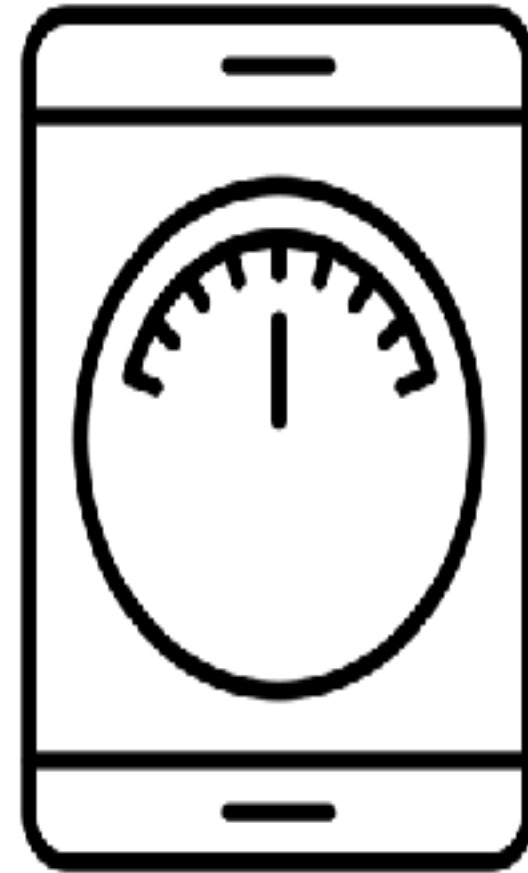
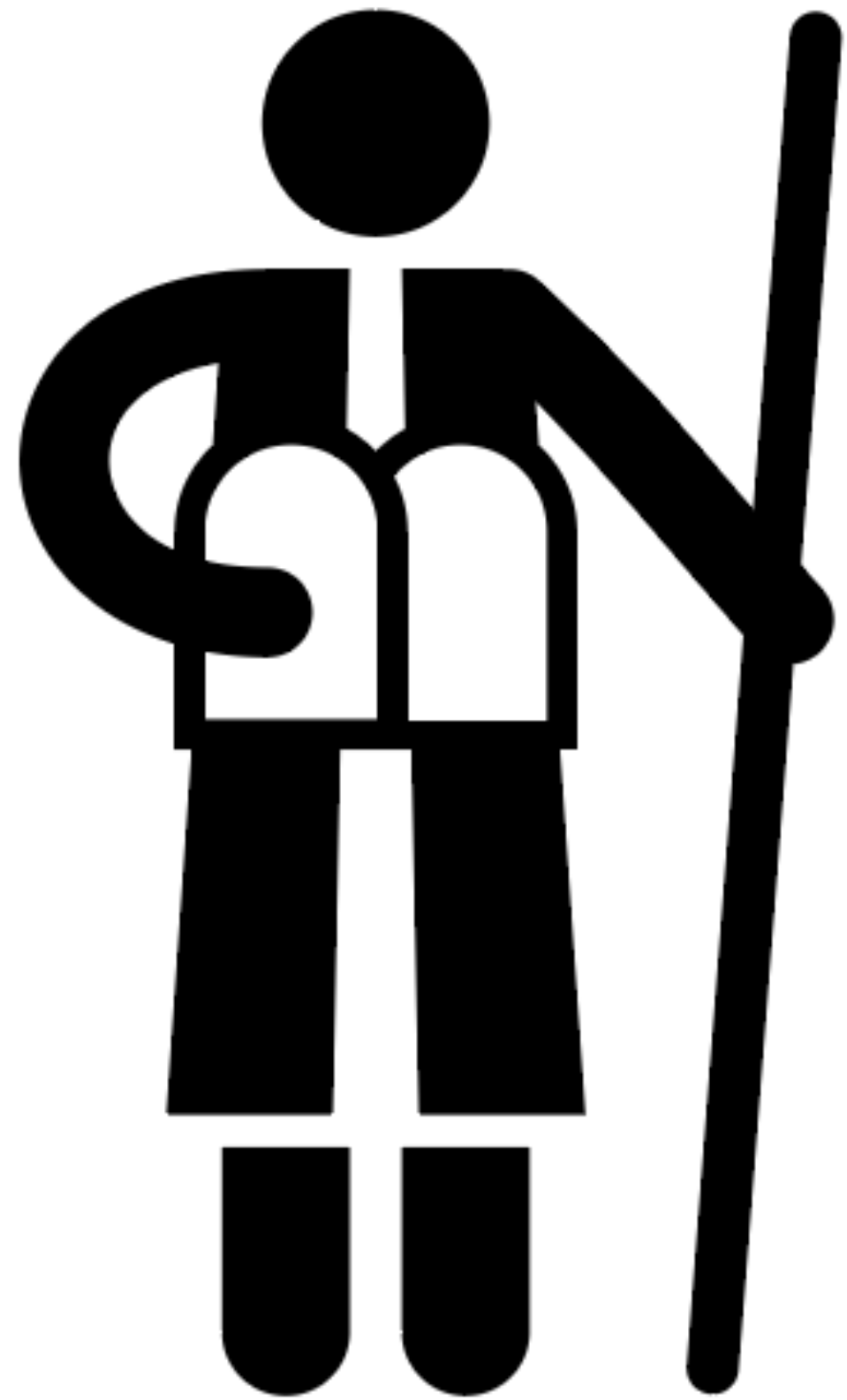


# Glucocorticoid Revisited

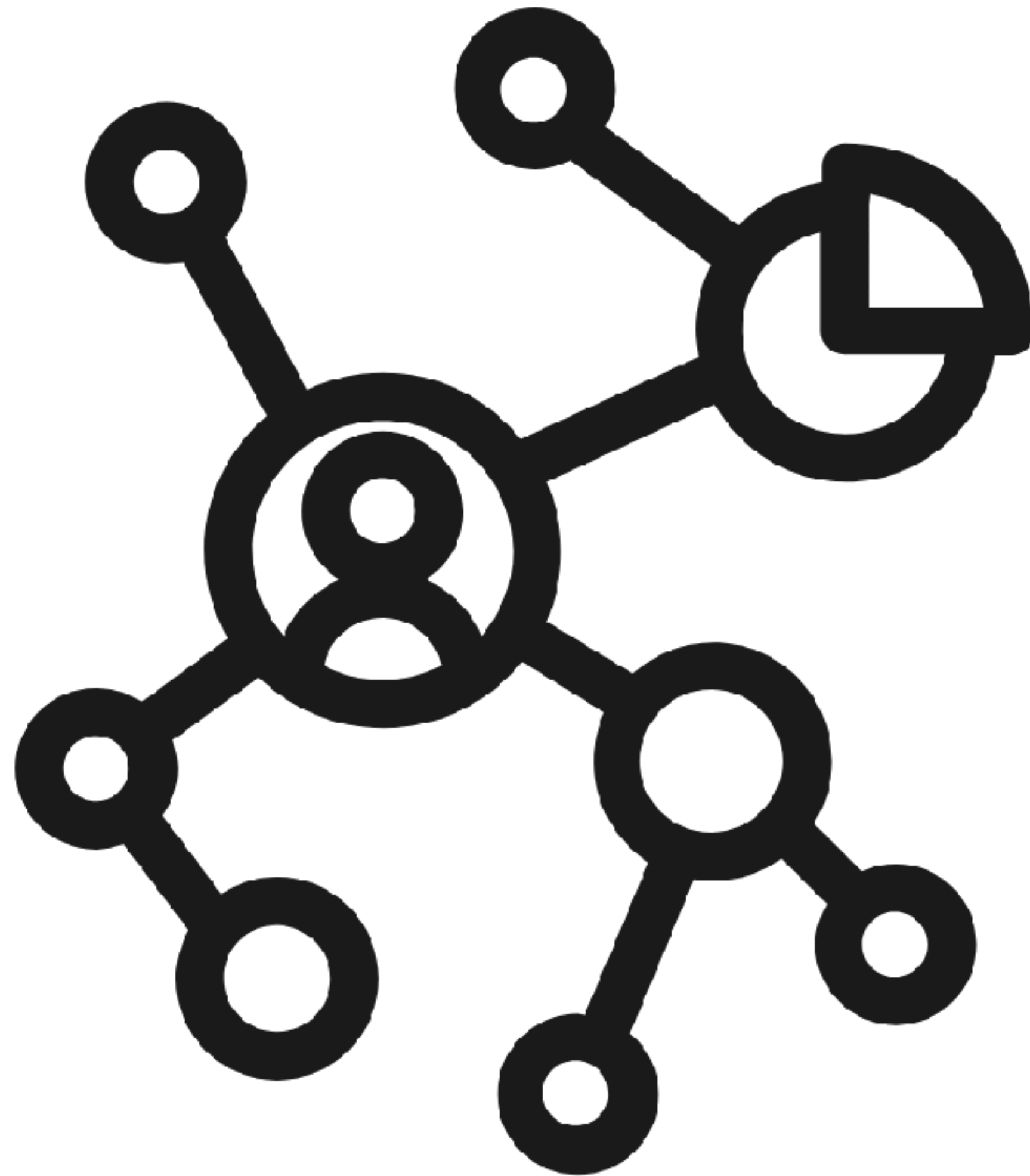




# ScrumScat



# Feedback and Scaling Frameworks

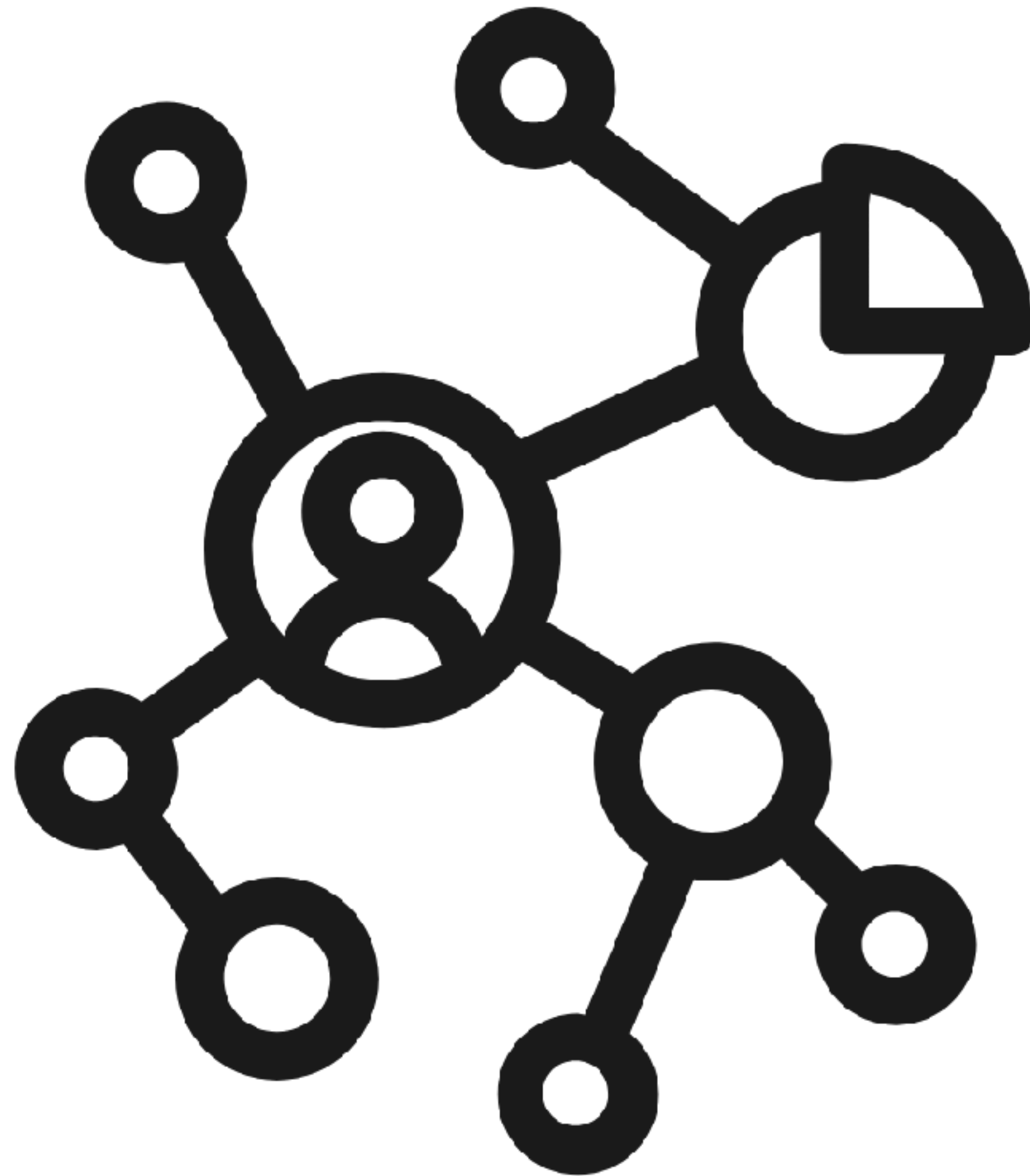


“The single biggest problem in communication is the illusion that it has taken place.”  
—

— George Bernard Shaw



# Feedback and Scaling Frameworks



“The single biggest problem in communication is the illusion that it has taken place.”  
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— George Bernard Shaw



# Phineas Gage with his Tamping Rod









# Phineas Gage with his Tamping Rod





# Phineas Gage with his Tamping Rod



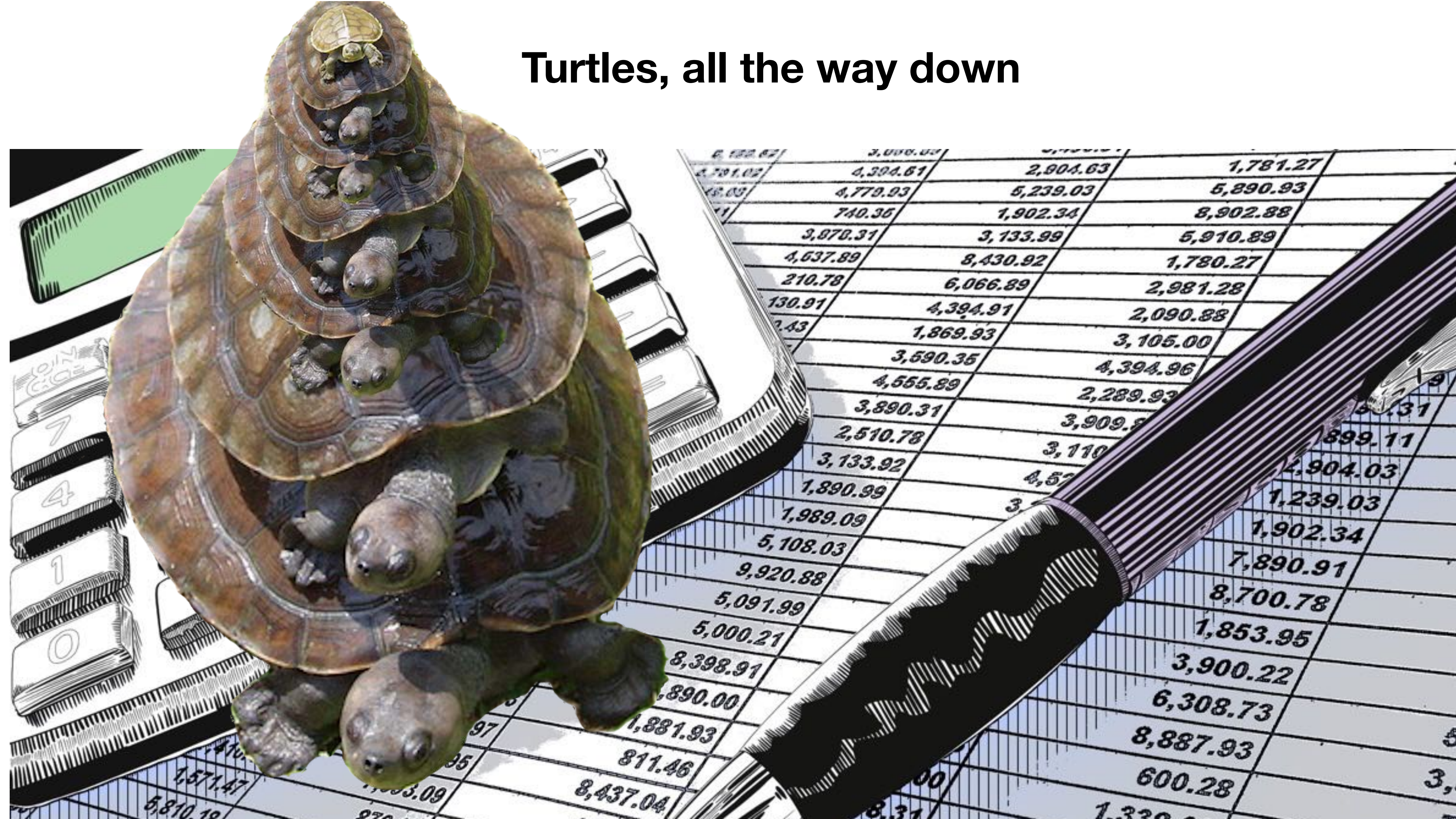


# Vigilant guardians of the balance sheet...





Turtles, all the way down







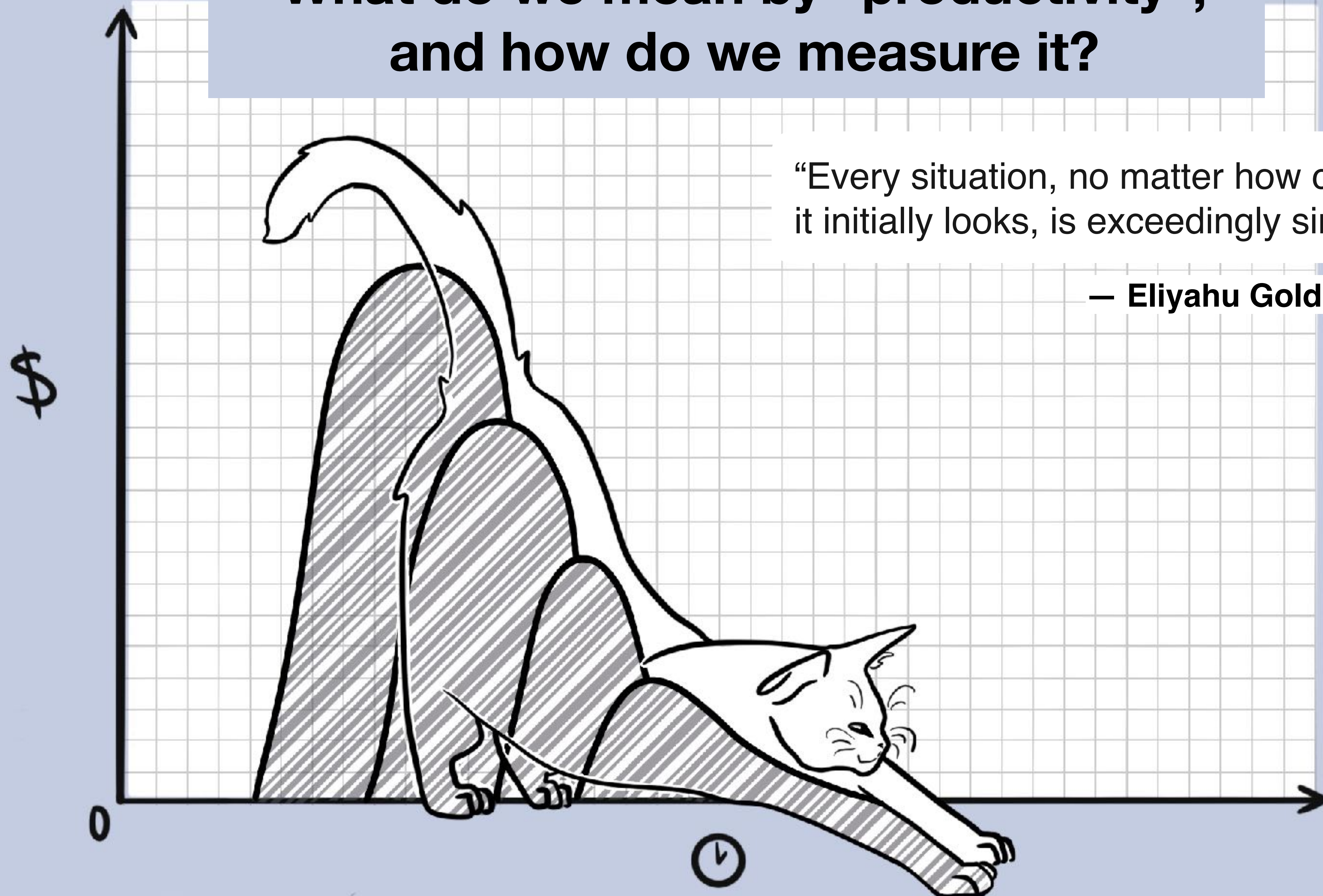
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5,239.03	5,890.93
1,902.34	8,902.88
3,133.99	5,910.89
8,430.92	1,780.27
6,066.89	2,981.28
4,394.91	2,090.88
1,869.93	3,105.00
3,590.35	4,394.96
4,555.89	2,289.93
3,890.31	3,909.8
2,510.78	3,110
3,133.92	4,57
1,890.99	3
1,989.09	
5,108.03	
9,920.88	
5,091.99	
5,000.21	
8,398.91	
3,890.00	
1,881.93	
811.46	
8,437.04	



# What do we mean by “productivity”, and how do we measure it?

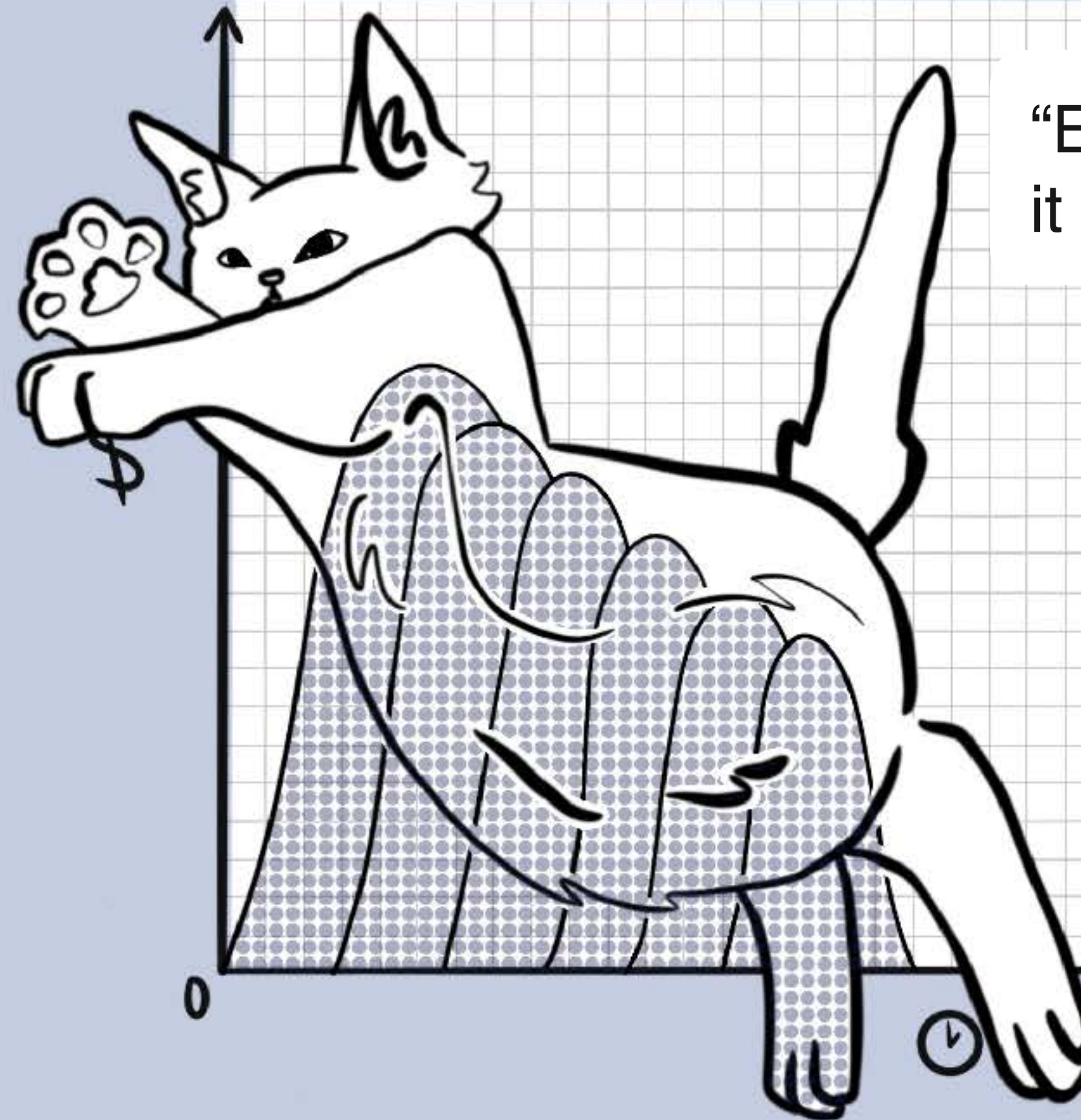
“Every situation, no matter how complex  
it initially looks, is exceedingly simple.”

— Eliyahu Goldratt





# What do we mean by “productivity”, and how do we measure it?



“Every situation, no matter how complex  
it initially looks, is exceedingly simple.”

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Since the first boolean bits were switched on a circuit board, untangling complexity has been a central problem of software engineering.

Complexity has multiple facets: the number of variations in the pathway to an acceptable outcome, the nature of dependencies implicit in the selected variants, and, perhaps most important, the prevalence of emergent variation.

Understanding emergent variation is at the center of systems thinking. The lack of training in how to model emergent variation is the rock that project managers tend to break their tools on.

The true nature of emergent risk hides quite well in the bright light of analysis. To model risk, you'll need to add a few tools to your kit.

Recognizing that mastery of full-tilt statistics is more than we can expect of the contemporary software manager. "...Cat Tails" provides a quiver full of reliable statistical arrows that you can use without having to work through all the proofs yourself.



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Michael Godeck

Statistical Consequences of Cat Tails

# Statistical Consequences of Cat Tails



Software engineering as if  
money matters

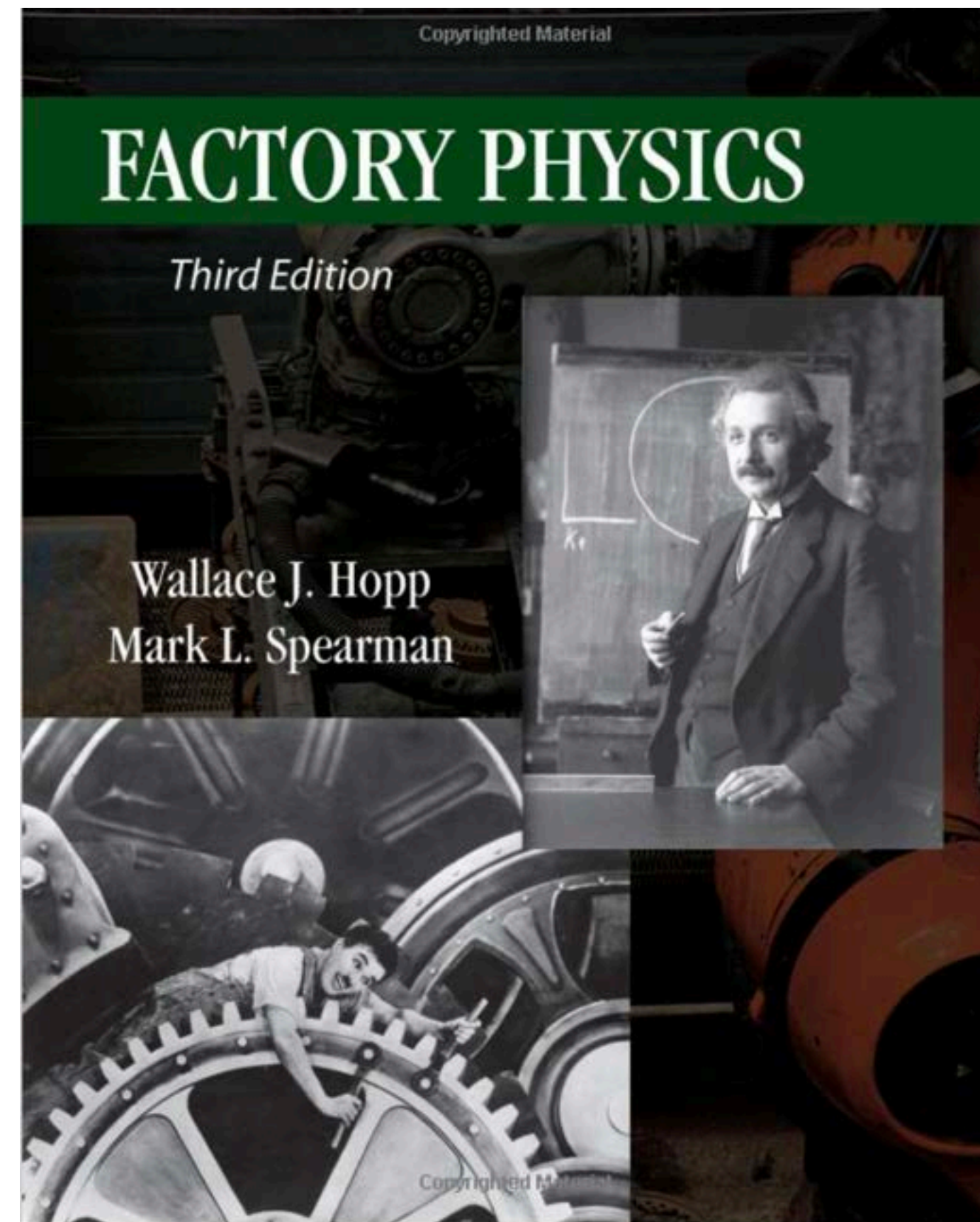
Michael Godeck



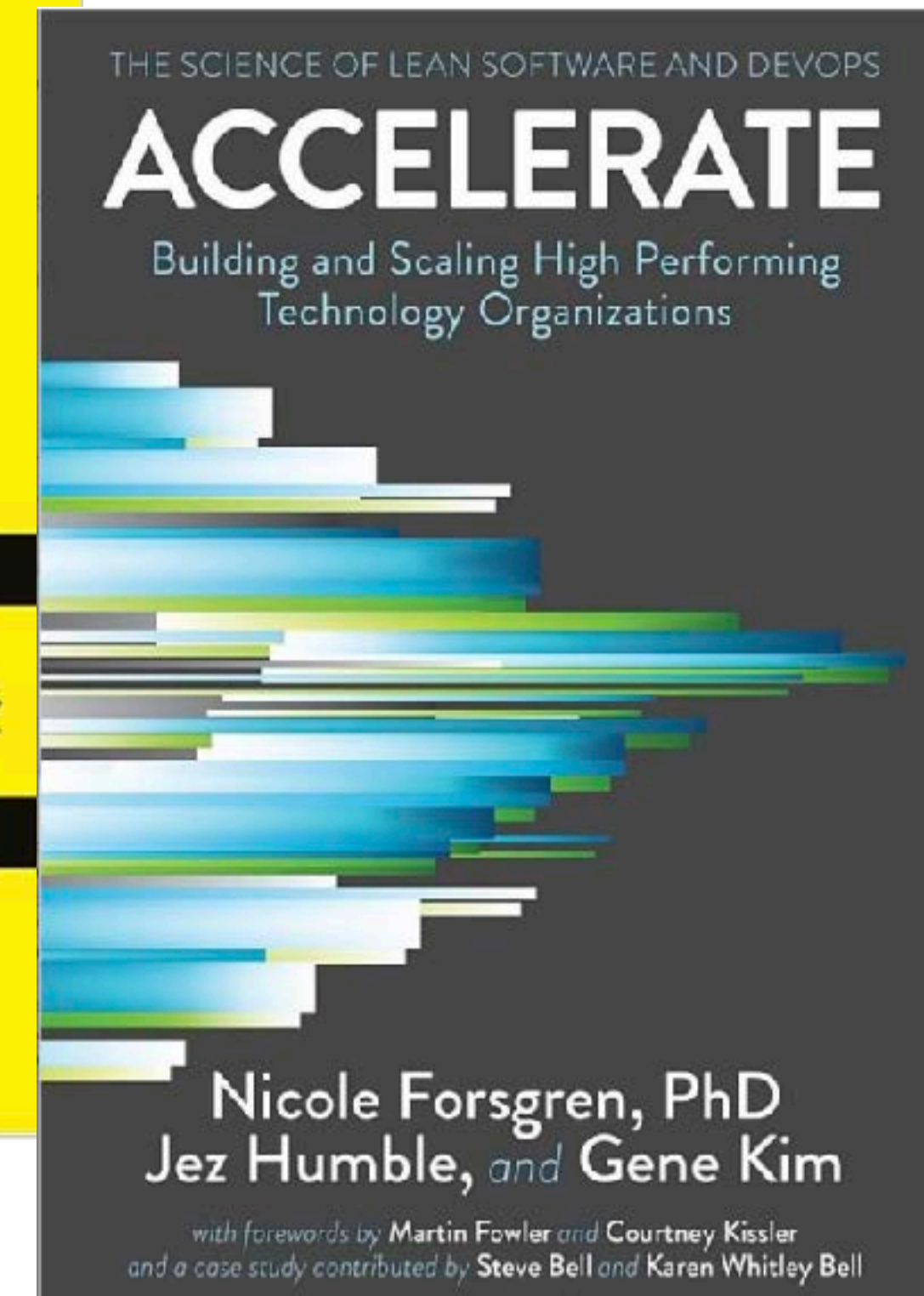
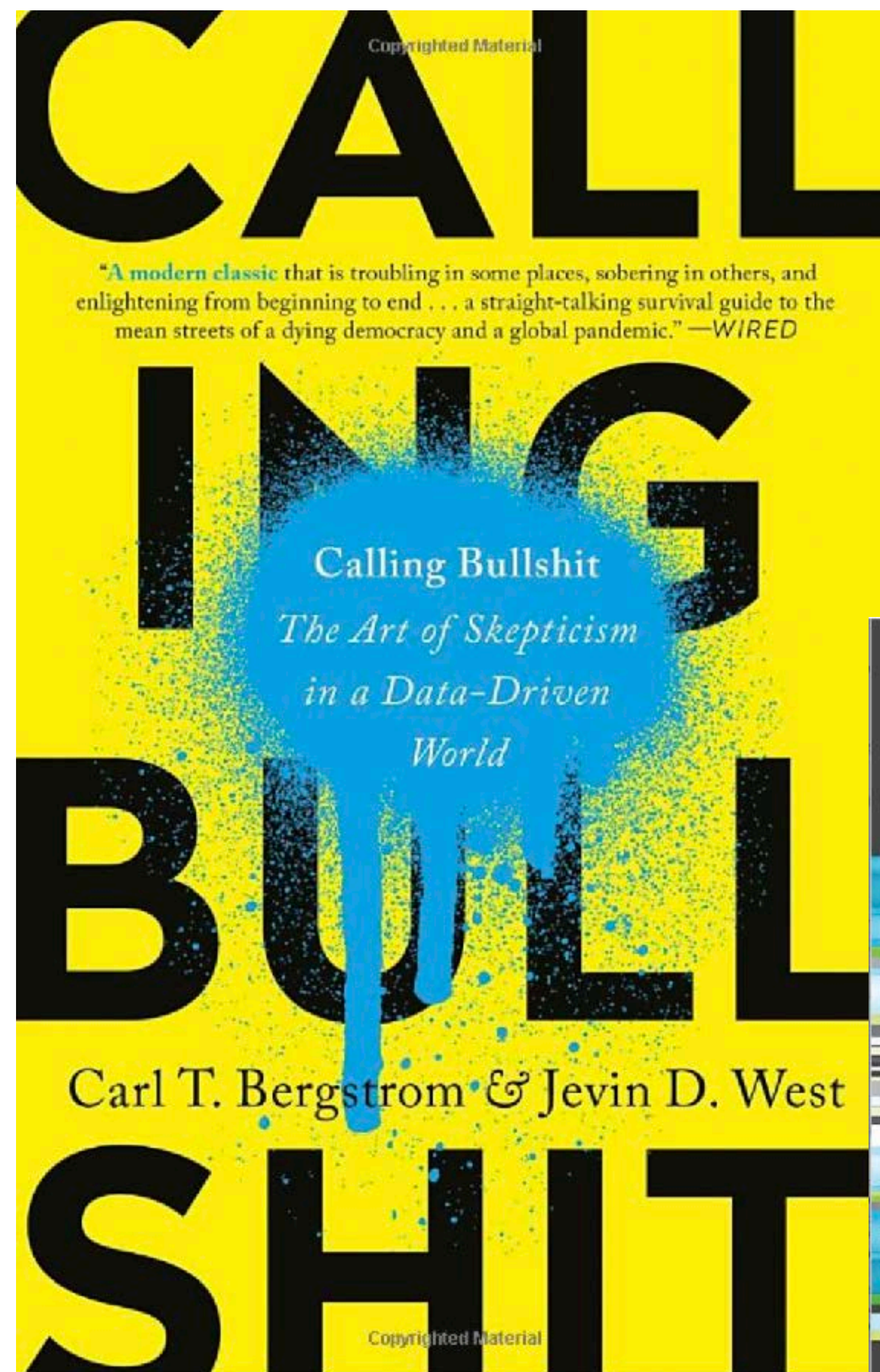
Rancho Bernardo  
San Diego, California



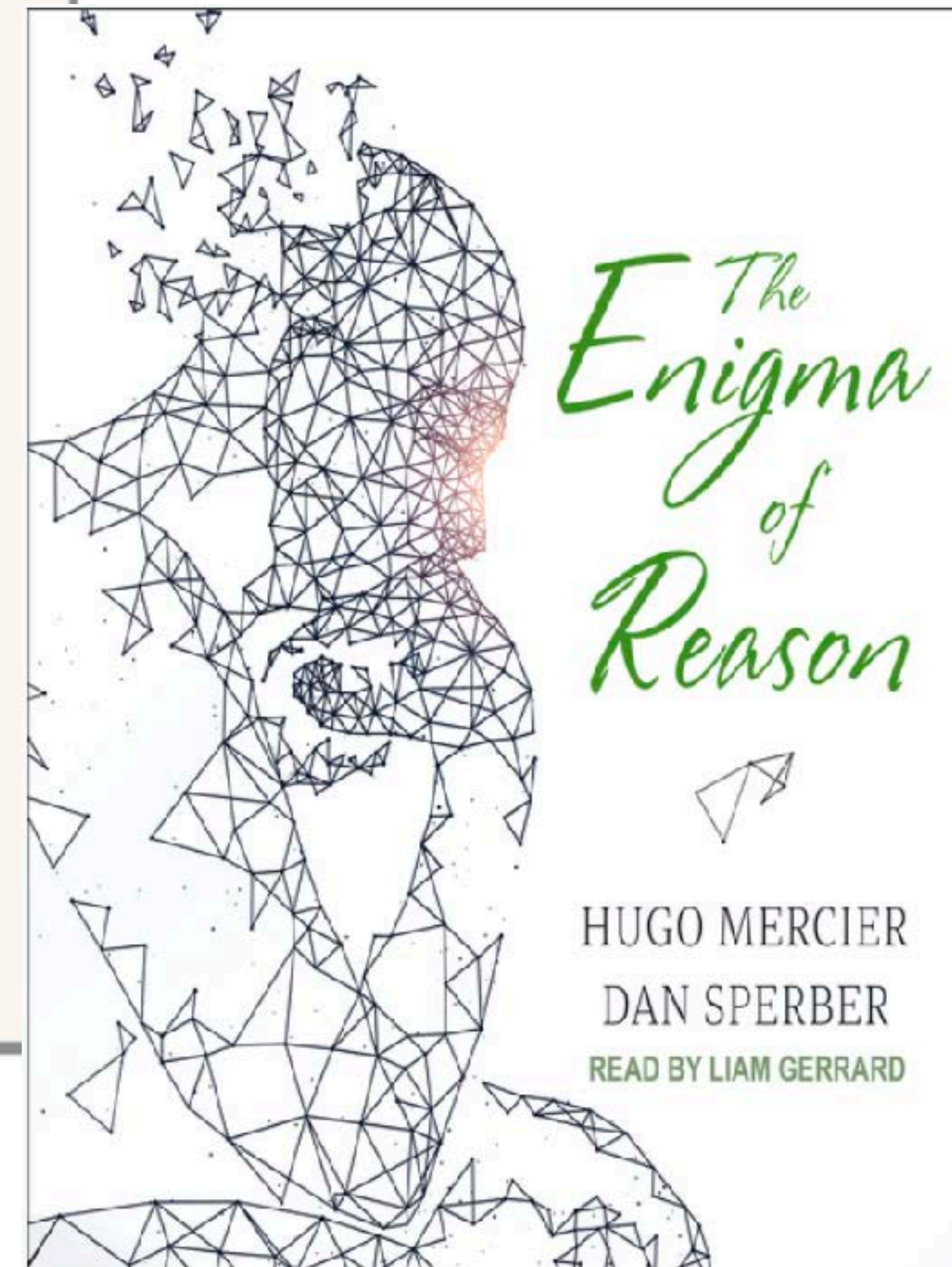
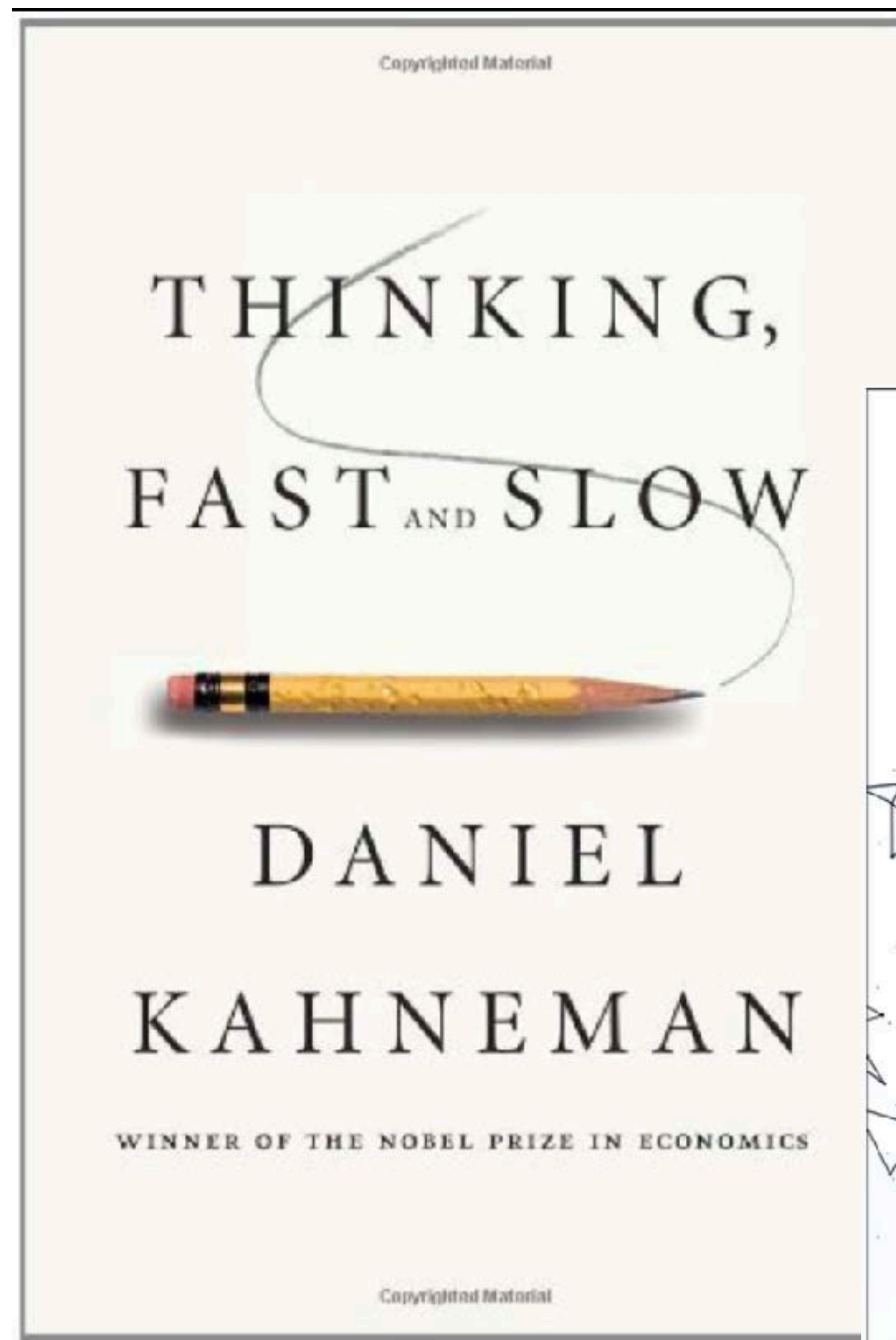
# Little's Law



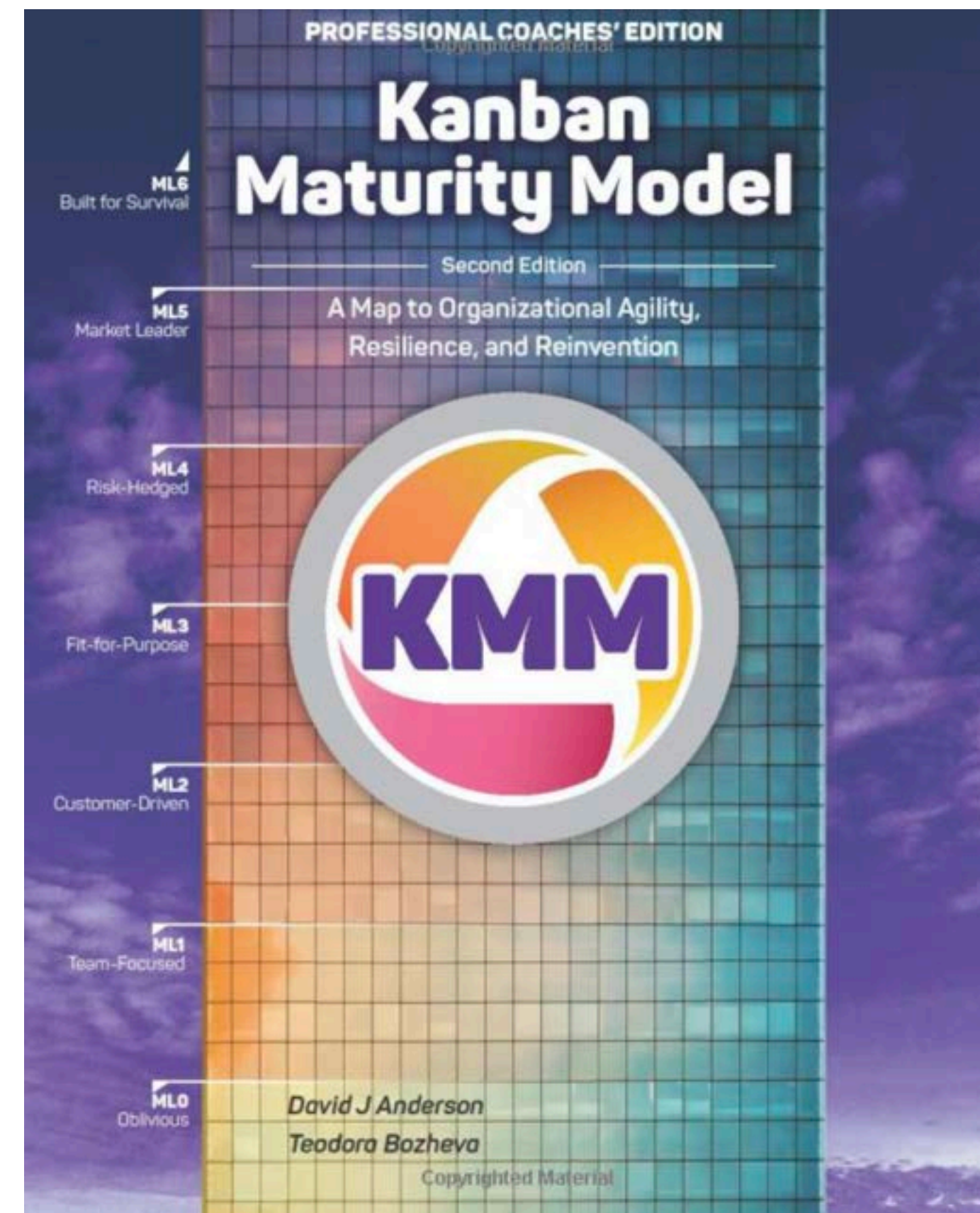
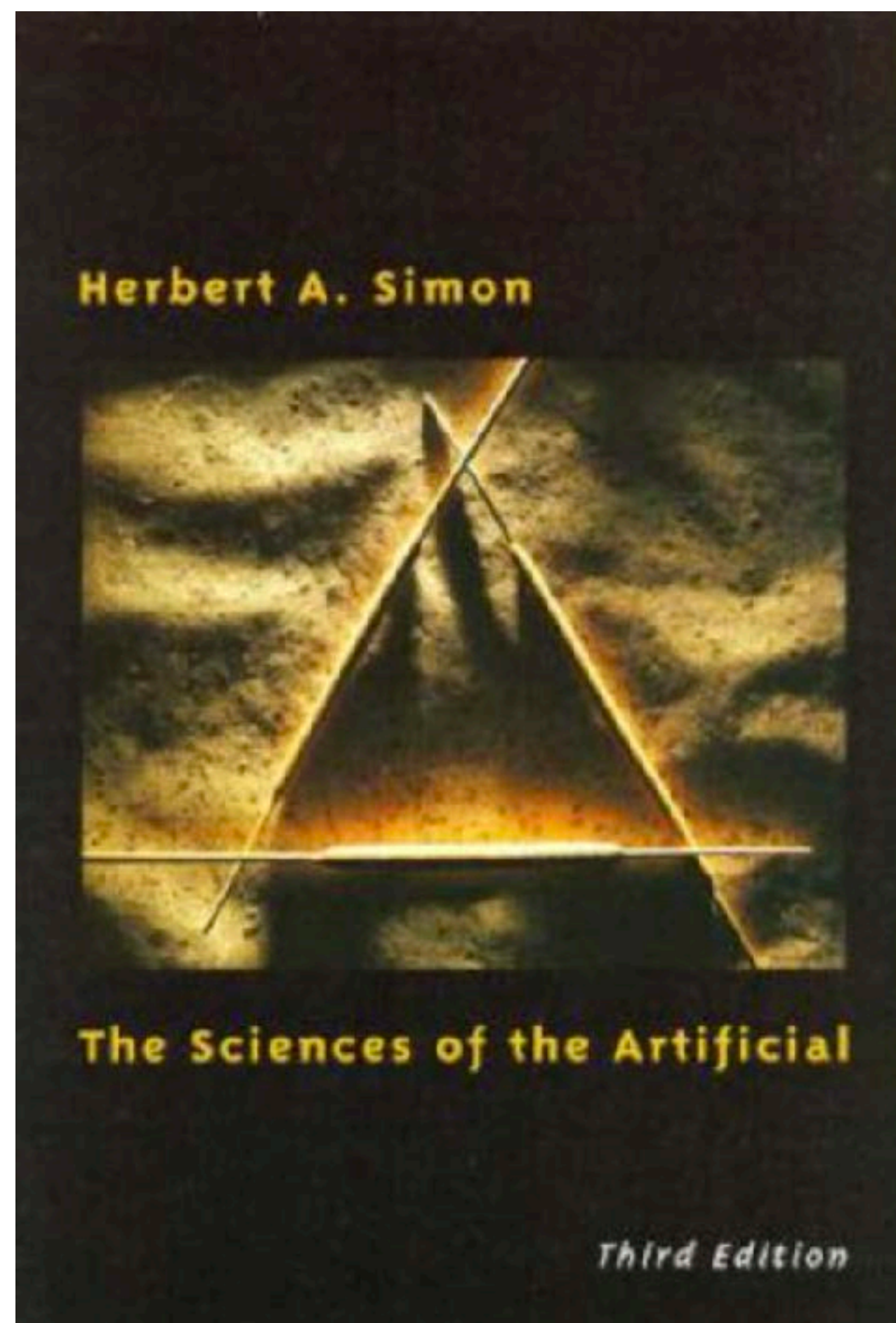






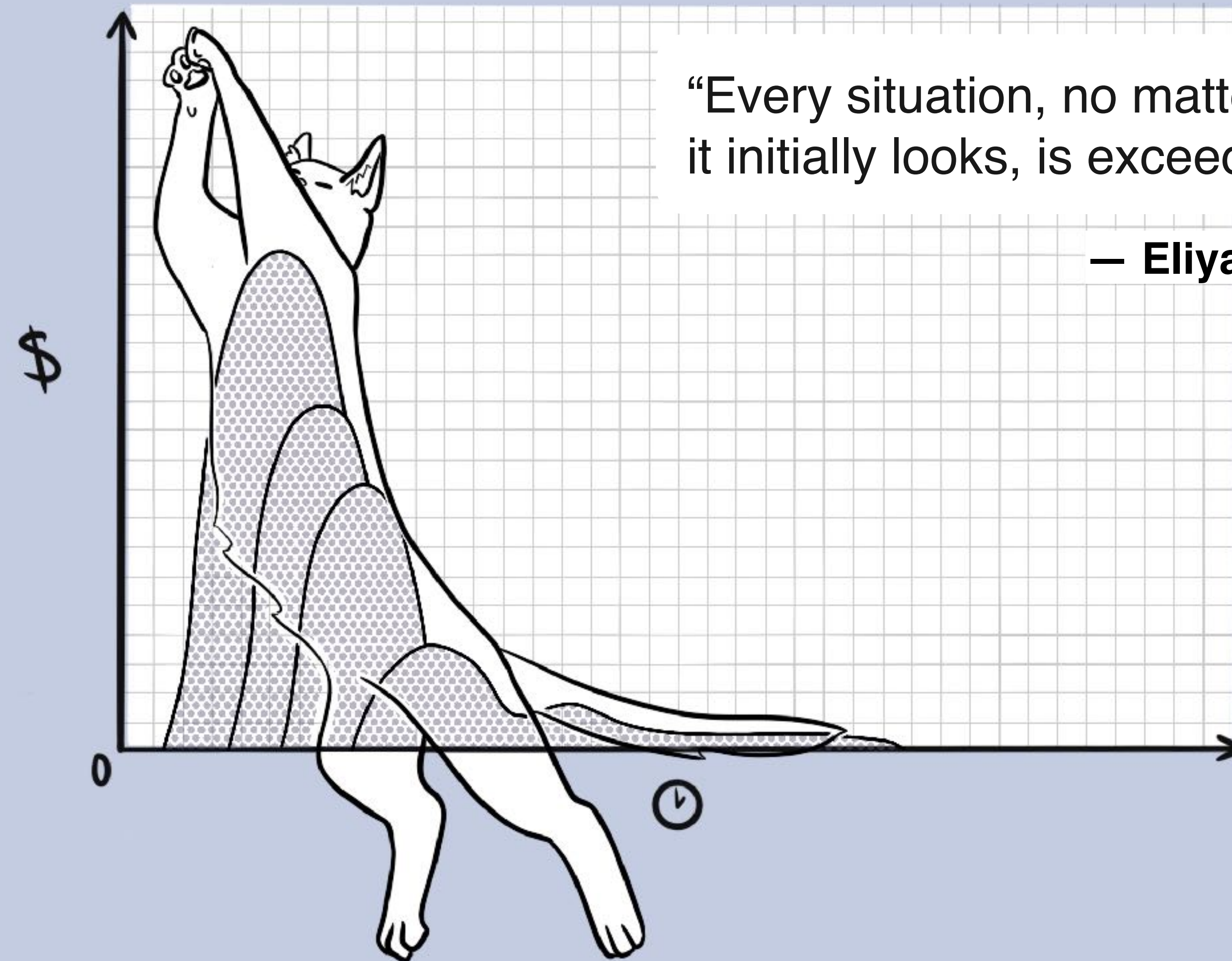








# Thin tailed distributions provide important clues about predictability



“Every situation, no matter how complex it initially looks, is exceedingly simple.”

— Eliyahu Goldratt



# The one-off opportunity



“Every situation, no matter how complex it initially looks, is exceedingly simple.”

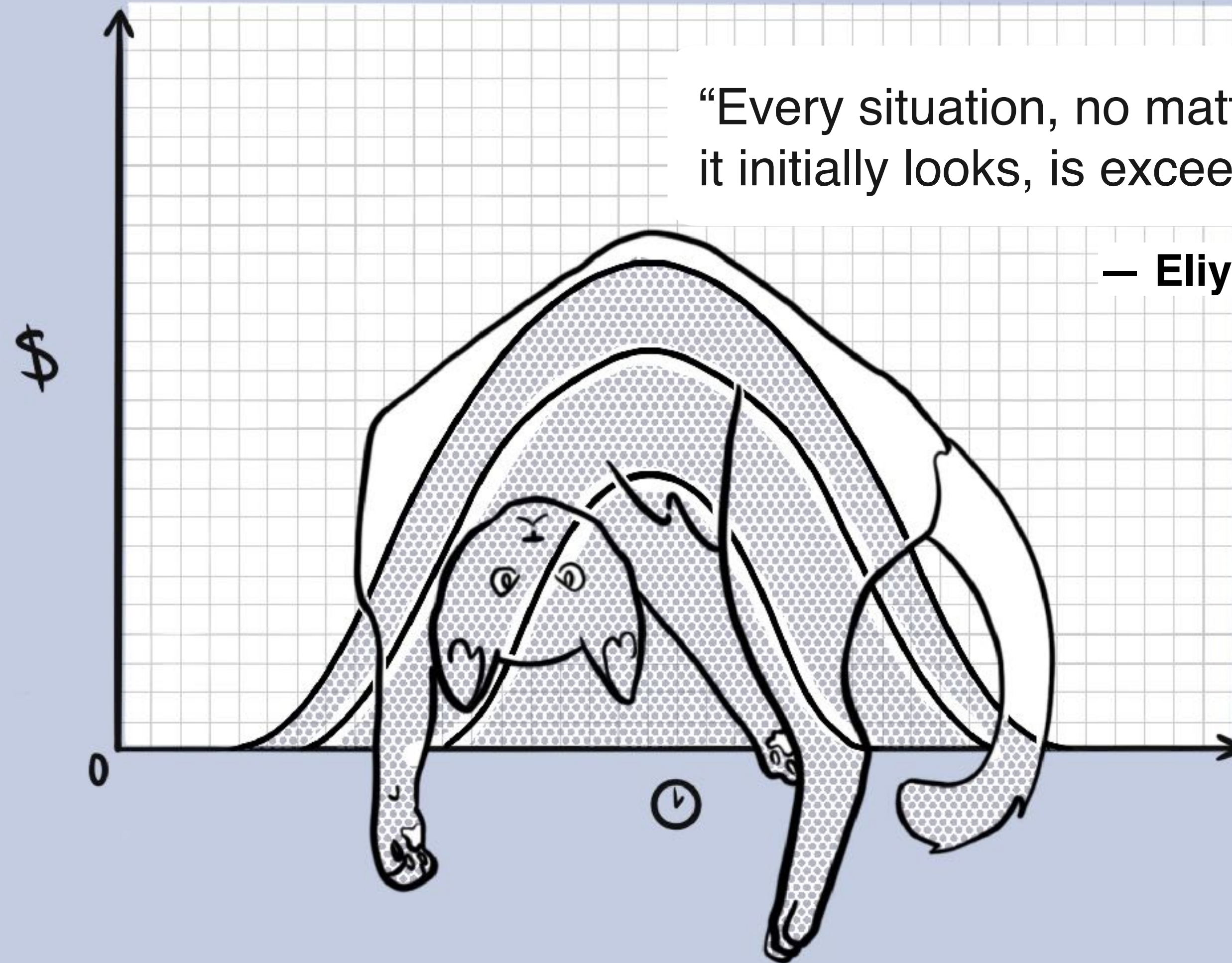
— Eliyahu Goldratt



# Normal distributions rare in knowledge work flow metrics

“Every situation, no matter how complex it initially looks, is exceedingly simple.”

— Eliyahu Goldratt





# Fat tailed distributions mean low predictability

