THE VIRTUAL MIND
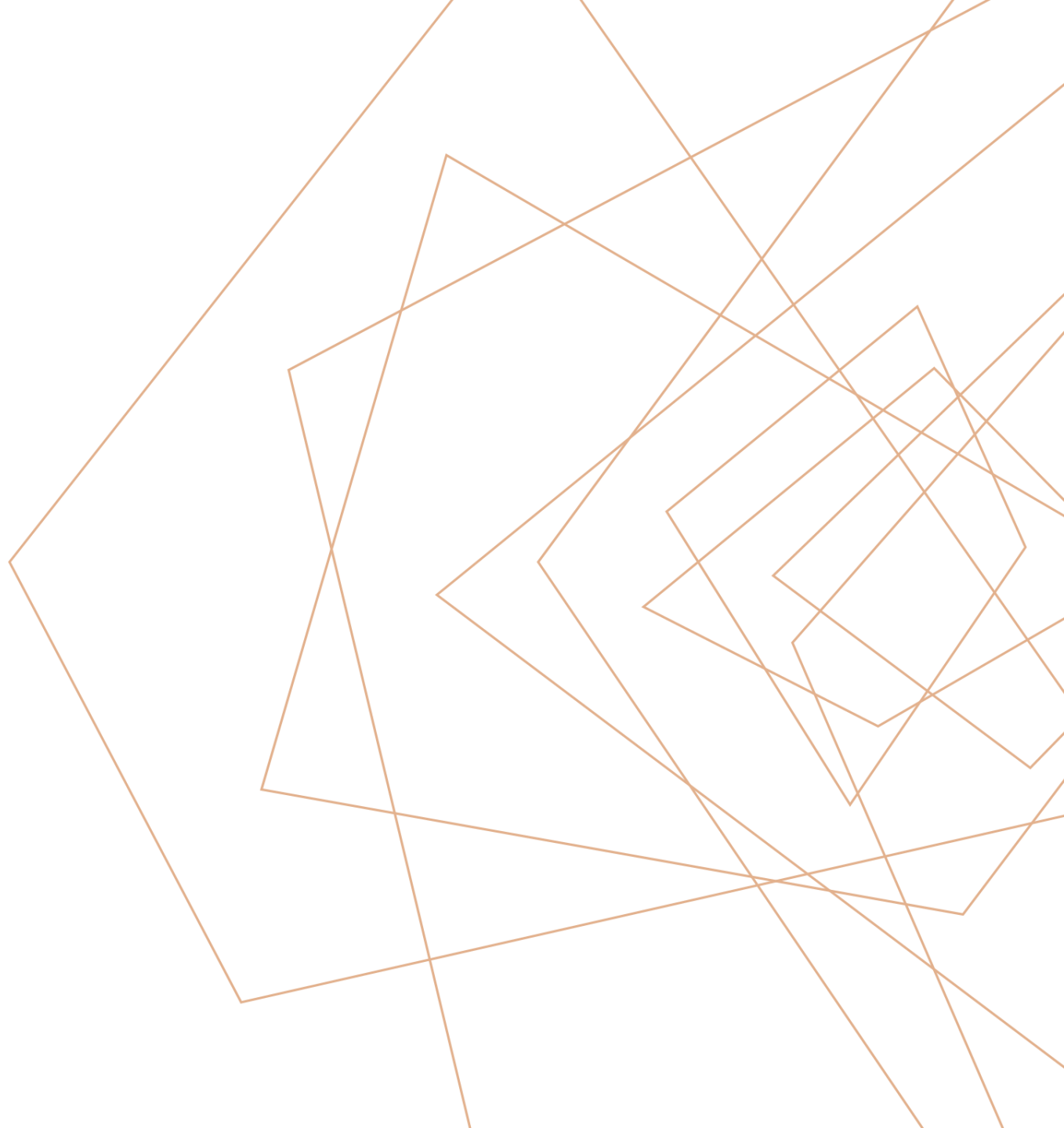
The creation of machine
generated human thinking

THE VIRTUAL MIND

The core objective of our Virtual Mind is its creation of machine generated human thinking, i.e. an architecture replicating the human ability to comprehend new objects or situations based on previous experiences.

WHY ARE CURRENT METHODOLOGIES NOT SUFFICENT FOR AGI?

- The hope that Artificial General Intelligence (AGI) with the ability to generalise and abstract, notably across disparate domains, would come out of large samples of statistics have failed to materialise. Thus, the algorithms typically cannot apply what they have learned in one type of situation and transfer (often with modifications) that knowledge into another.

- The previous focus on logic and hard coded rules for reasoning is a far too simplistic approach in the aspiration to establish machine generated human reasoning.

WHAT IS THEN MISSING TO ACHIEVE AGI?

Humans are able to adapt what they have learned and apply it to diverse situations without having to be trained on those *particular* situations. So, an algorithm aspiring towards AGI must be able to replicate how humans make connections by abstracting similar ideas, perceptions and experiences through analogies and adjusts these as required. That requires two capabilities;

- **A capacity to structural thinking through analogies rather than statistical correlations** -> an algorithm that encodes thinking (thought patterns) through analogies which allow it to generalise efficiently across domains by applying relevant knowledge to unfamiliar tasks.

- **Autonomous self-learning -**> an ability revisit and revise assumptions, handle regime shifts, and hence, reconfigure the reasoning apparatus if outcomes are erroneous.
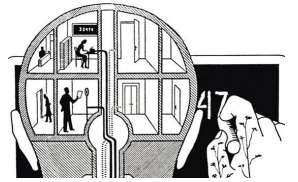
In all, it will require a shift from the algorithm calculating probabilities to predict the next token in a text, to identify precedents and apply the best matching analogies from these, and as and when needed re-calibrate these due to noted discrepancies. This is performed with a view to create value-added predictions or solutions on new data and situations.
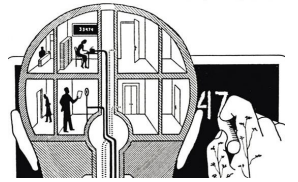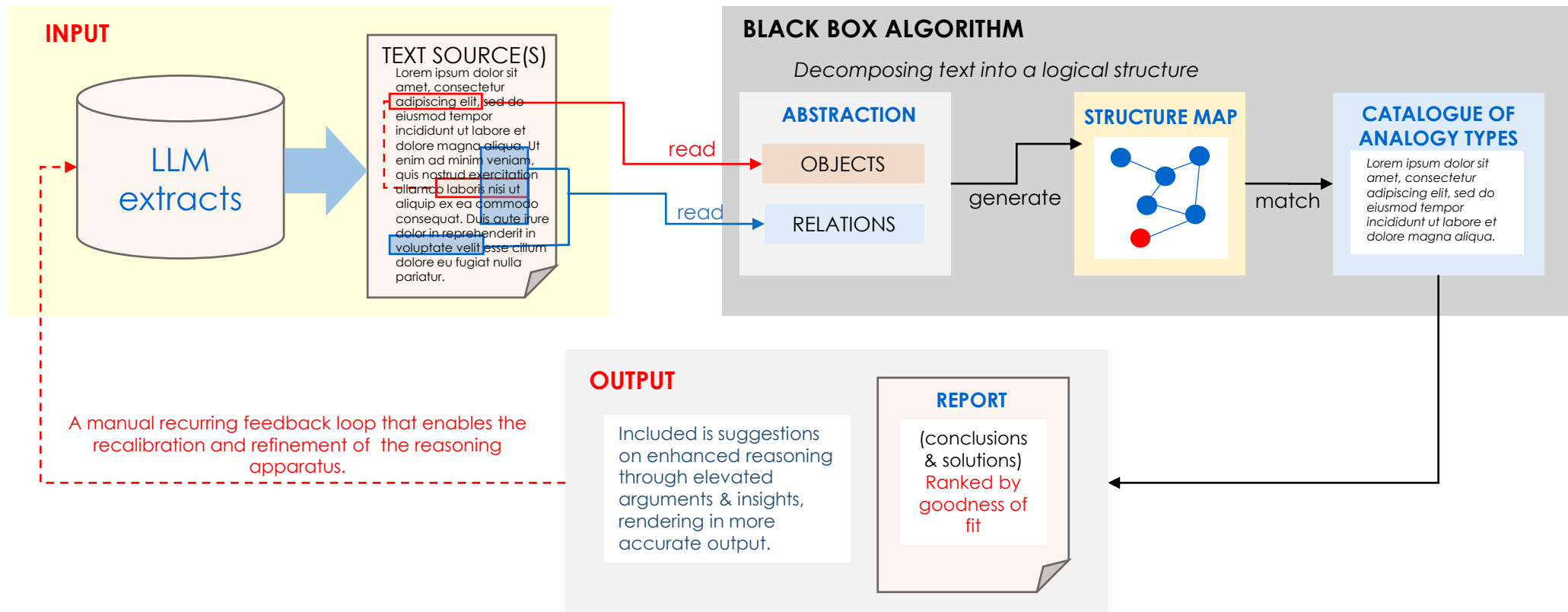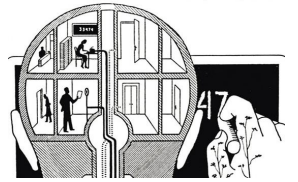
THE PATH TO AGI – UNDERSTANDING 'UNDERSTANDING'

Humans understand through **three entangled abilities**:

i) we approach a new object or situation through **abstracting** its key features and seek to establish how these relate to each other and its surroundings.

ii) With these abstract representations, we make **analogies** to already familiar objects or situations, and transfer knowledge to establish understanding of the new object or situation.

iii) Of course, this is typically a repetitive trial-and-error process, where **abduction** calibrates understanding through accommodating and adjusting for empirical insights deviating from the compatible standardised analogies.

METHODOLOGY OVERVIEW

INPUT

LLM extracts

TEXT SOURCE(S)

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

read

read

A manual recurring feedback loop that enables the recalibration and refinement of the reasoning apparatus.

BLACK BOX ALGORITHM

Decomposing text into a logical structure

ABSTRACTION

OBJECTS

RELATIONS

generate

STRUCTURE MAP

match

CATALOGUE OF ANALOGY TYPES

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

OUTPUT

Included is suggestions on enhanced reasoning through elevated arguments & insights, rendering in more accurate output.

REPORT

(conclusions & solutions) Ranked by goodness of fit

DEPLOYMENT

- The Virtual Mind is an algorithm for **generic problem-solving and for providing value-added insights.** The *proof-of-concept* version exclusively incorporates text sources, operating on the assumption that imprints of human language capture the essence of human intelligence. It seeks to guide problem solving through interaction and feedback and as such enhance reasoning by displaying and proposing additional relevant elements of supporting arguments and insights, thereby enabling creative conclusions and solutions. It will also assist in pointing out and probing strengths and weaknesses in existing chains of reasoning.

- The Virtual Mind is **agnostic** of LLMs as it is functioning as an **add-on application.**

- Allows for **few-shot learning** and is thus able to improve the poor economics of LLMs training models. This as the algorithm mimics the human ability to learn efficiently from a limited number of standardised analogies without the need of millions of examples to train upon. It is designed to generate understanding from generalised patterns at a conceptual level and to transfer that knowledge onto new data and situations.

THE ASK -> WAY TO MARKET -> COMPETITION

PROOF-OF-CONCEPT
We are seeking investors/partners to join us in our journey to advance our current proof-of-concept Virtual Mind application.
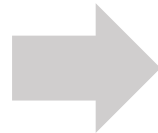
STANDARDISATION & COMMERCIALISATION
We need help with application standardisation, its commercialisation, and finding the first entry points to the market.

A WIDE-OPEN MARKET
The quest for AGI and algorithmic reasoning is intense, however, no applications and tools akin to what we propose have as of yet been released. Herein lies timing wise a very good opportunity to go to market.
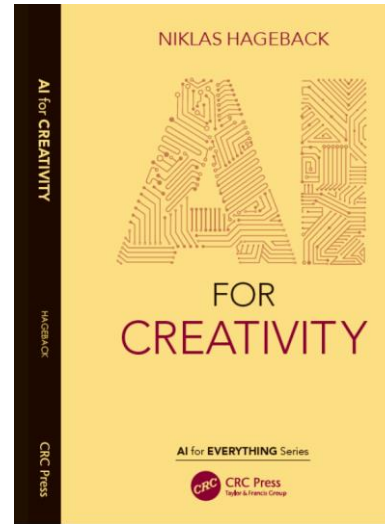
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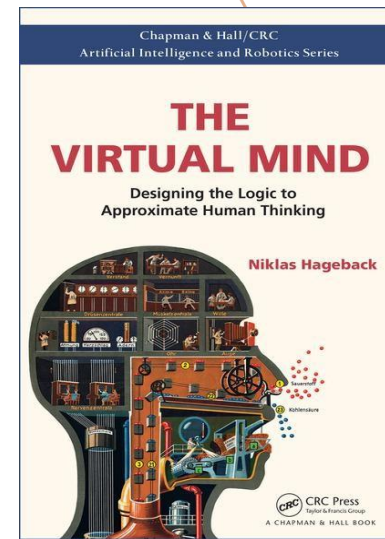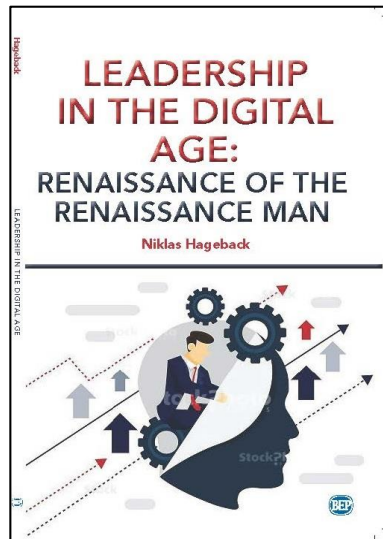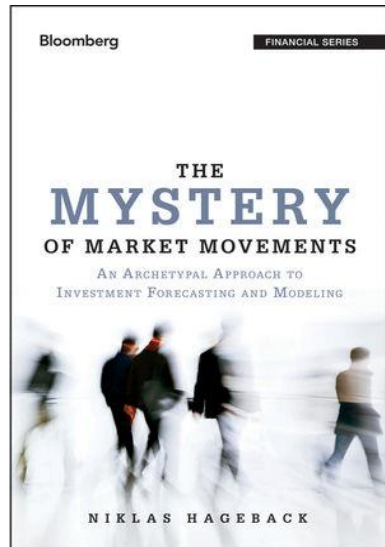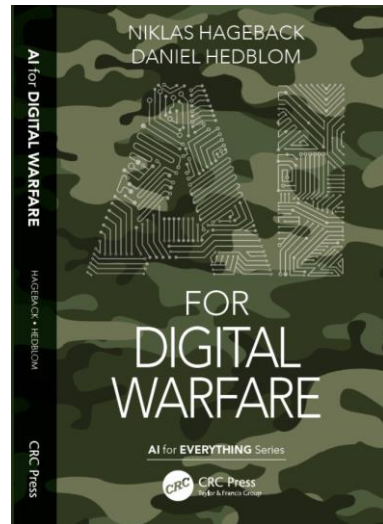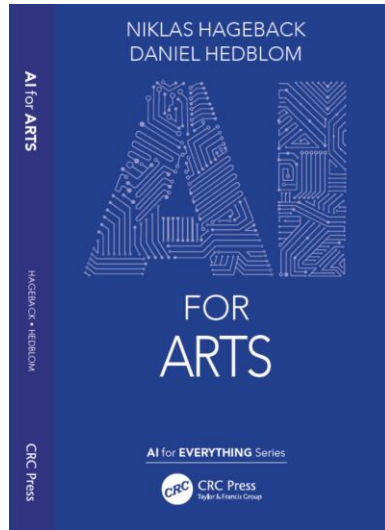
NEXT:
PROOF-OF CONCEPT
APPLICATION DEMO