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Unknown unknowns: How do we prepare ourselves to navigate an uncertain future?

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Questions to guide thought:

1. How knowledge paradigms shift? Black swan story – Overturning the "all swans are white" knowledge in the Western world. Cf. Philosopher Nassim Nicholas Taleb

2. 5 or so Minds of the future- Cf. Howard Garner

3. Do we dare think differently? Unsafe thinking - **osé** thinking

4. What do we do systemically or what do we need to design to ready ourselves for an uncertain future?

5. Will AI be an ally in dealing with unknown unknowns?

Preliminaries:

What are *unknown unknowns?*

(Donald) **Rumsfeld Matrix** US Secretary of Defense:

> "... there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are things we do not know. But there are also unknown unknowns – the ones we don't know we don't know. And if one looks throughout the history of our country and other free countries, it is the latter category that tends to be the difficult ones."

A Typology: Awareness and Knowledge

1. known knowns

Identified knowledge/facts

Employ analogies & lateral thinking to use facts in a creative manner (design thinking);

Explicit/formalized knowledge

2. Known unknowns

What we don't know yet, awareness

Expected or foreseeable conditions - can be anticipated but not quantified based on past experience;

Identified risks;

- Creating hypotheses (not facts) that need to be tested empirically
- Fill in knowledge gaps via research

3. Unknown known

Untapped knowledge;

Brainstorming can bring out unknown knowns (design thinking);

Things we do not know that we know e.g. an untrained writer who has formidable writing talent but she hasn't tried since she does not know; you can drive a car/ride a bike without understanding the physics behind it.

Implicit knowledge/unformalized

4. Unknown unknowns

: unidentified risk - Unfathomable uncertainty, surprise; ignorance

Unexpected or unforeseeable conditions – they cannot be anticipated based on past experience or investigation.

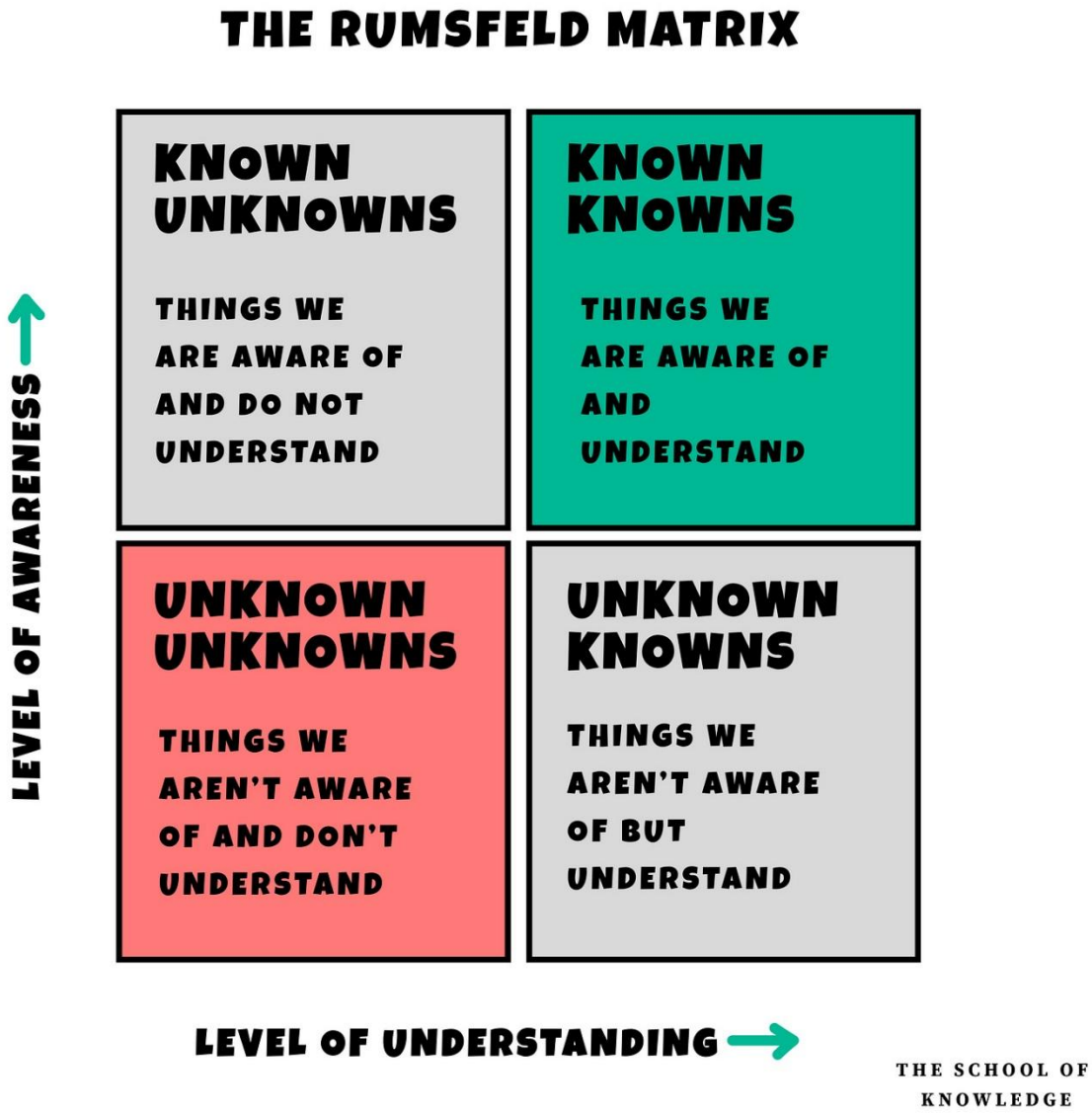
Need to explore a problem with an open mind (Design thinking);

Things we aren't aware that we do not know;

Black Swan events: Unpredictable events with major impact e.g. 9/11 Terrorism attack, 2008 Financial crisis, discovery of the INTERNET, Covid-19?

Who would have thought?

They can overturn epistemological paradigms/create new understanding;



How do we deal with Unknown Unknowns?

In light of our current understanding of unknown unknowns, it is abundantly clear that they are unpredictable, uncertain and difficult to deal with when they finally occur. Be it as it may, there could be tools or designs or mind frames that could help us survive the black swans. To do this, we now turn to a few ideas.

***Five Minds of the Future*: Howard Gardner**

1. Disciplined Mind – a mind informed by excellence in a field of knowledge
2. Creative Mind – a mind that is geared towards problem-solving and creating new ideas, things, etc.

3. Synthesising Mind – A mind that builds from many components to make sense e.g. a bee harvesting from many flowers to make honey
4. Respectful Mind – a mind that respects other people's belief systems and ideas
5. Ethical Mind – A mind that does the right thing

I dare add: Osé! (daring in French)

6. Curious/Reflective/Analytical Mind – a mind that can break up complex ideas and systems to simple heuristics
7. Empathetic Mind – a mind that places you in the shoes of others to feel and understand them
8. Resilient/Adaptive Mind – a mind that like a reed bends under adversity and swings back with new ideas
9. Healthy Mind – a mind that takes care of the body and mind
10. Entrepreneurial Mind – a mind that scours the horizon for opportunities
11. Presagious Mind – a mind that can "feel" and predict events (this last mind was suggested to me by Prof. Mwangi Njagi)

Artificial Intelligence and Unknown unknowns

AI is a powerful synthesising tool that rummages through incredible amounts of data in seconds, invariably making our job much easier. Further, AI can help us predict some events based on previous trends (history). It is a master of identifying patterns and routine procedures. Evidently, AI enhances our understanding of the current epistemological paradigms (known knowns), but also our appreciation of known unknowns by urging us to conduct more research. AI can awaken in us things that we are capable of doing but have never dared try (unknown knowns) or make explicit some of our hidden/untapped talents. Finally, AI, in its future mutations could probably help in exploring and mapping out multiple scenarios that we aren't aware of and don't know (unknown unknowns).

In parting...

The Rumsfeld Matrix is applicable in many domains of human endeavour, e.g. risk assessment & management, Project Management, engineering, but also it can be a powerful tool in unravelling phenomena. The proposed mind frames are far from prescriptive but they may offer some clues on how to architect resilience in our systems in order to deal with unknown unknowns. Finally, AI could hold an important key in exploring possibilities/probabilities of black swans.

Suggested Readings:

The Black swan, Nassim Taleb

Unsafe thinking, Jonah Sachs

Clear Thinking, Shane Parrish

How the mighty fall, Jim Collins

Reset, Dan Heath

Mafia bombers, Malcom Gladwell

Outliers, Malcom Gladwell

Who moved my cheese? Spencer Johnson

De-schooling society, Ivan illich

Mis-education of the Negro, Carter D. Woodson

Pedagogy of the Oppressed, Paulo Freire

Used Links:

https://www.pmi.org/learning/library/characterizing-unknown-unknowns-607

https://marvelapp.com/blog/known-unknowns-framework-design-thinking/

https://www.theschoolofknowledge.net/p/the-rumsfeld-matrix-explained

Poem by an unknown poet:

https://marvelapp.com/blog/known-unknowns-framework-design-thinking/

As we know,
There are known knowns.
There are things we know we know.
We also know
There are known unknowns.
That is to say
We know there are some things

We do not know.
But there are also unknown unknowns,
The ones we don't know
We do not know.
Finally, there are unknown knowns
The knowns
We do not want to know.