

Jargon to Layperson Translation:

The end of science? On human cognitive limitations
and how to overcome them

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Abstract

Is there a limit to human ken? The world's epistemic pessimists believe that some aspects of the extended universe will remain beyond human comprehension. Like death What comes after death? Do we truly comprehend our ken limits as humans?



This document includes tools for differentiating cognitive limitations. In these limitations, we can distinguish between “representational access (the ability to develop accurate scientific representations of reality) and imaginative understanding (immediate, intuitive comprehension of those representations)”. This helps us to know that there are not only visible limitations, but also invisible limitations called (hard vs. soft).

Introduction

Given the nature of our human brains and the pessimism of scientists and philosophers, we are unlikely to find answers to the universe's thousands of questions. Those questions that Noam Chomsky called “mysteries”. The purpose of this document is to find answers to these cognitive limits that we cannot find and give us the tools for this. Cognitive limitations can be observed and others that we only perceive, which we will see next

Kinds of Limits

Different kinds of limits interpretations from mysterians: (mental process of learning and getting the concept of things relating to the human brain)

1. For example an concept is presented and asked if humans can evaluate the problem into a solution or not. Simple (described in black in white)
2. The interaction of the world and the reaction to mind connection can interfere with the final result of a problem.
3. Unclear that if humans have the capacity to solve scientific theory to a conclusion that will educate people thoroughly

Representational and imaginative limits

1. The limitation of having an exact perception (“the ability to see, hear, or become aware of something through the senses.”) of features of other species rather than our own. Creates a barrier to know how to aim at a problem from different areas. (In one scenario, there is a domain of reality which, because of some insurmountable cognitive or perceptual barrier, we will never be able to probe or penetrate. Other creatures with different cognitive abilities might be capable of developing accurate representations about this part of reality, but for our species, they are inaccessible. In this scenario, we suffer from representational closure, which means that we lack representational access to a part of the world.)

Bare senses and bare brains

“There are a range of physical processes and phenomena that we cannot detect with our bare senses: UV-light, ultrasound, X-rays, radio waves, CO₂ molecules, gravitational waves, and so forth. But of course this is not the end of the story. In order to extend the range of our senses, scientists have developed X-ray film, Geiger counters, radio satellites, spectroscopy, gravitational-wave detectors, and so forth. All this equipment translates physical phenomena into some format that is digestible by our human senses. So are we perceptually ‘closed’ to UV light? It depends on whether we take into account extension devices.”

Hard limits and soft limits

Hard limit is a limit so difficult to get through that very little progress has been made over a reasonable amount of time.

When we encounter a mystery and stare forever into it with no understanding and lost, it seems like there's no way to get through this, But considering the various possible technologies for mind extension, a hard limit seems unlikely.

In the history of science, we've somehow always seemed to work our way around a mystery, to try it from different angles, or to partially understand it by comparing it to something else we already understand.

As you sink deeper a mystery with a limit, you will continue to exert more and more effort to keep forging ahead, but there is no single point during this process where further progress becomes impossible.

A historical perspective

Is there way of **predicting a hard limit**?

There's **two techniques** we've used to escape our limits, the **representational method** and the **imagination method**. One uses physical reality to help go past our limits, the other is theorizing ideas to help go past our limits.

For the **representational method** it's difficult to predict what possible physical limitations we may have in the future, that we haven't already have had and made progress with, it's difficult to make a definitive conclusion of what hard limit may look for this technique.

For **Imaginative method**, since it's very theoretical therefore it's just a thinking process, so any limits there really depend on how flexible and far our mind can reach.

Example: there's a limit to how much calculations humans can do yet by theorizing we made computers that can do tons of calculations way better than we can.

The nature of quantum mechanics

Classical Mechanics:

- Physical intuition
- Results can be checked with experiments
- Outcomes can be predicted
- More experimental

VS

Quantum mechanics:

- Unintuitive (no pictures)
- Inherently random
- The outcomes are in probabilities
- More Theoretical

Conclusion: Quantum mechanics forces us to create a more imaginative setting to settle problems or explain answers. It stretches our imaginative methods, but still isn't enough to be considered a hard limit, because progress is being made.

Mind-stretching through metaphors

What is mind- metaphor?

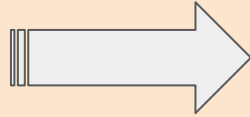
Mind- is often understood as thinking, reasoning, memory, belief, desire, emotion and motivation.

Metaphor- is related to expand our reasoning, the enrich thinking, stretch imaginations, enhance interpersonal understanding.

- How does mind stretching affect the mind? Stretching has been a low increase such as the hormone that Helps stabilize our mood, reduce stress , and overall it makes us feel good, which it has a cause to increase in depression and anxiety.
- As starting to put your mind to stretch these are brain-healthy examples
 - pick a jagawaw as puzzles
 - create something, as to start a sport, a business you have in mind, learn a new language, talk to new people.
our mood

Epistemic modesty?

Would it not be the height of hubris to imagine that the human brain, a product of biological evolution just like any other organ, can unravel all mysteries and understand everything there is to understand about the cosmos?



Will science ever find the real answers? OUR understanding for Nature is still far from complete. Human brains are the product of blind and unguided evolution.

Consider that human brains did not evolve to discover their own origins either. And yet somehow we managed to do just that. Perhaps the pessimists are missing something that yet we don't know.

Conclusion

What does this
all mean ?



As scientists either stops and hopefully publishes the results or treats the experimental results as a new form of observation and returns to the beginning of the process. The process is not without end but may end without interesting conclusions.