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IDEASQUARE COFFEE PAPER

The Unbearable Lightness of Uncertainty

As many others, the sentence above emerged during a sunny July afternoon while the IdeaSquare Self-Appointed Innovation team (ISSAIT) consumed pizza. It was clear to everyone that a possible answer to this conundrum required starting the research from almost the very beginning…yes THAT beginning. So here they went!

Once upon a time, specifically within the first 10 microseconds after the Big Bang, the Universe existed in what scientists call the Quark-Gluon Plasma (QGP) era. Imagine this epoch as a seething cauldron, with temperatures surpassing a trillion degrees Celsius. In this primordial "hot soup", the fundamental building blocks of matter—quarks and gluons—moved freely. Unlike today, where these particles are confined within protons and neutrons, the early Universe allowed quarks and gluons to exist in a liberated state, forming the QGP. It was a period marked by intense interactions and rapid transformations, as particles collided and merged in a primordial dance.

As the Universe expanded relentlessly, it began to cool, marking a crucial transition. The once free-roaming quarks and gluons began to coalesce, binding together to form protons, neutrons, and other hadrons. This phase shift signalled the end of the QGP era and marked the beginning of the Universe as we know it today—a Universe that eventually gave rise to atomic nuclei, and through millennia of random evolutionary processes, to our earliest ancestors.

Once the beginning was researched, the ISSAIT decided to further pursue the plasma connection by performing a fast forward in human (pre)history development. Therefore, they arrived at the uncertain and fortuitous moment when a courageous hominin decided to consume charred meat from animals caught in the frequent fires of the African savanna. Fire, in its essence, can be considered a form of plasma—the fourth state of matter. Unlike solids, liquids, and gases, plasma consists of highly energized particles: free electrons and ions. This ionized state occurs when the energy within a flame is sufficient to strip electrons from atoms, resulting in a mixture of charged particles.

The domestication of fire represents one of humanity's pivotal achievements, marking a profound shift in our species' evolution. The ISSAIT researched that it is estimated to have occurred approximately 1.5 to 2 million years ago, with early humans harnessing fire for warmth, protection, and most significantly, for cooking food. The advent of cooking not only enhanced food palatability but also improved digestibility, greatly boosting nutritional intake and fostering brain development. This, in turn, and as of capital significance, led to the evolution of larger brains which are characteristic of modern humans.

Archaeological evidence, such as charred bones and ancient hearths, attests to the widespread use of controlled fire by early humans. Beyond its practical benefits, fire carried profound psychological implications, providing comfort, security, and a sense of home. Its mastery also enabled early humans to adapt to colder climates and expand their territories, profoundly influencing migration patterns and the spread of our species across the globe.

Thus, fire played a crucial role in shaping human cognitive evolution. The development of 'inference machines'—our brains—allowed early humans to interpret and predict their environments with increasing accuracy. By synthesizing sensory information and past experiences, these brains anticipated threats and developed strategies for survival. However, this cognitive prowess also predisposed humans to fear uncertainty—a deeply rooted response evolved to ensure survival in unpredictable environments.

Yet, despite this inclination towards predictability, human progress has been driven by innovation—an inherently uncertain and unpredictable process. Innovation demands venturing into unknown realms, embracing risks, and confronting failures in pursuit of groundbreaking discoveries…although nobody guarantees success.

This paradox—our evolutionary need for predictability versus the unpredictable nature of innovation—presented a profound challenge to the ISSAIT. Could there be a solution to this Catch-22?[1]

Enter the concept of unlearning—a vital process for embracing uncertainty and serendipity in a world defined by constant change. Unlearning involves letting go of rigid beliefs and outdated knowledge that hinder openness

[1] At this juncture, certain members of ISSAIT embarked on a parallel investigation. It emerged that the term "Catch-22" was coined by the American author Joseph Heller in his 1961 novel of the same name. It depicts absurd bureaucratic constraints faced by soldiers during World War II. The term is introduced by the character Doc Daneeka, an army psychiatrist, who invokes "Catch-22" to illustrate why any pilot seeking mental evaluation for insanity—hoping to be deemed unfit to fly and thus avoid perilous missions—proves his own sanity by making such a request and therefore cannot be declared insane. Beyond its literary origins, "Catch-22" encapsulates a dilemma or challenging situation from which there is no apparent escape due to mutually conflicting or interdependent conditions.

to new possibilities. By cultivating flexibility and adaptability, unlearning transforms uncertainty from a threat into a fertile ground for creativity and discovery. Embracing serendipity means recognizing that valuable insights often emerge from unplanned, spontaneous events, ready to be harnessed creatively. In essence, learning to unlearn enables us to navigate the delicate balance between our innate drive for control and the serendipitous nature of innovation and life in general. It equips us to thrive in a world where the unexpected often leads to the most transformative discoveries and opportunities.

At this very moment, the ISSAIT was ready for formulating the adagio summarizing the research done. It was written on the IdeaSquare kitchen whiteboard as a food for thought for the many visitors, collaborator and, above all, students:

EMBRACE UNCERTAINTY; THE BEST UNFOLDS ALONG THE WAY

However, the ISSAIT research journey wasn't quite finished. In keeping with IdeaSquare's fine tradition, there was more food for thought awaiting those willing to venture down the rabbit hole. To provoke deeper reflection, they turned to philosopher Robert Nozick's thought experiment known as the "Experience Machine":

Imagine a distant future where scientists have unveiled a groundbreaking technology known as the "Experience Machine". Here's how it works:

You enter a laboratory and engage in an extensive discussion about your most loved deepest desires and aspirations—the pinnacle of joy, fulfilment, and satisfaction you could ever imagine experiencing. After this consultation, you are offered to enter a state of perpetual unconsciousness induced by the researchers. Your inert body will be carefully placed within a tank filled with a mysterious fluid in a completely darkened chamber, electrodes affixed to your head. Once immersed in the tank, the simulation commences. Every detail of your ideal existence unfolds before you in vivid realism for the remainder of your life (or beyond, should you choose). Upon entry into this alternate reality, all memory of the Experience Machine's setup vanishes, and any awareness of your simulated surroundings disappears. To you, this simulated life feels undeniably authentic. Within this carefully crafted virtual world, you inhabit your dream life to its fullest extent. Yet, unbeknownst to you, none of it exists in reality—you exist solely as a consciousness suspended in fluid within a dark chamber. You will never awaken to the real tangible world or engage with real individuals again, but in your perception, every moment feels as genuine as if it were truly happening.

The question is: *If the Experience Machine were available to you and guaranteed to work flawlessly, would you, do it? If not, why not?*

Just Think About It!

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