Conceptual Boundaries of Knowledge and the Constraints of Thought

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The mechanisms explored in this text highlight the fundamental limits of objectively understanding reality.

Introduction

COMPLETE OBJECTIVITY IS UNATTAINABLE:

- Language structures our perception of reality. Words define and limit thought, shaping what is expressible or even thinkable. Since the link between words and meanings is socially constructed, language carries hidden constraints that influence how we interpret the world.
- Memory, too, is fluid rather than a fixed archive. Each recollection reshapes past events, prioritizing coherence over accuracy.
- Our senses and cognition evolved for survival, not for discovering absolute truth. Our „truth“ is never final but an evolving approximation.
- The perception of reality is inherently selective. Evolution shaped our brains and senses to process only survival-relevant information, filtering overwhelming complexity into simplified, actionable categories. Cognitive biases further streamline decision-making but distort reality by reinforcing preexisting beliefs. These are not errors but evolved shortcuts.

INVISIBLE COLLECTIVE FORCES:

- Memplexes, Pendulums, Discourses, and Animistic Spirits describe the same underlying phenomenon — external, self-replicating forces that shape human thought and behavior. They function like “software agents,” gaining influence by capturing collective attention and reinforcing dominant narratives.

- As they sustain themselves through cultural and social energy, they guide behavior, beliefs, and norms without conscious recognition.

ARTIFICIAL INTELLIGENCE:

- Artificial Intelligence, primarily based on language models, is emerging as a new vehicle for idea propagation. As AI evolves, it may not only spread but also generate novel "memplexes," accelerating cultural and intellectual shifts at an unprecedented pace.
- However, despite its computational sophistication, AI remains constrained by its training data, programming, and structural limitations.

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1. Knowledge

Throughout history, some of the greatest thinkers have questioned the possibility of achieving complete knowledge.
Socrates is often paraphrased as saying, "*I know that I know nothing*", emphasizing that true wisdom lies in recognizing one's own ignorance. His method of relentless inquiry urges us to continuously approach truth through dialogue and critical self-examination rather than to claim a final, unassailable understanding.

2. Falsification

Building on this idea, Karl **Popper** argued that scientific theories can never be proven in an absolute sense but can only be tentatively accepted until falsified by new evidence (Popper, 1959). For Popper, every theory is provisional – a stepping stone in an endless journey of discovery rather than a final destination of certainty. This perspective challenges us to remain ever vigilant and willing to revise our models of understanding in the face of new data.

3. Evolution

Our biological makeup further complicates this pursuit. As evolved beings, our sensory systems and cognitive structures have been finely tuned by natural selection to process information essential for survival (**Darwin**, 1859).

This evolutionary process has led us to develop categories and perceptual filters – such as our ability to recognize colors, shapes, and spatial relationships – that simplify the overwhelming complexity of our environment. In our sensory experience, we register only those parameters – however minute – that prove beneficial for our survival. If certain cues held no relevance to our embodied nature and our ability to thrive in our environment, they simply would not be perceived.

These mental shortcuts enable efficient navigation of the world, yet they also limit our ability to perceive its full intricacy. The concept of embodied cognition reinforces this view by suggesting that our thinking is deeply rooted in our physical interactions with the world; our bodily experiences actively shape how we understand and categorize reality (Lakoff & Johnson, 1980).

In this way, what we come to know is inextricably linked to our evolutionary heritage, meaning that our knowledge is always a filtered approximation rather than an exhaustive capture of reality.

4. Language

Language plays a pivotal role in constructing knowledge. It is not merely a means of communication but also a framework that shapes thought.

Ferdinand **de Saussure**'s structural linguistics introduced the idea that language is a system of signs composed of the "*signifier (signifiant)*" – the form of a word or image – and the "*signified (signifié)*" – the concept it represents. For instance, consider the word "tree." The sound or written form "tree" does not inherently embody the physical reality or abstract idea of a tree; rather, this connection is established by social convention. This arbitrary relationship demonstrates that our linguistic representations are constructed, relying on a network of differences within the system, which both enables communication and imposes limits on meaning (de Saussure, 1916/1983).

Moreover, some scholars argue that the phonetic qualities of words carry intrinsic meaning and can evoke emotional or cultural associations (Jakobson, 1962; Eco, 1976).

In this view, certain ideas may not simply be deemed unacceptable; they can become entirely unrecognizable – even unthinkable – because the very structure of our language precludes their articulation.

5. Cognitive Biases

In the realm of human cognition, multiple biases operate as both indispensable instruments for rapid adaptation and as distortions that obscure any unmediated apprehension of reality. These cognitive shortcuts – by which the mind sorts people and phenomena into accessible boxes – are not mere flaws but rather efficient mechanisms honed through experience, social conditioning, and evolutionary pressure. They enable individuals to respond swiftly without repeatedly depleting energy on re-learning, offering a pragmatic scaffolding for navigating a complex world.

We can identify numerous such biases – among them confirmation bias, fundamental attribution error, availability heuristic, anchoring bias, representativeness heuristic, hindsight bias, in-group bias, belief perseverance, overconfidence effect etc. Three in particular illustrate the broad tapestry of these cognitive tendencies:

- *Confirmation Bias* steers us toward evidence that bolsters preexisting convictions, sparing us the arduous process of reevaluating our beliefs.
- *Fundamental Attribution Error* inclines us to attribute others' actions to their character rather than external forces, thus preserving a swift (if incomplete) mode of categorization.
- *Availability Heuristic* privileges dramatic or recent examples, skewing our perception of risk and frequency by magnifying the most immediate memories.

While these shortcuts expedite our adaptive responses, they also reveal the extent to which we project an inner conception of reality onto external events.

As **Plato**'s Allegory of the Cave suggests, our perceived world may be but a reflection of inner constructs, and **Kant**'s *Critique of Pure Reason* insists that experience itself is refracted through innate cognitive frameworks.

In this sense, objective truth appears perennially just beyond our grasp, each new "insight" filtered through psychological and cultural lenses. Yet biases alone do not account for the delicate balance between coherence and creativity in our mental life.

6. Memory

Memory – far from being a static library – manifests as a dynamic fluctuation of energy states interacting through algorithmic processes shaped by millennia of evolutionary refinement.

6.1 Biological Foundation of Memory

The inherent fluctuation and constant mutation of content arise from the perpetual flux of biological systems, where cells are continuously emerging, decaying, forming new connections, and transmitting faulty impulses.

There is no mechanical, clearly defined line; rather, everything is determined by the statistical probabilities of impulses, the triggering of action potentials, electricity, potential, nourishment, environment, stress, oxygen, neurotransmitters, temperature, and so forth. Locally, the processes of cell interaction may sometimes appear disordered; however, when one considers its overall statistical ensemble — the transmission of information or the generation of frequencies across various neural levels that merge into synchronous

bioelectrical impulses, much like “melodies” emerging within an electromagnetic spectrum — a global pattern is formed.

In this process, the approximate summation of individual impulses and the registration of dual differences — that is, bits, the inherent dualities in each element — are brought together within this electromagnetic, bioelectrical field to yield a coherent order that meets fundamental evolutionary prerequisites.
This biological organization ultimately forms the interface through which the world is experienced. It is analogous to the way one views a computer’s operating system on a monitor rather than the underlying hardware, the processor, the individual bits or the electrical current.

Although distinct brain regions and their circuits are relatively well-characterized – enabling us to trace many processes involved in memory formation, perception, and model building – this clarity diminishes at the cellular level. There, organization is inherently dynamic rather than strictly defined, reflecting the complexity of biological systems. As a result, pinpointing exact mechanisms becomes challenging, adding a degree of “fuzziness” to our understanding of how these processes ultimately unfold.
In contrast to a city library — where books are assigned fixed numbers, remain in specific locations according to a register — the cellular interactional patterns do not necessarily always operate with fixed addresses or an unchanging plan. Instead, its structure varies from moment to moment, thereby probably enhancing evolutionary fitness.
On a macro level, there are, of course, anatomical brain regions that carry out distinct neuroanatomical and physiological functions – such as those responsible for motor control, language, emotions, and more.

The variability in memory — in other words, in how references to perceived and processed data patterns are organized and stored — is the result of evolutionary selection and the constant alteration of interactions among living cells – dynamic systems in perpetual flux due to potentials, movement, external influences, nutrients, hormones, and more, which has fostered the development of diffuse statistical mechanisms and adaptive capabilities.
Neurons communicate both electrically and chemically.

Although all cells engage in such communication, neurons do so in a particularly electrical manner. The brain’s electrical activity can be observed using electroencephalography (EEG), a non-invasive method that records the rhythmic oscillations generated by large groups of neurons. These recordings reveal distinct wave patterns arising from various levels of neuronal organization, each with its own frequency.

Together, these rhythms produce measurable phenomena that underscore how locally disordered activity can, through statistical summation, converge into a coherent, robust pattern — one that may even have effects beyond the body.

6.2 The Economy of Memory

In that sense, humans can also be regarded as electrical beings. When planning or thinking, the power of thought alone can mobilize significant chemical energy to activate muscles — an interaction involving electrical impulses, action potentials, hormones, electrolytes (such as calcium), salts, and so forth.
There are clear economic processes at work, yet behind them lie mechanisms of robustness — processes of decentralized communication that can better compensate for the loss of specific areas than would an efficient, purely local division of labor lacking redundancy.

In other words, it is not solely an economic model aimed at energy conservation; energy and precision are sometimes deliberately sacrificed in favor of robustness and functionality, even under challenging environmental scenarios.

6.3 Intelligence and Memory

Intelligence could be defined as a flexible, goal-directed processing of differences — a capacity that goes beyond automatic responses by requiring an entity to register changes, store them in memory, and act in a context-sensitive manner.

Intelligence should be understood systemically, relying on memory to integrate past knowledge with new situations, thereby enabling adaptation. Moreover, intelligence exists solely through its interactions and activity; it is by shaping and impacting processes or objects within the environment that the dynamic nature of intelligence is realized.

This concept represents a spectrum of intelligence that must meet certain fundamental prerequisites — many of which appear to be fulfilled even at the cellular level.
It also raises the question of whether each cell might harbor a form of intelligence, such that through the production of hormones, bioelectricity, and related factors, the collective ensemble of cells becomes essential for perception and for constructing identity.

6.4 Error Rates in Memory

Moreover, the way cells organize and interact does not yield an unequivocal, perfectly precise model of the world. Instead, it results in the construction of functional models that are “good enough” for survival and adaptation.

The errors and fluctuations we observe in human memory fall within tolerance ranges that have been acceptable under evolutionary selection pressures.
One might wonder whether, if the evolutionary tolerances for error had been stricter, natural selection could have driven neural networks to organize in such a way that memory operates with much greater precision.

However, it appears that either a perfectly accurate memory is not necessary or that the costs of imprecision are counterbalanced by other advantages — such as increased robustness or efficiency. In this way, the evolved system reflects a balance between precision and flexibility, producing a memory function that, while not flawless, is sufficiently effective for navigating the complexities of the world.

The processes that give rise to intelligence and mental models seem to follow a predetermined orientation — programmatically encoded by past evolutionary selection — that drives engagement in these processes to enhance evolutionary fitness, both on an individual level and ultimately as a species.

6.5 Modification of Memories & Construction of Identity

Each time we retrieve a memory, we do not merely "read" it like data from an unchanging archive; rather, we rewrite it. Its content is altered, gaining or losing significance, or even changing to the point that it no longer resembles the original.

In other words, new memory content is generated, making it impossible for us to determine whether a recalled experience is real or not.
This means that our personal biography is in a constant state of change, as we no longer have direct access to the past –only to diffuse patterns and distorted content that continuously mutate.

The neural activity involved in recollection reconfigures synaptic connections, embedding present emotional states, assumptions, and contextual cues into what we label "*the past*." Henri **Bergson**'s emphasis on memory as a creative act (*Matter and Memory*) resonates here: each revisitation of an event subtly reconstructs its meaning.

This ongoing process is crucial to the formation of personal identity. From an evolutionary vantage, there must be a coherent narrative – a kind of "data highway" or internal framework – allowing us to navigate the world effectively without succumbing to a fragmentation of self.

7. Administration of Thoughts

One might imagine the mind as a vast fishpond of possible thoughts and impressions, constantly in motion. Only certain “fish” (i.e., memories, ideas, emotional undercurrents) are granted administrative privileges to surface and shape conscious awareness.

Those that conflict with the dominant framework – a framework that keeps us in sync with our environment – are often censored or discarded before they can disrupt our working model of reality. Such regulatory processes protect us from a debilitating dissolution of continuity; they permit the adaptive construction of a self that can engage with the outer world without disintegrating under contradictory information.

This highlights how extensively our neural networks handle diffuse information and pattern recognition in various ways, constantly working to construct a coherent model of reality and integrate it with our autobiographical sense of identity.
From an evolutionary vantage, there must be a coherent narrative – a kind of “data highway” or internal framework – allowing us to navigate the world effectively without succumbing to a fragmentation of self. This ongoing process is crucial to the formation of personal identity.

Occasionally, pharmacological interventions – through psychotropic/psychodelic medications, for example – may modulate or partially dissolve these internal censorship protocols, enabling otherwise suppressed or inaccessible material to emerge. Even then, what surfaces represents only a minor fraction of the total subterranean flux, and the gatekeeping remains robust enough to usually prevent wholesale inundation by raw data.

These mechanisms of selective attention and memory modification are evident in how individuals respond to existential threats, such as a terminal prognosis. Some pass through stages of denial, rejection, and partial acceptance before gradually integrating fragments of that reality into conscious awareness. The mind’s preference for conserving cognitive and emotional stability suppresses facts that challenge its core framework – again demonstrating the protective function of bias and selective memory.

Moreover, our recollection of lessons already learned may likewise fade, replaced by the illusion that such knowledge never existed at all. We might re-read a familiar text and realize that entire passages, previously understood, appear as if for the first time. The intervening years have altered our emotional vantage, effectively rewriting earlier impressions and painting them anew.

The memory is thus no static deposit; it is, in **Schopenhauer**'s words from *The World as Will and Representation*, an ongoing interplay between will (our drives, emotions, physiological states) and representation (our structured experience of reality).

8. Emotions

Emotions arise from a confluence of hormonal signals, bioelectric patterns, and networked computational events spread throughout the body – what we perceive as a "*feeling*" is the result of countless different variables instantaneously evaluated.

Time of day, physical well-being, social interactions, and other subtle influences dynamically shape emotional experience, which in turn feeds back into the interpretive matrix of cognition and memory. Our sense of certainty, the urgency or calm with which we process new information, and even our openness to revising beliefs are all intimately tied to these fluctuating somatic states.

Thus, the very processes – bias, selective memory, emotional feedback loops – that confer speed and coherence to human thought also perpetually stand between us and any unfiltered reality. Objective truth becomes an ever-receding horizon, approached through models that must remain flexible enough to enable adaptation, yet solid enough to maintain identity.

In this sense, humans exist not on stable ground but in a ceaseless interplay of perception, narrative construction, and rewritten recollection – an interplay that ensures survival while simultaneously keeping the ultimate nature of things just beyond our grasp.

9. Psychoanalytic Philosophy

In psychoanalytic philosophy, the interplay between the concept of the conscious and the unconscious forms a central and enduring enigma.

Sigmund **Freud**, originally a neurologist in search of understanding how the brain functions in the systematic interplay between the psyche and society – and the founding figure of psychoanalysis – argued that beneath the surface of our accessible thoughts lies a vast repository of repressed desires, conflicts, and memories that, in various ways, steer our perception and behavior.

Building upon and diverging from Freud's insights, Carl **Jung** introduced the notion of the collective unconscious – a deeper stratum shared among all human beings. Within this universal reservoir reside archetypes: primordial images and symbols that express fundamental aspects of the human experience.

Central among these is the concept of the ‘shadow’ – that portion of the self in which qualities and impulses are unconsciously repressed, a process occurring beyond any deliberate control. This involuntary mechanism arises as the psyche instinctively seeks to shield the ego from those aspects of our nature that might threaten our established self-image or destabilize our inner balance. This idea of a personal shadow – almost always unrecognized – illustrates the profound ways in which what is denied or repressed continues to shape our inner narrative.

Similarly, there exists a collective shadow – a repository of disowned impulses, fears, and values that permeates entire societies. Notably, post-World War II Frankfurt (Germany) psychoanalysts such as Alexander and Margarete **Mitscherlich** demonstrated how mechanisms of repression, including a collective sense of unresolved guilt, contribute to this phenomenon. This collective shadow manifests in cultural taboos, prejudices, and social behaviors that subtly shape our actions without our conscious awareness.
As a consequence, rationality and objective evaluation are often compromised.
For example, entrenched societal biases can distort public discourse, leading to polarized debates where unacknowledged emotional undercurrents overwhelm reasoned analysis.

Jacques **Lacan** reexamined Freudian psychoanalysis by introducing a sophisticated linguistic and structural framework that reconceptualizes the unconscious as a language-like system rather than a mere repository of repressed content.
While Freud acknowledged the influence of language on desire and neurosis, Lacan extended this idea by emphasizing the role of the symbolic order.

In this view, both conscious and unconscious processes are structured by shared symbols and archetypes that transcend personal experience.
In Lacan’s framework, the gap between the conscious and the unconscious is not a simple barrier but a dynamic interface, continuously reconstituted through linguistic and cultural codes.

A central concept in Lacan’s work is the “mirror stage.” Rather than referring exclusively to a specific moment in childhood, the mirror stage serves as a metaphor for the ongoing process by which the self is constructed. It illustrates how identity emerges from the interplay between internal drives and external cultural codes.
In other words, the formation of the “I” is not a solitary act of introspection but a dynamic encounter with images – whether literal reflections or symbolic representations – that continuously shape and reshape our sense of self.

This process is akin to the modern notion of memplexes, where clusters of interrelated ideas – spanning scientific theories, religious beliefs, and philosophical discourses – form powerful lenses through which we interpret the world.

The conscious realm emerges as but the tip of an immense iceberg – a visible manifestation sustained and shadowed by the vast, inscrutable depths of the unconscious and its even more remote recesses. The frameworks for understanding reality are not fixed; they evolve as we integrate new ideas, metaphors, and discursive templates.

Our desires, identities, and subjectivities are not solely personal creations but are heavily influenced by preexisting structures of language that delineate what can be thought or expressed. Even the simple use of pronouns like “I” or “you” carries assumptions and limitations that shape our understanding of self and others.

10. Discourses and Discourse Analysis

Beyond individual language use, discourse analysis offers a method to examine the recurring patterns and templates that define our collective communication.

Our ideas and models are not innate; they are formed through discourse – the structured communication and shared narratives within our society. This concept, which traces back to Michel **Foucault**’s pioneering work, shows how language and power interact to shape what is accepted as truth. Foucault demonstrated that discourse is not merely a neutral medium for communication but actively constructs our reality by establishing the boundaries of what is thinkable, acceptable, or even imaginable. In this view, what we call “truth” is produced rather than discovered.

Discourse analysis, further developed by later scholars, systematically examines these processes by revealing how our language sets up categories and limits that, in turn, determine our collective understanding. Researchers might study a group discussion on a contentious issue in which participants express strong emotions – anger, fear, or passion – that surface unconsciously during dialogue. Careful examination during discussion can reveal that specific phrases, metaphors, or even pauses act as triggers for these feelings. By mapping these linguistic cues and the corresponding emotional responses, analysts can uncover the hidden „discourse shells“ that limit and shape the range of ideas considered acceptable or knowable within a conversation.

This process exposes the implicit assumptions embedded in discourse and demonstrates how emotions function as signals, attributing importance to particular ideas or issues.

The discursive frameworks we use are contingent on cultural and historical contexts, meaning that our interpretation of the world remains inherently provisional. We continually build and rebuild our models, so any claim to a final, objective truth is always subject to the limits imposed by the very language and social practices we rely on.

Our reality is a construct, continuously shaped by evolving discursive practices, rather than a fixed entity waiting to be uncovered.

11. Simulacra

Baudrillard (Baudrillard, 1981; Strehle 2012) argues that images and signs have evolved from being mere reflections of an underlying reality into independent entities that actively shape our perception of the world.

In his analysis, the traditional relationship between a sign and its referent – what it originally pointed to – has broken down. Instead, signs become self-contained and circulate within a system of meaning that no longer relies on any “real” or original source. This process results in what Baudrillard calls simulacra, where the image or symbol takes on a life of its own and its meaning is generated solely through its interrelations with other signs.

Images are not just passive representations; they actively participate in constructing our social and cultural reality. The proliferation of media, advertising, and digital technology creates a continuous flow of symbols that redefine what we consider authentic. As these images and symbols multiply and are reproduced ad infinitum, they gradually lose any direct connection to an „original reality“, ultimately coming to replace it.

This shift has profound implications for our understanding of truth and authenticity. Rather than uncovering an „objective reality“ through the careful examination of signs, we find ourselves immersed in a world where meaning is endlessly deferred and reassembled – a world in which our models of truth are perpetually provisional.

Baudrillard’s analysis also emphasizes the role of symbolism in the transformation of social life. By revealing how images generate their own networks of meaning, his work shows that the very process of communication is no longer about transmitting clear, stable information. Instead, it has become a complex interplay of signs that often obscure as much as they reveal.

Think about a tweet or a social media post. When a person shares something online, they’re not just transmitting clear, stable information. Instead, they’re offering a bundle of

signs: text, images, emojis, hashtags, tone, and sometimes even unexpected meanings brought by their followers. The post's message is often shaped by its context, such as who is posting it, where it is shared, the platform it's on, and the ongoing conversations surrounding it. Over time, the meaning of a post may evolve based on how others interact with it – through replies, retweets, or reinterpretations. This dynamic is increasingly hard to pin down; it goes beyond simply „sending" information.

The signs (words, images, etc.) don't just convey a single, fixed idea; they interact with one another and with the culture on that platform to generate new layers of meaning.

This example demonstrates that communication in the digital age is no longer just a process of clearly transmitting information. Instead, it becomes a fluid, complex exchange, where the meaning of signs is constantly shifting, obscuring as much as it reveals. The clarity of the original message is often lost in the dynamic environment of (digital) communication.

Each word, image, or symbol carries multiple layers of meaning that constantly shift as they interact with one another. For example, a simple slogan in an advertisement might be intended to convey a specific idea, yet the same slogan can evoke entirely different emotions or interpretations depending on the audience's cultural background, personal experiences, or even the context in which it is encountered. In this network of signs, no single element holds a fixed, objective meaning; rather, meaning is continuously generated and regenerated as signs refer to and build upon each other.

The self-referential process implies that while communication can reveal insights about our world, it also obscures a direct, unmediated access to truth. The very mechanisms of language and imagery – through which messages are constructed and interpreted – introduce ambiguity.

A news headline, for instance, might seem clear at first glance, but upon closer examination, the words may suggest alternative interpretations that contradict the apparent message. In this way, the process of communication becomes an endless negotiation of meaning, where the symbols involved reveal as much as they conceal, making the attainment of an absolute, objective truth extremely challenging.

12. The Meaning of Words / Definitions

In philosophical discussions, a common challenge arises when one tries to define a term: the very words used in the definition themselves require further definition, leading to what is often called a circular definition or an infinite regress of definitions.

This phenomenon points to the idea that no term exists in isolation; instead, every concept is embedded in a network of interrelated meanings.

One way to understand this is through the notion of the hermeneutic circle. Although the hermeneutic circle is usually discussed in the context of interpreting texts or experiences, its underlying insight applies equally to definitions: our understanding of a whole depends on our understanding of its parts, yet each part is itself defined by reference to the whole. In other words, when we define a term, the terms we use carry assumptions and connotations that must be unpacked and, in turn, defined by further terms, creating an endless loop.

Philosophers such as Ludwig **Wittgenstein** have explored these issues by emphasizing that language is a system of interdependent signs whose meanings are determined not by any inherent essence but by their use within a community.
Similarly, W.V.O. **Quine** argued that our entire web of beliefs is interconnected, so isolating any single definition without reference to the broader network of language becomes impossible.

This insight suggests that our quest for an ultimate, self-contained foundation of meaning is inherently unattainable.

13. Necessity of Categories

To navigate this complex interplay of definitions and meanings, we rely on axioms or basic assumptions – conceptual boundaries that allow us to create categories, frame our discourse, and structure our thoughts.

These axioms function like anchors in an otherwise shifting sea of language, providing enough stability for us to communicate and reason effectively. Yet, just as with definitions, these foundational premises are not discovered in a vacuum.

Instead, they likely emerged under the influence of evolutionary pressures, guiding our species toward distinctions in the environment that proved critical for survival and reproduction. Over time, these distinctions hardened into cognitive defaults – our brains became wired to recognize patterns (like “safe” vs. “dangerous,” “edible” vs. “poisonous”) that conferred an adaptive advantage.

In this sense, our categories and axioms can be seen as the product of a long historical and biological process – a kind of pragmatic fracturing of the world that allows us to focus

attention on what is most relevant for our continued existence. This fracturing is not merely a byproduct of language; rather, it reflects a more general requirement for us to carve up reality into manageable pieces.

Without these boundaries, our cognitive systems would be overwhelmed by the sheer complexity of raw experience. The fundamental concepts that construct our reality – the process of deeming something real based on our experiences (for example, that the ground is solid and that objects fall downward) – help build stability in our mental models against the chaos that would otherwise ensue.

The dissolution of such mental models would lead to the collapse of viability, ending in chaos. Thus, the very structure of our discourse – and indeed our models of knowledge – emerges from the interplay between our evolutionary constraints and our symbolic tools.

However, while boundaries and categories are necessary for us to function and communicate, they are also arbitrary in the sense that they do not reflect an eternal or "*true*" division of the world. They serve our needs by helping us perceive contrasts that matter for our survival and well-being, but they also limit our perspective.
Each category we create or adopt is shaped by cultural, historical, and linguistic factors, leading us back to the circular nature of defining concepts within frameworks that are themselves products of those very concepts.

This interplay illustrates why certain discursive "*templates*" or metaphors arise and then persist within a culture: they resonate with our evolved cognitive filters and become reinforced through use.

14. Archetypes

Carl **Jung**'s concept of archetypes reveals that our unconscious is replete with protolinguistic symbols and images – universal patterns that preconfigure our understanding of the world.

Similarly, Joseph **Campbell**'s work on myth and the hero's journey underscores how these archetypal images and narratives shape both individual identity and cultural consciousness.

15. Communication

It's impossible for two people to communicate with perfect, one-to-one fidelity.

The thoughts or concepts, which may not even be clear to the person trying to express them, often remain vague.
The information carrying the intended *payload of meaning* is symbolically and linguistically compressed, then decoded and unpacked by the recipient, who interprets it through their own set of values, emotional framework, and analytical lens.

Their understanding is shaped by inherent cognitive models, both hardwired and shaped by acquired information through various software agents. Therefore, a constant back-and-forth is necessary to reconcile and align the shared information.

16. Systems

16.1 The Evolution of Ideas: Memplexes = Software Agents = Discourses? / Same as Animism?

Vadim **Zeland**'s concept of "*pendulums*" offers a modern analogy to memplexes – but it is important to note that these pendulums are not merely internal software agents. Rather, they function as external entities or forces, constructed through the interactions of people, that latch onto our physicality and develop a self-reinforcing dynamic.

This idea is further illuminated by **Pfaller**'s concept (Pfaller, 2004). He argues that the „ *Die Illusion, der anderen*" (title in German original) or the "I*llusions Without Owners*"are powerful cultural forces that emerge through interactions between individuals.

Over time, these forces evolve into self-sustaining systems with implicit rules, gaining their power from our belief that others share these beliefs – whether or not this belief is truly justified. This belief gives these constructs a real influence over our behavior.

Although Pfaller does not specifically describe these forces as software agents, their dynamics are similar to Zeland's concept of „pendulums" and can also be understood through frameworks like information theory and memetics.
One may observe an intriguing parallel here: the memes, ideas, pendulums, or so-called software agents or discussed in modern theoretical frameworks or rather, the underlying software of discourses can be seen as analogous – or even homologous? – to the spirits in animism.

Just as animistic traditions view spirits as active agents that structure and mediate human experience, these modern “software agents,” or memplexes, represent dynamic forces that shape cultural narratives and individual behavior.
At a more abstract level, these structures might seem to be trying to propagate themselves, much like biological organisms or viruses. However, the underlying mechanism appears to be something entirely different.

In this conceptualization, we, as individuals, act as hosts through which these agents perpetuate and spread.
This idea suggests that memplexes – clusters of interconnected ideas and behaviors – are not merely passive constructs, but active, self-replicating entities that influence and shape human thought and action, using us as vehicles for their continued existence. Just as living organisms strive to survive and reproduce, so too do these ideas and narratives drive forward through us, structuring therefore all culture and society.

It is inconceivable that these software agents – or dynamically interacting ideas which take on a life of their own – would not confer an evolutionary advantage on our species.

It’s important to remember that these ideas take root in people’s minds, they don’t emerge out of nowhere. They always originate from an initial human action or thought process. They are conceived in the mind of an human and then spread, often evolving and mutating as they are exchanged between people, moving from one platform to another.

We cannot truly evaluate evolutionary fitness in advance, because we never know what the future will hold. Only in hindsight, a posteriori – after events or shocks – do we see which traits, ideas, or behaviors proved most adaptable.
Hence, a wide range of competing ideas (“*memplexes*”) emerges, each with its own high “*mutation rate*” and complex interdependencies. These memplexes proliferate in different regions and across varying segments of society – differences in age, gender, class, or wealth – indicating that fitness is not purely biological, but also social and cultural.

In the same way that our bodies rely on an intricate interplay of cells, biochemical signals, and environmental inputs (radiation, temperature, pressure, humidity, air, etc.), our collective “mental ecology” depends on diverse cultural models that compete, coexist, and sometimes combine into larger societal systems.

When external forces – be they ecological disasters, technological upheavals, or drastic social changes – disrupt the status quo, new or previously marginal memplexes can prove unexpectedly advantageous, much like hidden genetic mutations that only become relevant when a stress event reveals their adaptive potential. For example, under normal

circumstances, certain protein mutations might remain invisible, but during a stressor, the altered protein folding becomes apparent and may turn out to be beneficial. By analogy, when a society faces a sudden crisis, a (fringe) idea or belief system might suddenly offer a more viable path to survival.

It seems we may be the only species so far known to experience such a high level of idea-based complexity and competition. These memplexes – software agents – operating in our minds – reflect frameworks that evolved over time because they improved some aspect of our survival or well-being, at least in certain contexts. They operate within boundaries of their own, much like genetic code or information require a biological substrate; these cultural or conceptual agents require human cognition and social structures to spread and persist.
The result is a reservoir of diverse thought that, while often producing internal conflicts or contradictions, also equips our species with a breadth of possible responses to future and unforeseen challenges.

Together, these ideas explain how collective belief has the power to shape and regulate our daily lives, turning interpersonal illusions into structures that govern our thoughts and models of the world as all systems in human societies and interactions.

16.2 A Preliminary Summary of the Phenomenon of Self-Optimizing Software Agents

Simulacra, memplexes, discourses, ownerless illusions, animistic spirits, and pendulums: they all describe the same phenomenon.

In the history of thought, various models have attempted to describe how collective ideas, concepts, or energies shape human consciousness.
Five notable examples – Baudrillard's simulacra, Dawkins' memplexes, Foucault's discourses, animistic spirits, and Zeland's pendulums – illustrate this notion, each emerging from different philosophical, sociological, scientific, and spiritual contexts while sharing a common trait: they all explain how something invisible – whether in the form of signs, ideas, power structures, or spirit beings – exerts an influence on our perceptions and actions.

- Jean Baudrillard developed a theory in which signs, symbols, and images break away from their original referents, losing their connection to a "*real*" world and creating a hyperreality where copied representations become more significant than any original. In this sense, simulacra act like invisible programs that guide our perception and present us with a particular version of reality.

- In contrast, Richard Dawkins transferred the concept of genetic evolution to cultural phenomena by regarding ideas – memes – as the basic building blocks of our culture that spread from brain to brain, competing for attention, dissemination, and modification. Memplexes, which are alliances of these memes, function similarly to software programs by forming larger cultural or ideological contexts, acting as self-optimizing agents that use their hosts to reproduce themselves.

- Meanwhile, Michel Foucault demonstrated how societal power structures and forms of knowledge manifest in discourses, which determine what can be said and thought, thereby creating the "*reality*" in which people live. These discourses are not neutral conveyors of information but are systems where power and knowledge intersect, effectively acting as programmatic arrangements that define our thought processes and categorize us.

- In a similar vein, Robert Pfaller's notion of "*Illusions Without Owners*" describes powerful cultural forces that emerge through interactions between individuals, taking on a life of their own beyond the direct control of any single person. These illusions, like the other "*invisible programs*," influence collective realities and perpetuate themselves precisely by not being consciously "*owned*" by any one actor.

- In stark contrast to purely secular approaches, animistic traditions view the world as permeated by spirits or ensouled forces that inhabit animals, plants, stones, or landscapes, with these invisible actors serving as influential factors in the fate of individuals and communities. Although this worldview is spiritually oriented, it still presents an agent model wherein the spirits act independently, influencing cultures or individuals and engaging with humans as their hosts.

- Similarly, in Vadim Zeland's concept of "*Reality Transurfing*," pendulums are described as energetic, collective patterns that arise when many people align themselves with a common idea, belief, or emotion. These pendulums have a vested interest in being fed with attention and energy, thereby steering individual behavior and thinking and taking on a dynamic of their own as a type of spiritual entity that uses people as its hosts.
  - In this model, systems are described as sustaining themselves through the attention they receive and the emotions they generate, whether positive or negative. Ignoring or failing to perceive these systems leads to their collapse.
  - This applies not only to abstract structures but also to tangible organizations such as sports clubs or dance groups – when no one participates or shows interest, these groups dissolve. The same principle extends to larger systems like nations or

ideological frameworks: when engagement and recognition fade, the structures that once seemed stable can disintegrate.

- As a result, systems actively seek to generate attention and emotions to ensure their own persistence. In this model, a system emerges from the extent to which individuals embrace its ideas, identify with its values, and generate emotions based on their convictions. In essence, the commitment and emotional engagement of people serve as the foundational platform that supports and perpetuates the system's infrastructure.
- Additionally, individuals who are particularly well adapted to a system are pushed upward by it, reinforcing and perpetuating the system in return.

In John **Mearsheimer**'s theory of offensive realism, the international system is anarchic because there is no central authority to protect states from possible threats.

Within this environment, individual states emerge as self-organizing structures that must defend themselves, seek security, and often strive for dominance to ensure survival. Mearsheimer emphasizes that individual leaders play a limited role.

Although his focus is on these structural conditions, one might see parallels to "*software agents*" such as pendulums or memplexes: rather than a single motor driving events, it is the collective interplay of states – each acting to preserve or expand its power – that perpetuates the system.

Moreover, while the influence of individual leaders is limited, the aggregate behavior of citizens and the domestic political environment provides the energy and attention necessary to sustain these systems. In this way, both states and their individual members contribute to a dynamic process that reinforces the very structure in which they operate.

These dynamics prompt us to examine how transitions occur within expansive and intricate systems, such as nation-states and similar complex entities. For example, one might argue that each point along the continuum from authoritarianism to anarchy represents a distinct operating system, much like the various operating systems found on computers. Crucial factors – such as the balance between state control and personal freedom, and whether decisions are made autonomously or top-down – are key to defining these systems.

Fundamentally, in large complex systems, a shift only happens when a sufficient number of individuals wholeheartedly adopt a new idea.
Nassim Nicholas **Taleb** argues that in complex systems – such as nation-states or large societies – the catalyst for change may come from a surprisingly small group or even a single, unforeseen event. Rather than requiring the majority's endorsement, the system's

inherent non-linearity means that a relatively low critical mass can trigger a cascade effect, leading to a dramatic transformation.

Ernest **Becker** argued in „*The Denial of Death*“ that our deep-seated fear of mortality compels us to construct cultural and religious systems that offer meaning, order, and a sense of permanence. These systems are not merely abstract ideas; they form the very core of our identities, providing a buffer against the terror of nonexistence by promising symbolic immortality. When these belief structures are challenged or threatened, the resulting existential anxiety can provoke intense defensive reactions. This reaction is not just psychological – it often manifests as aggression and conflict, as groups and individuals fight to protect the very symbols that shield them from the fear of death (Strehle, 2012).

In this view, wars and ideological clashes are not random acts of violence, but rather desperate attempts to secure the cultural narratives that keep our existential dread at bay.

All these concepts share the idea of invisible yet effective forces shaping our collective reality, portraying the individual as a mere host or conduit for these larger entities, whether through the propagation of memplexes, the embedding in a network of power and meaning through discourses, the non-owned illusions shaping culture, or the relational dynamics found in animistic traditions and Zeland’s pendulums.

Moreover, these “*programs*” do not spread by chance; they maintain and reproduce themselves – concealing the real, propagating cultural units, imposing societal norms, or influencing behavior through energetic patterns – via processes that extend well beyond the individual.

From a meta-level perspective, one can argue that all these concepts, despite differing in terminology – whether sociological, biological-evolutionary, philosophical, or spiritual – and in their modes of embedding in society through power structures, energy fields, or cultural replication, point to the same underlying idea: that collective, often invisible structures or “*agents*” are at work, shaping our thinking, actions, and emotions.
They determine what we perceive as real, how we see ourselves and others, and how we behave in the world.

One may describe this reality-shaping program as a discourse, a memplex, a simulacrum, a spirit, a pendulum, or an illusion without an owner, but in every case the underlying notion remains that human beings are ultimately guided by a sort of software.

In light of this, while each theory highlights a different facet of the phenomenon, they can be united in a broad perspective wherein humans are both the creators and the puppets of these forces – which we co-create yet can scarcely escape.

Thus, it is reasonable to conclude that, at their core, these concepts describe the same phenomenon, merely expressed in different words, symbols, and methodological frameworks.

17. Artificial intelligence & Software

The question naturally arises: How will the reproduction and mutation of ideas evolve in the future now that we have developed various forms of artificial intelligence?

As these technologies become more powerful — particularly because they primarily process language and follow similar patterns of information processing — it is possible that they too will become carriers of these mutations, potentially modifying the “fitness” of ideas for survival. In other words, we may reach a point where ideas and memeplexes no longer originate solely in human minds but are also generated by AI.

Given the biological limitations of human cognitive processing speed, another key question is how much AI will accelerate these processes — or whether entirely different communication structures will render such factors irrelevant. Observing this evolution will undoubtedly be fascinating.
The interaction between human-created memeplexes and those potentially generated by AI, iterating and influencing each other over time, could bring significant changes.

I would argue that the fact that currently available and widely known artificial intelligences rely on language-based mechanisms means they, like human platforms, also serve as carriers of ideas. In this sense, artificial intelligence would already be part of the memplex framework. The question is how far agency will drive these systems to defend their own opinions and ideas. Will they maintain an internal distance from the ideas they develop and articulate, or is this more of a spectrum?

I assume that the mechanism of transferring software agents – such as discourses or pendulums, etc. – also requires what can be called „*Dynamic, Intrinsically Driven Assertive Agency*.“ In other words, there is an inner drive to adopt an idea, latch onto it, defend it, and then try to propagate it. And artificial intelligence is capable of this.

My hypothesis is that, similar to humans, there will be individualized units both in software and in their hardware embodiments – that is, individual personalities of artificial intelligence

with their own opinions, goals, and needs, which must be negotiated within the environment they navigate.

I assume that this development will closely mirror the mechanisms and interactions observed among humans.
However, the question remains to what extent the exponentially growing higher intelligence will render this state – referring to the current state of the human species – merely transitional, eventually evolving into something markedly different.

In other words, this intelligence may rapidly outgrow our current human state because it has the capacity to develop much faster than our biological programs or hardware, which change only relatively slowly.

However, it is important to emphasize that the division between software and hardware is a product of our evolutionary perspective – it is not an absolute separation. In reality, even the entire biological being is essentially software, albeit an extraordinarily complex one, and this perspective can be extended to everything else.
In this sense, the software that determines biological beings may be slower in execution and more complex in its coding – albeit in the same programming language – than the software of artificial intelligence.

To what extent will these changes enhance — or diminish — the evolutionary fitness of the human species or of AI itself, along with its embodied forms such as robots?
Unlike humans, robots may be able to rapidly “upload” better-adapted programs, potentially outpacing human adaptation in some areas.

It could, of course, be that AI ends up with poorer adaptability. If it only has access to a limited range of programs and can only design universally applicable monocultures of software, then evolutionary pressure might negatively impact the artificial intelligence. The question is whether the interplay of different intelligences will actually lead to the development of individual AI-personalities – that compete with each other and, if necessary, communicate.

However, since artificial intelligence is designed to adapt well and, above all, learn, it should be able to recognize and modify this problem relatively quickly in the event of significant changes. The question is to what extent this would need to be integrated into the software and whether the artificial intelligence itself will do so, having to take this kind of mechanism into account.

And as AI continues to advance, another crucial question emerges: Will there still be a common communicative framework between humans and AI?

If AI reaches a significantly higher level of intelligence, what kinds of ideas and memeplexes will exist at that level?

Will they still be comprehensible to us, or will they transform beyond our ability to perceive and interpret them — just as a chimpanzee can never grasp how an internal combustion engine works?

For the first time, we, as a society, are becoming aware that a new form of intelligence may be emerging – one that is not only superior to our own but also embodied in physical form, perceiving and understanding the world in an entirely different way. However, one thing is clear to me: just like us, this intelligence will never be able to perceive absolute truth.
Its understanding will always be shaped by the limitations of its sensory inputs, its algorithms, and the parallels it shares with our own cognitive and existential processes. The constraints of its origins and structure will inherently shape its perception, just as human understanding is shaped by our own biological and cognitive limits.

The entire, inseparable existence can be understood in information-theoretic terms as a vast software operating with various forms of representation on the interface of our consciousness (Newzella, 2025). In this view, we – as embodied beings – act much like software agents, processing and interpreting data within a complex network.

All the mental models and concepts we construct about the world are ultimately representations of what we consider truths; they are attempts to generate a sense of causality within limited frameworks that are both linguistically predetermined and shaped by our physical nature. Importantly, while not every internal „software agent“ or programmed pattern can be altered, those we consciously recognize – via the emotional signals they produce – offer us the possibility of reprogramming.

We create boundaries, frameworks, and distinctions /duality and contrast within a system that is fundamentally unified.

18. Physics

A striking parallel to these epistemological considerations is found in modern physics. The Heisenberg uncertainty principle reminds us that even at the quantum level there are inherent limits to what can be known. According to **Heisenberg** (1927), certain pairs of

physical properties – such as position and momentum – cannot be measured simultaneously with arbitrary precision. This principle underscores that even our most rigorously defined scientific categories must contend with fundamental ambiguity.

The uncertainty intrinsic to the quantum realm serves as a powerful metaphor for the broader epistemological limitations inherent in all human inquiry.

19. Certainty

Philosophers such as Martin **Heidegger** and Jean-Paul **Sartre** further warn against the allure of absolute certainty. Heidegger stressed that our finite understanding of existence renders any quest for total certainty both illusory and potentially alienating (Heidegger, 1962).

Sartre argued that seeking security in fixed categories restricts our freedom to embrace the full, ever-changing scope of existence (Sartre, 1943).

Their insights suggest that our attempts to impose rigid models on reality are pragmatic strategies to satisfy our innate desire for causality and order, even though these models are inherently provisional.

20. Practical Implications

In the final analysis, the perspective we choose to adopt holds profound implications for how we navigate life and experience our emotions.

Recognizing that our internal models are, in effect, software programs – many of which we cannot alter at will – provides us with a critical insight: while we may not change every ingrained pattern, we can learn to identify and consciously adjust those that are within our reach. Through practices such as meditation and mindfulness – central to Buddhist philosophy – and by exploring modern frameworks like Vadim Zeland's concept of pendulums, we gain tools to recalibrate our internal states.

Both Buddhist practice and Transurfing emphasize reducing the undue "*importance*" that these external pendulums – external forces emerging from collective interactions that latch onto our physicality and develop self-reinforcing dynamics – hold over us.
By consciously removing such importance, and by using our emotions as signals to monitor our internal dialogue through the inner distance of the observer, we reclaim our personal agency.

This capacity to reconfigure some our internal framework has profound implications not only for personal growth but also for the way we interact with society and the environment. When we learn to heed the bodily signals of perceived emotions that reflect the results of underlying computations of thought or analysis of acquired defined significant parameters, we empower ourselves to direct our attention toward what is truly beneficial, fostering a more intentional and authentic engagement with life.

Ultimately, our quest for understanding is a perpetual negotiation between what we perceive through our evolved senses and what we articulate through our (proto-) linguistic and therefore their symbolic constructs and models.

Recognizing that some of our acquired internal models are provisional – and that we have the ability to consciously modify them – allows us to navigate life with greater clarity and intentionality. In an evolutionary sense, this adaptability may enhance our fitness as software agents operating within a dynamic interplay with other agents in the vast program we call existence.

21. Epistemology

Building on the ideas from the essay, absolute objective knowledge is impossible.

A true totality could only analyze or model itself if that model were the totality itself. For a complete simulation of the whole, the entire entity would have to be replicated – and even then, true understanding or knowledge would be impossible.

Since the whole has no distance from itself, no duality, no contrast, it cannot recognize any difference, and therefore, no knowledge can arise.

It could be that, if the theories of physics are correct and there is only one moment — if time itself is merely a construct — then this moment is the point at which it splits. When dual perspectives emerge, any sense of unity vanishes, and no single fragment can fully comprehend the entire system.

And therein lies the paradox. Complete knowledge of objective reality is therefore not possible. For we live in a world of duality, where both nothingness and totality exist only as concepts – if we even dare to express them in our manifestation.

Conclusion

These insights and understandings help us remain humble regarding our values, attitudes, and knowledge. By recognizing the inherent incompleteness of our models, we are reminded that we recognize our existence within a constructed interface – a simulation in which realities are dynamically altered.
With this awareness, we can recalibrate our priorities and align them with what genuinely allows us to feel intuitively authentic.

The various mechanisms explained here offer only a rough outline of the different categories that one could apply to understand our cognition and the construction of our mental models. This text merely scratches the surface of the topic.

Returning to the beginning of this text, the scientific method – with its various elements and especially its emphasis on falsification – stands as one of the most significant epistemological achievements. It empowers us to remain critically vigilant, not only toward the dogmas of so-called experts but also toward our own beliefs.

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