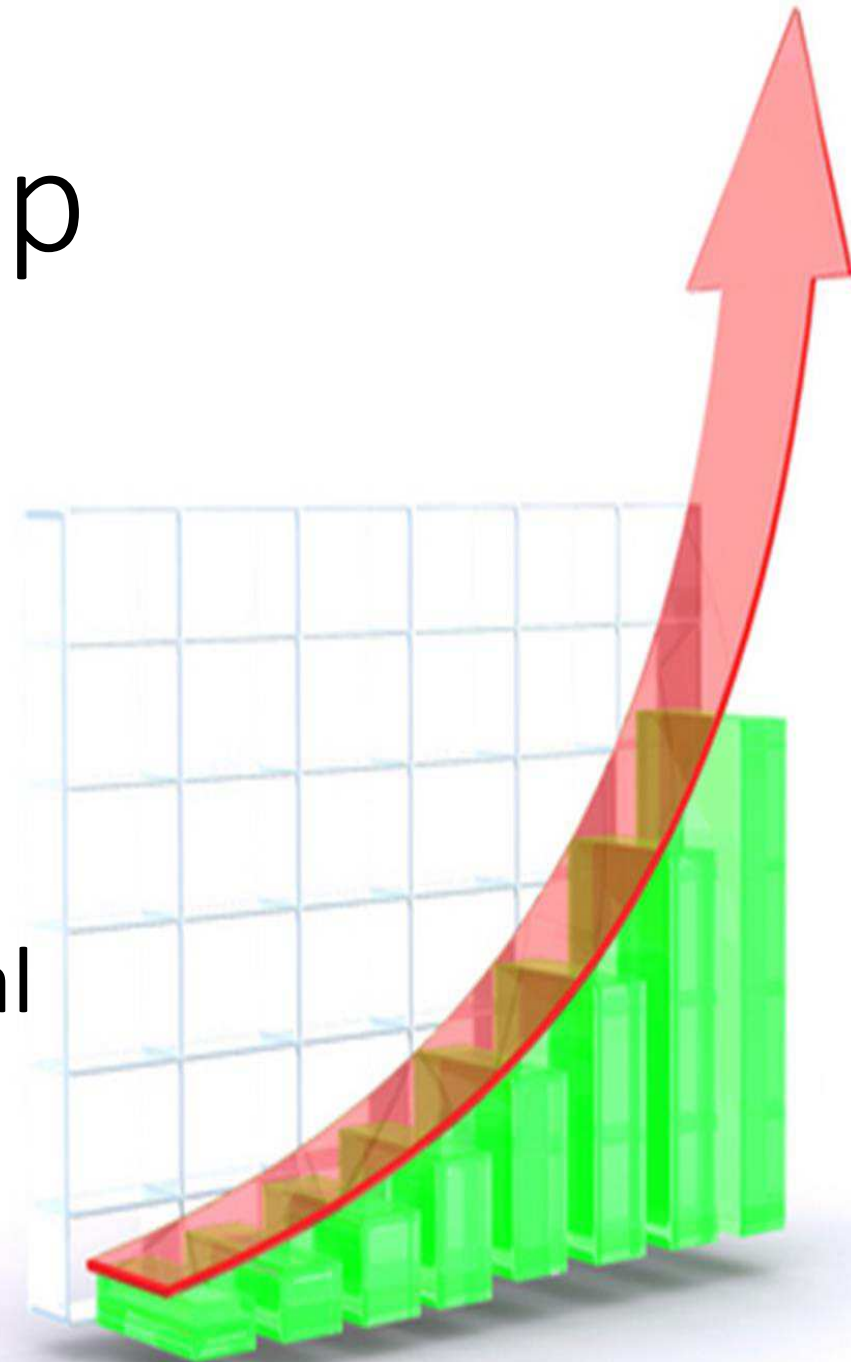


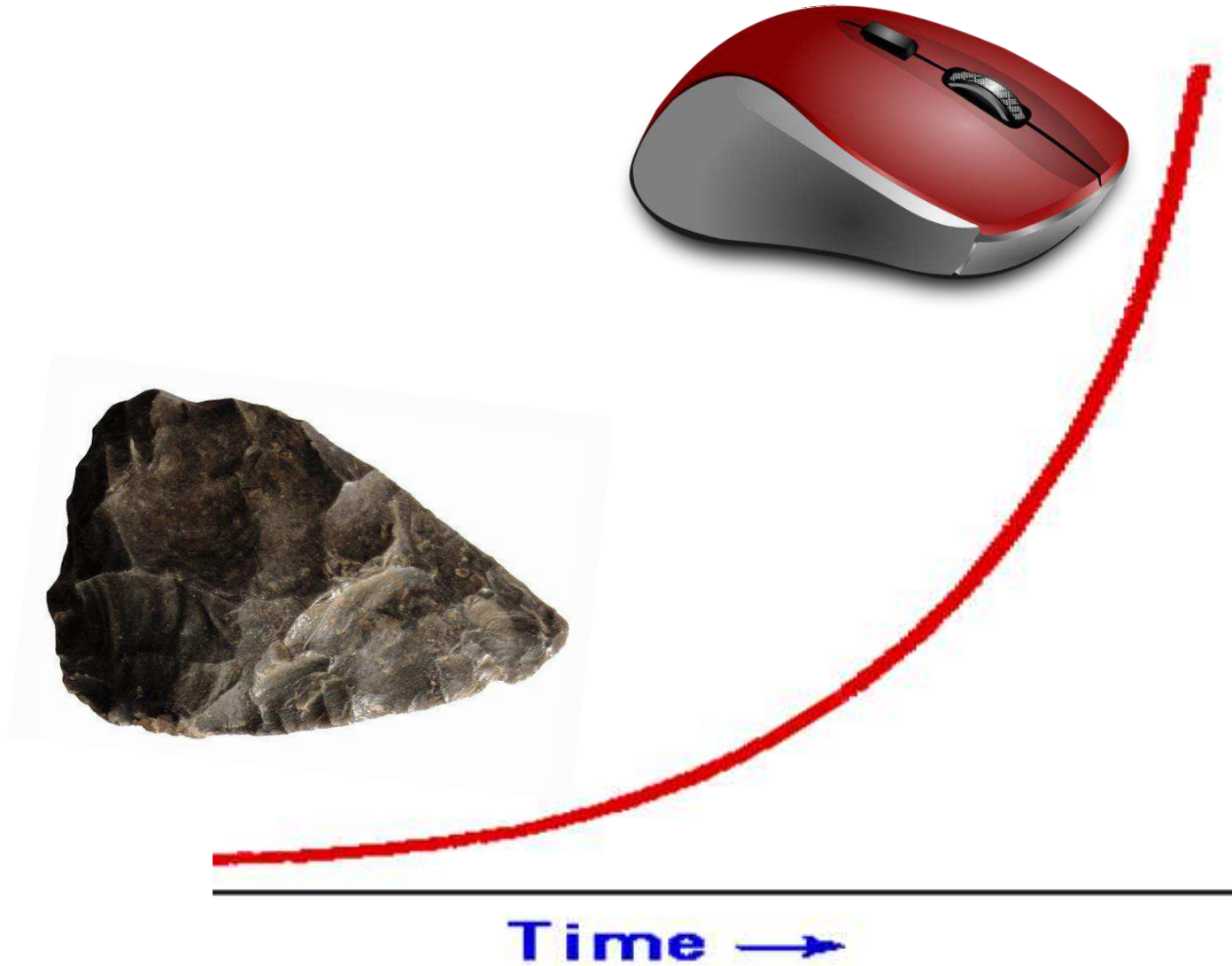
# Entrepreneurship

- **Exponential Change:** Disrupt or be disrupted.
- **Ideas:** Building blocks of disruption
- **Entrepreneurism:** Realise the potential

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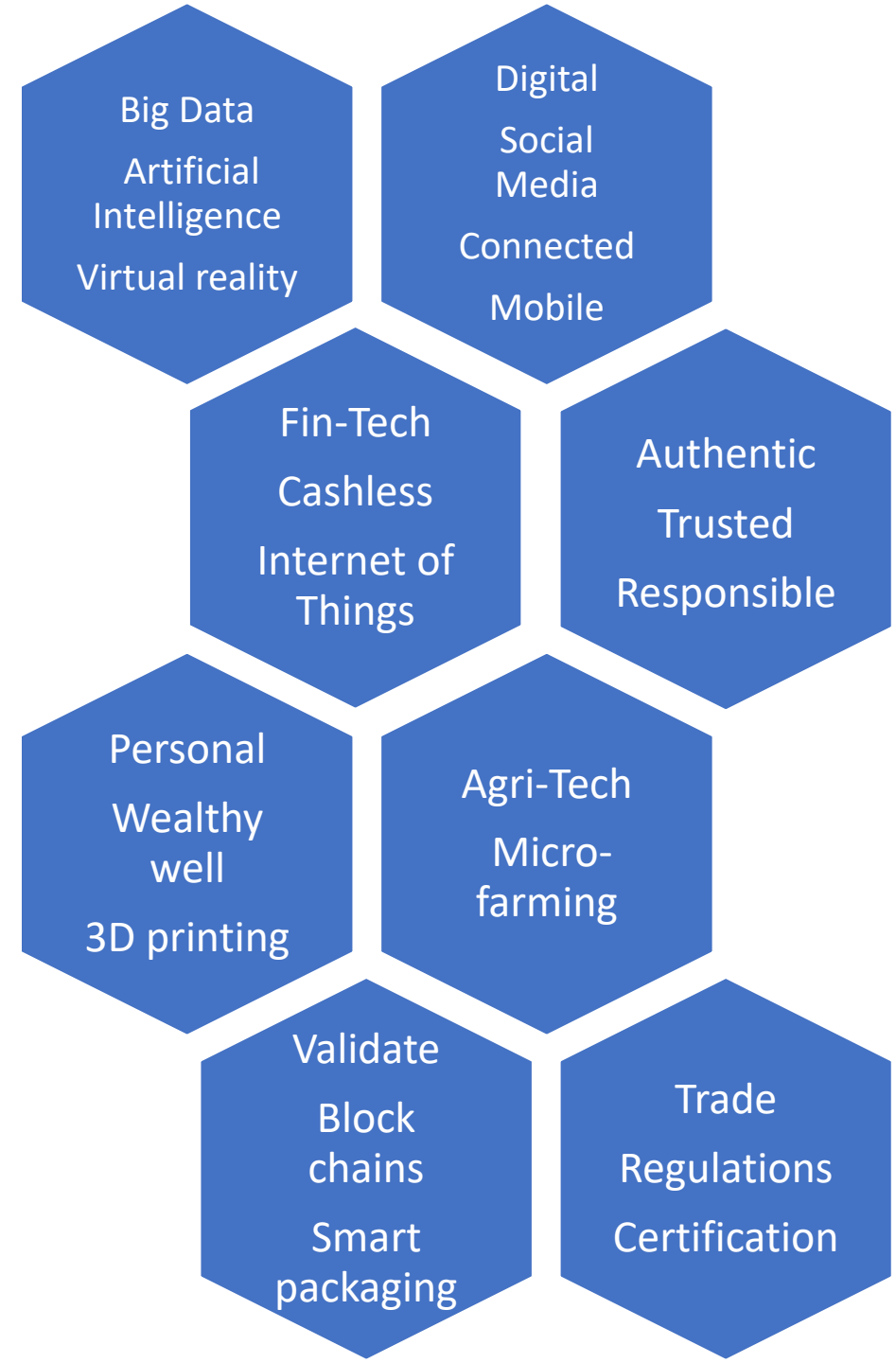
# Exponential Change



# Natural Products

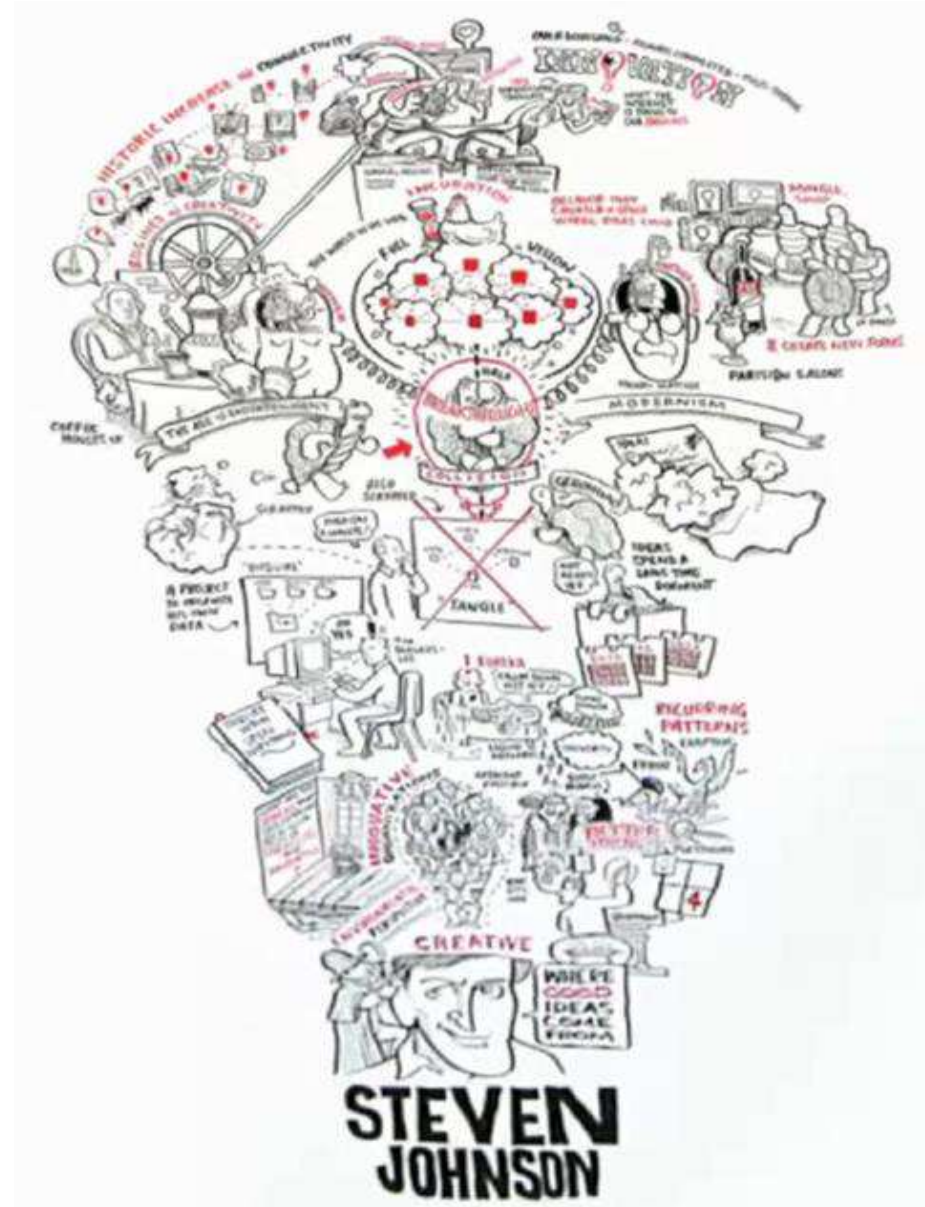
Multiple disruptive technologies are emerging at the same time, and quickly

This is accelerating the rate of change, the opportunity to disrupt and the risk of being disrupted



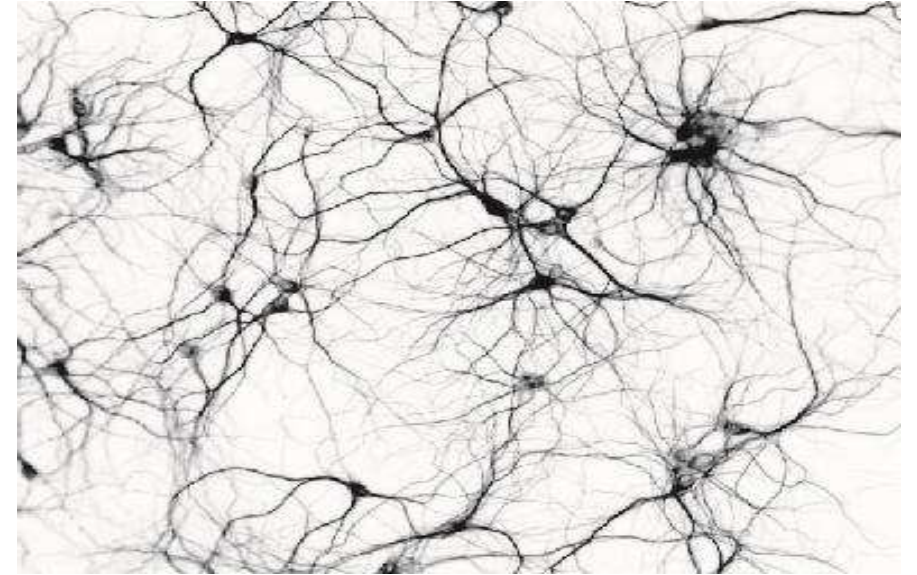
# Good Ideas

- Physiology
- The adjacent possible
- Liquid networks
- The slow hunch
- Serendipity
- Error
- Networks



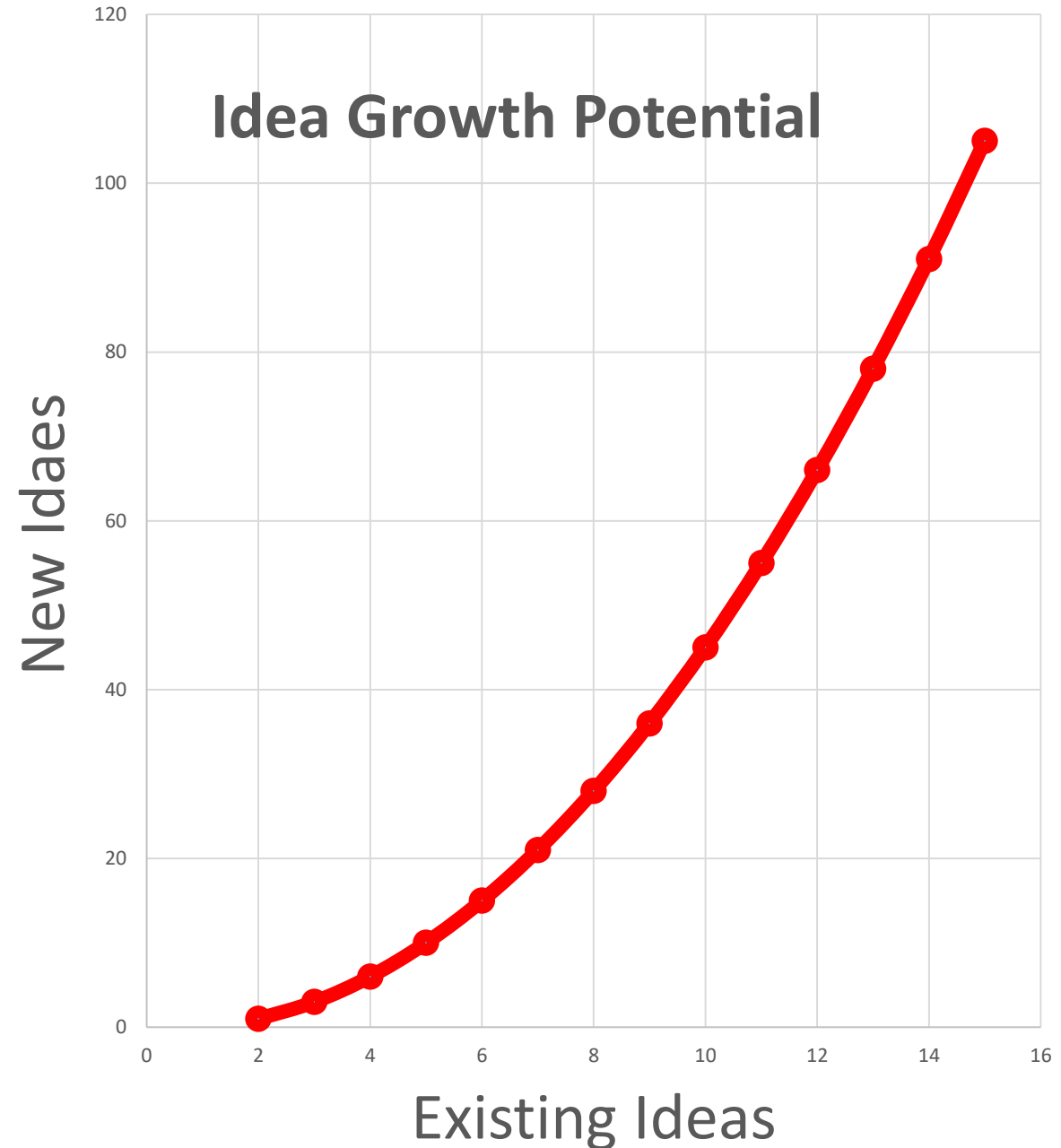
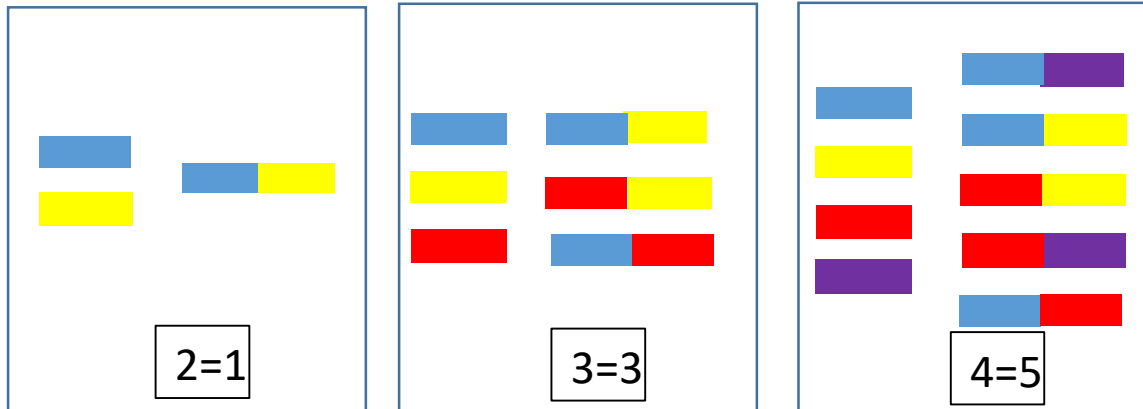
# The physiology of ideas

- 100 billion neurons.
- Connections are what we think.
- The brain constantly rewires.
- The greater the quantity and quality of experiences, the more ideas.
- The same applies to social networks.



# The adjacent possible

- Ideas are connected like doors. Open a door and you can see new ideas, but only ideas that are connected can be seen.





# The multiple

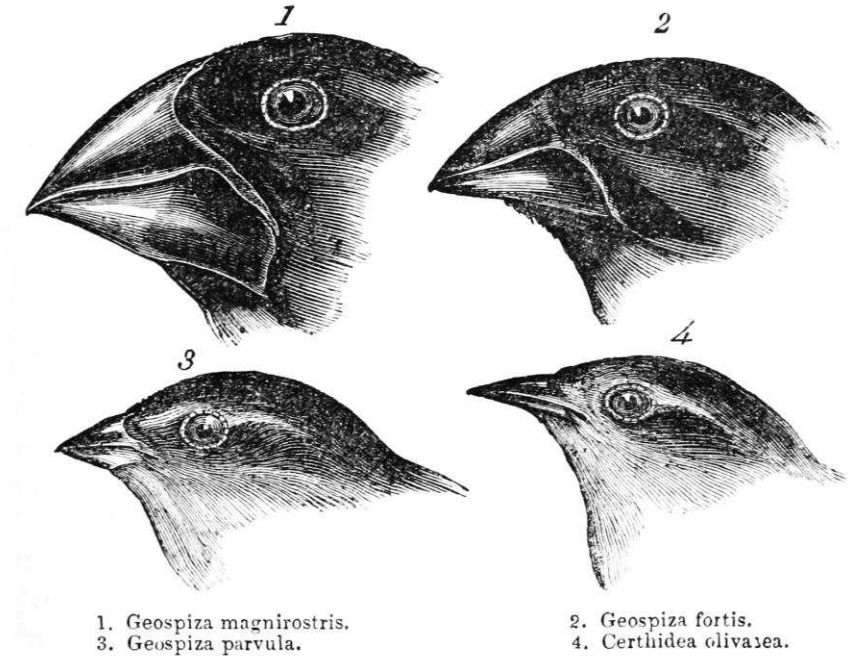
- The phenomenon of the "multiple":
  - Sun-spots were discovered in 1611 by four different scientists in four different countries;
  - Electrical batteries were invented twice, separately, one year apart.
  - Similar things happened in the earliest days of the steam engine and telephone.
  - .....

*In 1903, New Zealander Richard Pierce flew a powered heavier-than-air machine, nine months before the Wright brothers' flight.*



# The slow hunch

- It takes time to open all the necessary doors in a network that lead to an innovative idea.
- Patience and contemplation are key aspects of innovation.
- Many slow hunches never turn into something useful because our day-to-day matters usually get in the way.
- Write everything down, and let it bloom.

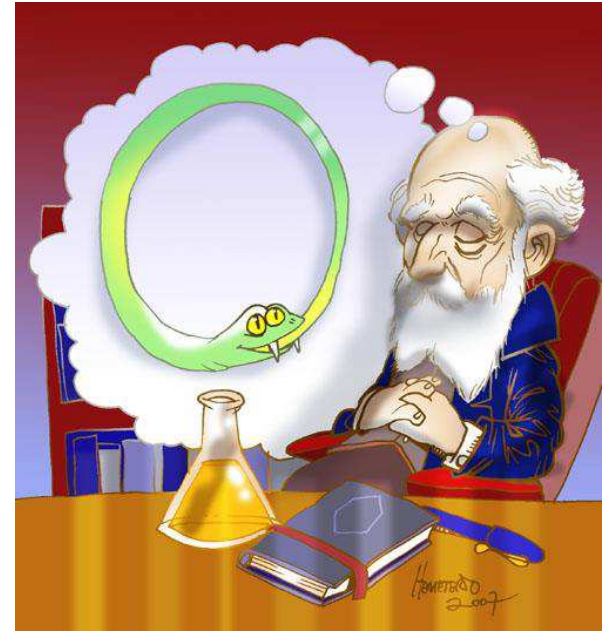


*"In July opened first notebook on 'Transmutation of Species'— Had been greatly struck from about Month of previous March on character of S. American fossils—& species on Galápagos archipelago. These facts origin (especially latter ) of all my views."*



# Serendipity

- Ideas sometimes arise from happy accidents, hunches connect in an unexpected way.
- The discovery must be meaningful to you.
- In our web-based world! You never know where a Google or Wikipedia search might take you, what connections you may discover...



*Kekulé "...I was sitting writing on my textbook, but the work did not progress; my thoughts were elsewhere. But look! What was that? One of the snakes had seized hold of its own tail, and the form whirled mockingly before my eyes.*

# Error

- When ideas are wrong, we need to challenge them and find new methods. Being right keeps you in place. Being wrong forces you to explore.
- Noise and error leads to unpredictability, which in turn leads to innovation.
- Fail fast and moving on to the next thing.



*Alexander Fleming discovered penicillin when the mould accidentally infiltrated a culture of Staphylococcus left by an open window.*

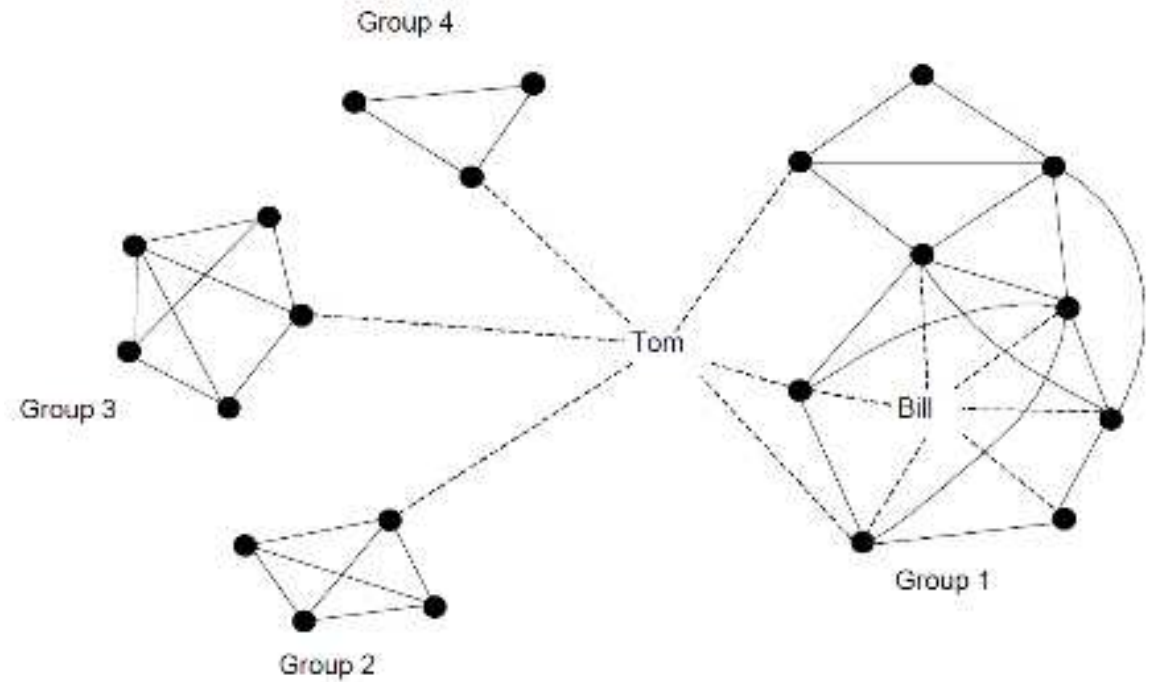
# Networks: Liquid

- The best networks provide an environment that encourages constant “collisions” between all of its elements.
- This is why “liquid” networks are the best. They provide more stability than gas, where there’s not enough time for meaningful connections to happen, and less rigidity than solids, where there’s not enough randomness.



# Networks: Bridging

- Weak links are the strongest.
- Expand the the perimeter of your potential by exposing yourself to as much serendipity, as much argument, as many rival ideas as possible.

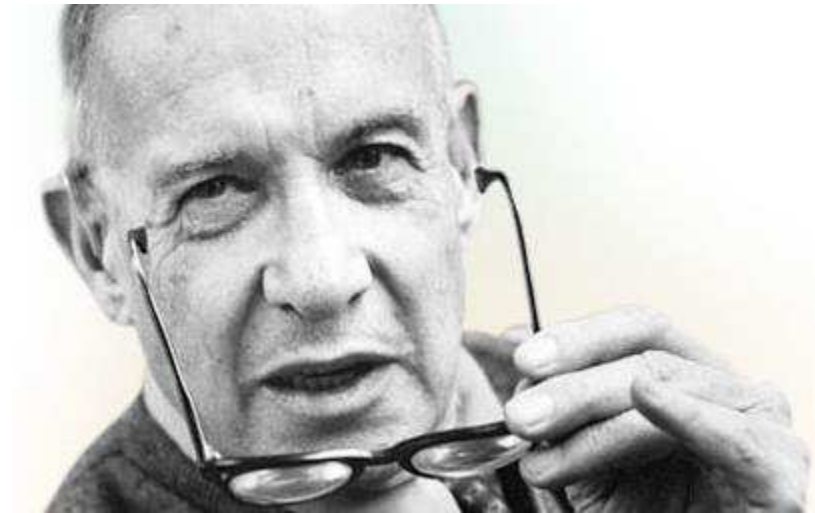


# Entrepreneurism

- Principles

- Bird in Hand
- Affordable loss
- Crazy Quilt
- Lemonade
- Pilot in the plane

*Most of what you hear about entrepreneurship is all wrong. It's not magic; it's not mysterious; and something to do with genes. It's a discipline, it can be learned*



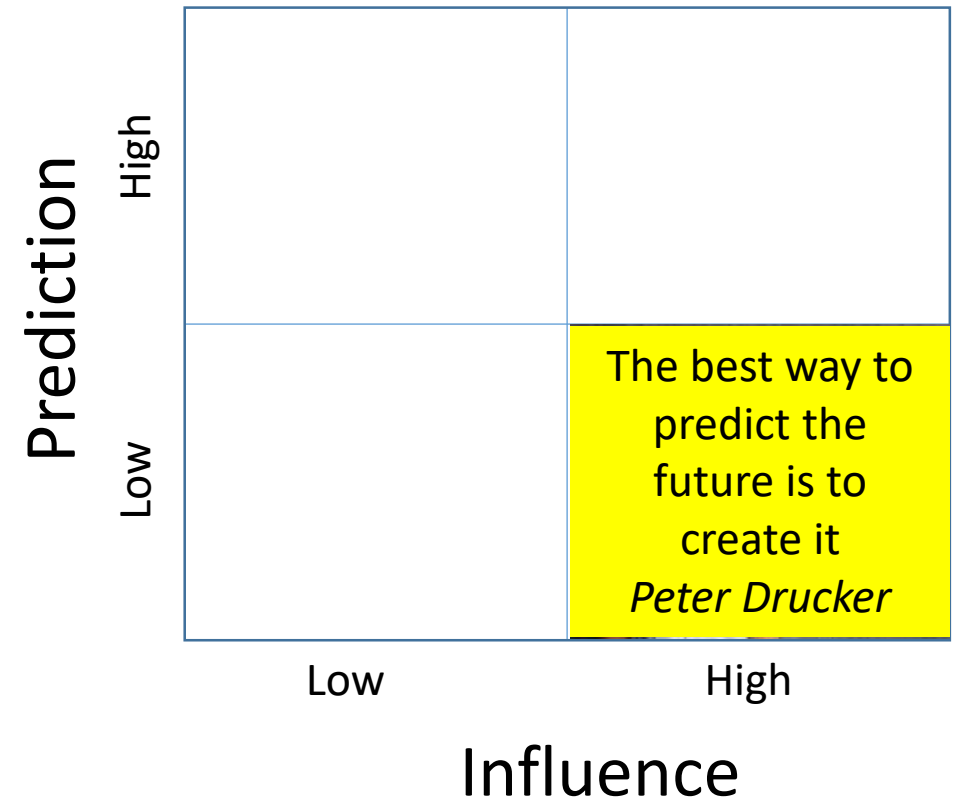
Peter Drucker



# Entrepreneurs prefer influence over prediction

- Uncomfortable with prediction, comfortable with influence
- The imagined end remains dynamic: Path is made by walking
- Identify opening moves and experiment
- Believe that the future is neither found nor predicted, but rather made

*Prediction is very difficult, especially if it's about the future -Neils Bohr*



# The Bird in Hand Principle

- Entrepreneurs start with what they have. They will look at who they are, what they know and who they know.
- So an entrepreneur does not start with a given goal, but with the tools she has.



# The Affordable Loss Principle

An entrepreneur does not focus on possible profits, but on the possible losses and how they can minimize those losses.

- *Risk Little, Fail Cheap*
- *Avoid irresponsible risk*
- *Concentrate on acceptable risk to next step*
  - *Quick action and learn by doing*
  - *Be frugal, bootlegging*



# The Crazy Quilt Principle {form partnerships }

- The entrepreneur interacts to:
  - Co-create
  - Obtain commitments from key partners early
  - Reduce uncertainty



# The Lemonade Principle

- **Murphy's law:** "Anything that can go wrong, will go wrong".
- Corollary: "Surprises should not be surprising."
- Exhibit resiliency.
- Flex to take advantage of serendipity and uncertainty.
- Allow yourself three mistakes a day and look for lessons.



Velcro



Post-it



WD-40



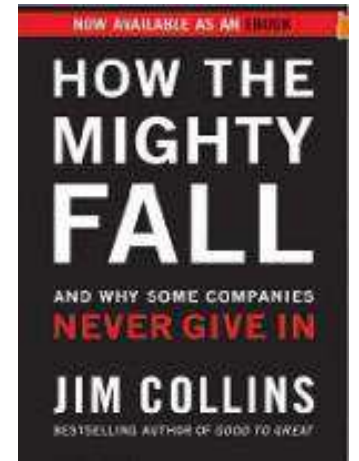
Viagra



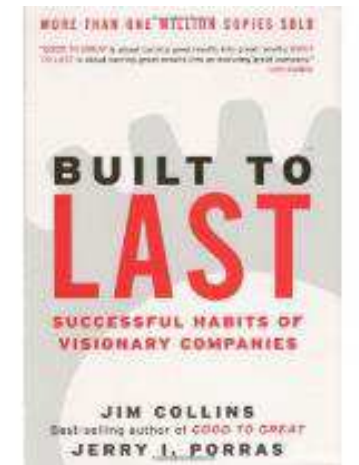
Penicillin



Cheese



2009



1994



# The Pilot-in-the-plane

In this stage all the previous principles are put together. The future cannot be predicted, but entrepreneurs can control some of the factors which determine the future.



# Summary

- We are inherently inventors. It is our condition.
- We can all be entrepreneurs. It is a state of mind.
- These skills are essential for today's competitive advantage.
- Practice makes perfect.
- Take action!

*Competitive advantage is increasingly dependent on better ideas and the means to realise their full potential.*

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