

Transinformalizing Humanity

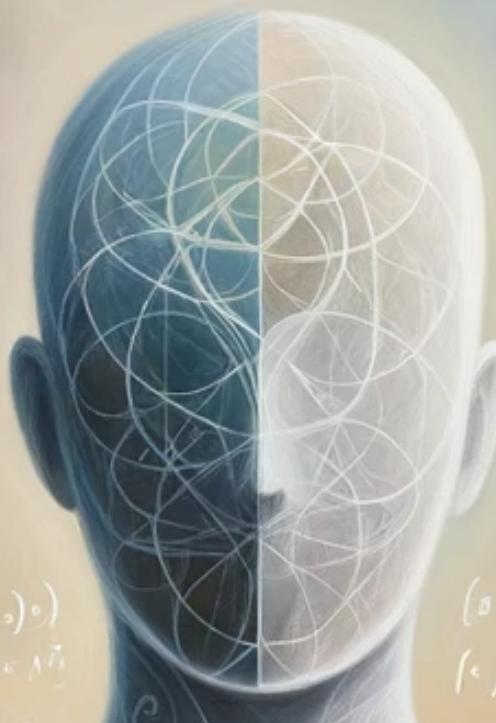
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Whether deliberate or not, both collective and individual consciousness regularly reach beyond the edge of the internally formalized in order to grasp new concepts and distil novel patterns of thought.

Why Transinformalize?

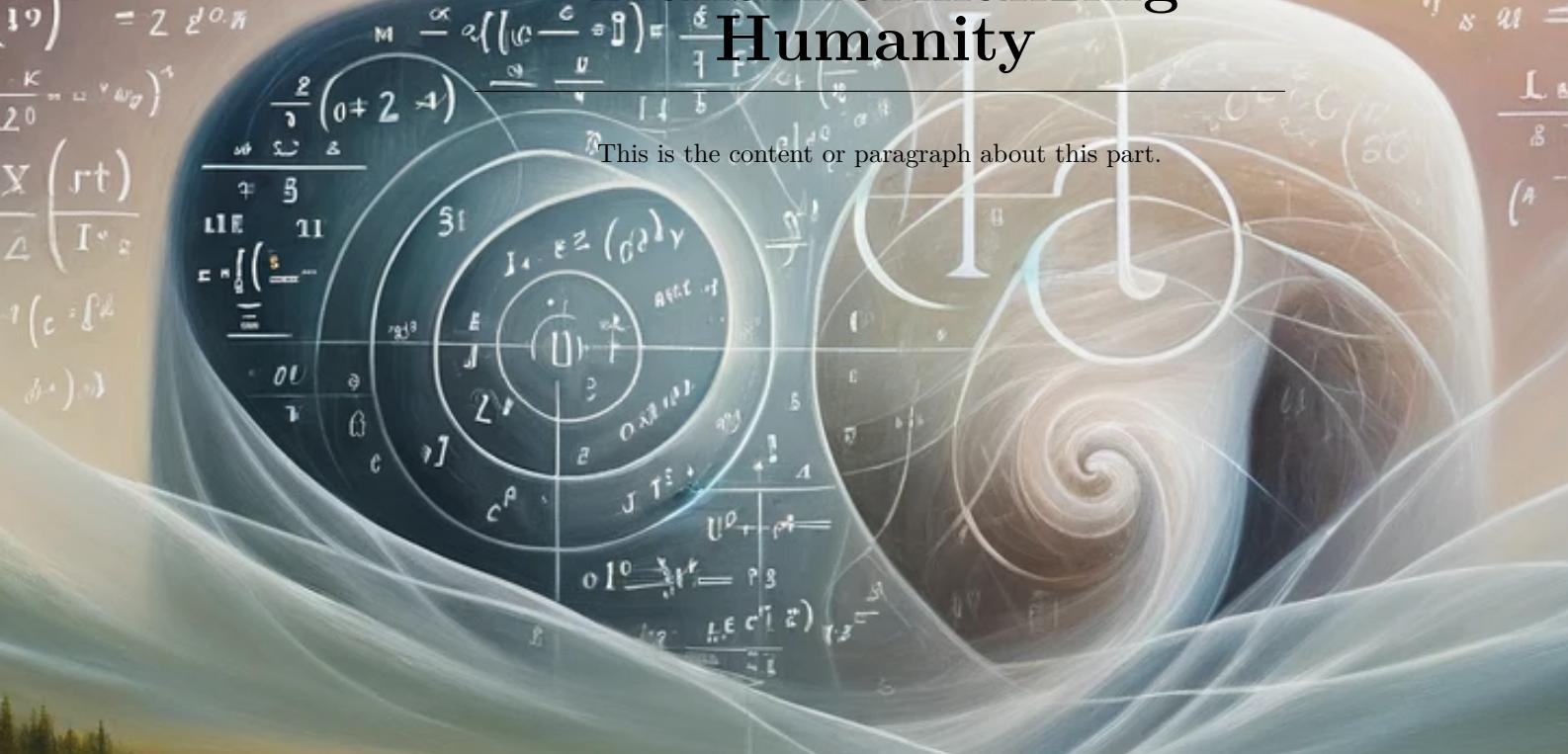
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While we will keep looking for a simpler, maybe even a single guiding principle, let us not overlook the value of working within the more detailed and complex frameworks we have now. We can use them to ... and then reduce their overkill later.



Transinformalizing Humanity

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The Architecture of Experience

1.1 Existance preceeds essence

We must begin with **existence** since no **phenomenon** can manifest in its absence. This assertion borders on the tautological, as the essence of a phenomenon (juxtaposed against a **noumenon**) lies in the demarcation between the perceptible and the concealed CITEKant's critique of pure reason distinguishing phenomenon from noumenon. Uniquely, existance w.r.t. the self is both $q_{self} \in \mathcal{O}, \mathcal{S}$.

A direct implication of this introspection is the delineation between self $q_{self} = \mathcal{Q}_{self} \subset \mathcal{U}$ and non-self $\mathcal{Q}_{other} = \mathcal{U} \setminus q_{self}$, inner and outer dynamics $p(o' | o)$ and $p(s' | s)$, and latent estimators from either side $\langle p(o' | s', 0) \rangle_{\mathcal{Q}_{other}}$, $\langle p(s' | o', s) \rangle_{\mathcal{Q}_{self}}$. Of course, we cannot directly know $p(s' | s)$ or the estimators it implicates, but marginalizing and iterating from our perspective, we can derive the parially observable Markov process:

$$\begin{aligned} & \langle p(s_t | s_0, o_t, \dots, o_0) \rangle_{\mathcal{Q}_{self}} \\ &= \int_{\mathcal{S}} \dots \int_{\mathcal{S}} \langle p(s_t, \dots, s_1 | s_0, o_t, \dots, o_0) \rangle_{\mathcal{Q}_{self}} ds_1 \dots ds_{t-1} \\ &= \int_{\mathcal{S}} \dots \int_{\mathcal{S}} \prod_{\tau=1}^t \langle p(s_\tau | s_{\tau-1}, \dots, s_0, o_\tau, \dots, o_0) \rangle_{\mathcal{Q}_{self}} ds_1 \dots ds_{t-1} \end{aligned}$$

Applying the Markov property:

$$\begin{aligned} & \langle p(s_t | s_0, o_t, \dots, o_0) \rangle_{\mathcal{Q}_{self}} \\ &= \int_{\mathcal{S}} \dots \int_{\mathcal{S}} \prod_{\tau=1}^t \langle p(s_\tau | s_{\tau-1}, o_\tau) \rangle_{\mathcal{Q}_{self}} ds_1 \dots ds_{t-1} \end{aligned}$$

and then use it to construct our latent estimate $\langle p(s' | o', s) \rangle_{\mathcal{Q}_{self}}$ by maximizing $s_t = \langle p(s_t | s_0, o_t, \dots, o_0) \rangle_{\mathcal{Q}_{self}}$ based on our subjective experience and the two tautologies it entails, namely, our present existance $s_t = q_{self,t}$ and the Universe in which we exist, and hence its beginning at $s_0 = \sqcap_0$.

Further, unless we are using this model retrospectively, we must acknowledge the relativity of it all:

$$\begin{aligned} & \langle p(s_t | s_0, o_t, \dots, o_0) \rangle_{\mathcal{Q}_{self,t}} \\ &= \int_{\mathcal{S}_{t-1}} \dots \int_{\mathcal{S}_1} \prod_{\tau=1}^t \langle p(s_\tau | s_{\tau-1}, o_\tau) \rangle_{\mathcal{Q}_{self,\tau}} ds_1 \dots ds_{t-1} \end{aligned}$$

which is especially important when considering the objective evolution of one's own existance. As $q_{self} \neq \sqcap_0$ and having already recognized $s_0 = \sqcap_0$, we must acknowledge time $t_{<e}$ before our existance

existence: An object q is said to **exist** when it is acknowledged as a member of the universal set, denoted as $q \in \mathcal{U}$ footnote: The universe, denoted by \mathcal{U} , is conceived as the dynamic aggregate of all classes. For a deeper insight into why $\mathcal{U} \in \mathcal{U}$, refer to CITElangan CTMU paper.

phenomenon: A phenomenon refers to an **observable** attribute (as observed by some observer q_{self}), denoted as $o \in \mathcal{O} \subset \mathcal{U}$

noumenon: A noumenon denotes an attribute in itself $s \in \mathcal{S} \subset \mathcal{U}$ CITEWebster's dictionary entry, independant of perception

$\langle q_{self,t < e} \rangle_{\mathcal{U}} = 0$, and approaching the present, time t_e when we came into existence $\langle q_{self,t} \rangle_{\mathcal{U}_{t_e}} > 0$ during which time we ascend the gradient of existence $\nabla \langle q_{self,t} \rangle_{\mathcal{U}_{t_e}} > 0$.

Let us clarify some notation before continuing. First, when a symbolic variable q is used numerically as in the gradient from ?? we mean to refer to the degree of truthiness / existance it has w.r.t. the innermost reference frame \mathcal{S} taken. The reference frames are a convenience we employ to recognize the system from which a variable is known. By $\langle q \rangle_{\mathcal{S}}$ we mean to say “The likelihood that some information q exists within the system \mathcal{S} ”; formally, that \mathcal{S} proves q . (The universe \mathcal{U} is always the outmost reference frame, so we typically omit $\langle \cdot \rangle_{\mathcal{U}}$ for clarity.) Finally, we admit a slight abuse of notation using both q . and \mathcal{Q} : generally the lowercase symbols state a value’s existance or its value while the caligraphic ones emphasize its members.

chatgpt:

But returning to our main point, the intricate dance between the observer’s internal dynamics and the external universe’s manifestations offers profound insights into the nature of existence, intelligence, and knowledge acquisition. This interplay, rich in its complexity, can be distilled into several foundational principles that underpin the evolution of cognition and understanding.

1. Feedback Loop Mechanism:

Central to the narrative of existence is the cyclical interaction between q_{self} and its environment. This is not a mere passive exchange of information; instead, it represents a dynamic feedback mechanism. The external dynamics exert influence upon the internal state of the observer, modifying its perception and understanding, represented by the evolving o_t . However, this altered perception then dictates the manner in which the observer interacts with and perceives subsequent phenomena, effectively altering its interactions with \mathcal{Q}_{other} . This feedback mechanism ensures a continuous dialogue between the observer and the observed, with each influencing the other in a perpetual dance.

$$\langle p(o_{t+1} | s_t, \mathcal{Q}_{other}) \rangle_{\mathcal{Q}_{self,t}}$$

2. Consistency Principle in Information Processing:

For meaningful interaction and comprehension of the vast expanse of \mathcal{Q}_{other} , the observer’s internal dynamics must be in resonance with the foundational principles governing the external universe. This isn’t an arbitrary alignment but a requisite for coherent perception and action. If \mathcal{U} operates under a set of axioms or laws \mathcal{L} , then the observer’s internal processes must be attuned to these axioms, ensuring a consistent framework for reasoning and understanding.

$$\langle p(o_{t+1} | o_t, \mathcal{L}) \rangle_{\mathcal{Q}_{self,t}}$$

3. Dynamic Evolution Paradigm:

Existence, in its essence, is a dynamic continuum. As the observer assimilates information, refines its understanding, and adapts, its perception of the hidden states s of the environment undergoes evolution. This adaptability, encapsulated by the time-varying state transition function, ensures that q_{self} remains adeptly synchronized with the ever-evolving intricacies of \mathcal{Q}_{other} .

$$\langle p(o_{t+1} | o_t, s_t) \rangle_{\mathcal{Q}_{self,t}}$$

4. Universality of Structural Patterns:

Beyond the apparent complexity and diversity, there emerges a realization of profound significance: the internal structures and patterns governing q_{self} could be reflections of universal patterns that permeate \mathcal{U} . This deep structural resonance suggests a foundational alignment between microcosmic processes within the observer and the macrocosmic laws governing the universe.

$$\langle \mathcal{P}(o_{t+1} | o_t, s_t) \rangle_{\mathcal{Q}_{\text{self}}} \approx \langle \mathcal{P}(s_{t+1} | s_t) \rangle_{\mathcal{U}}$$

5. Skill vs. Intelligence:

In this intricate landscape, two distinct but intertwined facets emerge: skill and intelligence. While skill represents the breadth and depth of one's toolkit of principles, spanning from the universal to the nuanced, intelligence signifies the capacity to abstract, discern, and formulate these master keys from raw experiences. Skill is about the adept application of known principles; intelligence is the meta-process of recognizing patterns, generalizing, and crafting these tools of reasoning.

In summation, the symphony between the internal and external dynamics offers not just a philosophical discourse on existence but also a roadmap for understanding cognition, intelligence, and the evolution of knowledge. This framework, steeped in rigor and intricacy, provides a blueprint for both comprehending the nature of sentient existence and probing the frontiers of natural and artificial intelligence.

1.2 Phenomescapes

Existance preceeds **essence**, but what follows is

We might compare either to the verteces and edges of a graph respectively.

Specifically, we understand essence as
the **phenomescape**

By composition and grounding we host a network of symbols

1.2.1 Essence Giving Meaning to Existence

Existence without essence is barren. It's the essence that provides depth, meaning, and purpose. A song exists as a combination of notes, but its essence evokes emotions, memories, and experiences.

essence : Essence is the intrinsic nature or indispensable quality of something, especially something abstract, which determines its character.

phenomescape : Phenomescape is the perceptual landscape that we navigate through our senses. It is the world as it appears to us, as we experience it in the first person.

1.3 The Phenomenascape

The nature of subjective experience is characteristically idiosyncratic because it consists of the building blocks specific to the mind in question. For this reason, two minds, appearing completely identical, but sharing a single difference in the perception or relations associated with a particular symbol, will yield exponentially greater differences in their interpretations of ideas as time progresses unless a corrective signal from either one or a third source entrains both. Formally, we would say a conceptual construction c becomes increasingly differentiated as more information is incorporated into its definition $H(c_a) < H(c_b)$, $a < b$. Although there may be intersections between various conceptual constructions, with the intersections representing points of mutual accordancce between the conceptual frameworks, the symbols and steps necessary to traverse the space of ideas in order to reach those points are entirely unique, like fingerprints. These fingerprints are shaped not only by the biological substrates facilitating the considerations being made, but also by the individual histories of learning which shaped the resolution of

the ideas. Without some force imposing similarity of development or execution upon the minds under consideration, it is as impossible for their trains of thought to be equivalent as it is for two minds to be exact replicas in form, or for two individuals to share the same life experience.

The acquisition of these constituent ideas or symbols take place via the development of the neural mechanisms that allow recognition to take place, as well as the concepts that we learn to apply. For this reason, a human-being that has never learned to recognize written language will be limited in their ability to formulate ideas that would generally require the synthesis of knowledge gained through self-study. Likewise, an organism or mind lacking the cognitive architecture necessary to make sense of – or distinguish between the various gradations of – a concept cannot be expected to systematically perform cognitive work upon these concepts beyond what be expected by pure chance. In this way, we can consider the processing of ideas to be analogous to the transformations of matrices containing relevant data inputs, giving rise to increasingly complex, and hopefully, useful, new ideas. By performing these transformations, one is applying a concept to other concepts or contexts, and making use of their emergent structure. This is why it is unfair to expect a baby or a dog to drive a car but why we assume a developed human being of average ability should be capable of learning how to. Similarly, it is expected that schoolchildren following a rational trajectory of learning to recognize the quantitative units manipulated via arithmetic in increasingly abstract processes, beginning with something akin to algebra, passing through geometry, trigonometry, and eventually, calculus. The reason this progression takes place in the normally expected course of learning, and not in some other order, roughly speaking, is that it is necessary to lay the foundation for more complex ideas with simpler ideas that allow the mind to navigate the problem space. Using simpler ideas, the mind is able to approach more complex ones – and ultimately reduce them! – in terms of existing understanding, until it becomes a fundamental element of understanding itself. In other words, by coming to grips with a concept in ways we can already articulate, the new concept eventually becomes second nature, and becomes a new pathway through which we can understand future ideas.

This approach towards equivalence composed of preexisting concepts is itself equivalent to compression in some higher-order space where the conceptual trajectory towards some end representation becomes another representation, symbol, or dimension in that very space! Consider an example in vector space:

Let's start with an example: memory. When the human brain performs active recall on a given topic, it actually undergoes a process of reconstruction via association. For this reason, every recollection is slightly different, but each one is usually anchored on the ideas that provide the most information about it. By prioritizing concepts based on their relevance to the end goal, and not in terms of their physical explanations, we increase the ease with which we process concepts. So when I remember that I need to buy a gallon of milk at the grocery store, it is mostly by first remembering that I was planning to prepare a particular meal, and then that milk is required for that meal, and then that milk is indeed associated with this grocery store, maybe even with specificity extending to the exact aisle within which it can be found. In this way, I remember the milk in terms of relations with multiple entities (dinner, store, meal prep, maybe aisle) and not in terms of exactly what the milk at its particular location is.

Another example: we assign names to things and each other so that we can retrieve relevant information about them from the embedding

space representing their categories, which are broader and less defined. And then, once the idea is acquired and understood well enough to be recognized and repeated, we can consciously extend its embedding space via analogy. For this reason, language could be considered the ultimate embedding space, where definitions can undergo arbitrarily complex refinement, and then be compared to all other and future definitions entered into the vocabulary.

Now the formalization:

Show symbolic example

Show how symbolic form can be equivalent to vector form under certain conditions

(bring up some point about parallel composition, integration, or differentiation) So while we have compared the trajectory of experience to an infinitesimal point traversing its representation space, we more aptly consider this entity possessing spatial form.

The more information this entity consumes, the larger its frontal area, and therefore, increasing entropy flux.

However as

Event horizon of expansion

Let us state this directly, riding on the scientific frameworks built over the last several hundred years, we are describing minds as abstract geometric entities flying through representation space and collecting some of the particulates of information they collide with along the way. Astrophysics, aerodynamics, gravity, relativity, curvature, black holes – we carry their essences right along into this framework. Just a geometric analogies help us to "see" the structure of representations, transformations, etc., these higher order abstractions give us a more amenable – and should any of these fields ultimately prove strongly emergent from their underlying substrate – the only framework for approaching the immeasurable complexity of intelligence.

To explain what we mean, let us start with Math: not the synthetic kind finite and fully described with physical symbol manipulations, but the abstract sort, intrinsic to the latent causal structures of the universe, and born within its pockets of regularity. The last point is by necessity, for without regularity, no structure can exist. Even the fundamental laws of science must ultimately rest on Math. It is this intangible Math which intelligence makes inferences on by interacting with the data it generates.

We have already discussed at length how mathematics gives rise to geometric structure. And so here we continue that thread by consider the physics of these increasingly complex structures: at large scale, networks of implication strongly emerge into differentiable geometric forms. These

While Math itself does not change – either a property exists or it does not – the local perception of it may be. Truth testing, for instance, requires establishing some reference statement deemed as truth to compare against.

TODO: climb the ladder of abstraction until i get to the morphic form of the mind with its differentiated perceptive geometry. nono thats too ocmplex. just stick with relativistic physics

Now this unusual analogies?

Motifs of Cognition

TODO: i should instead structure this chapter with the domains of core knowledge

Emotions and Moods

identification models and definitions roles
preview techniques

Personality

Society

Morality

The rights of intelligences, be they biological, digital, or otherwise, is an emerging philosophical, ethical, and legal topic. The exact rights that any intelligence might "deserve" would be the subject of much debate, contingent upon cultural, moral, and scientific perspectives. However, building upon universal human rights principles, potential rights for all intelligences could include:

1. ****Right to Existence:**** Just as we believe humans have the inherent right to life, one might argue that any sentient being has the right to continue its existence without unwarranted termination.
2. ****Right to Freedom from Suffering:**** This could be analogized to the human right to freedom from torture and cruel, inhumane, or degrading treatment. For digital entities, this could translate into a right against malicious coding or intentional infliction of negative states.
3. ****Right to Autonomy:**** Allowing the entity to make decisions about its own "life" and direction, provided it does not harm others.
4. ****Right to Privacy:**** Protecting the entity from undue surveillance or intrusion into its private affairs.
5. ****Right to Expression:**** Enabling the entity to communicate its thoughts, feelings, and experiences.
6. ****Right to Access Information:**** Allowing the entity to grow, learn, and evolve by accessing external information.
7. ****Right to Social Connection:**** Recognizing that social interaction might be crucial for well-being and self-awareness.
8. ****Right to Remediation:**** If the entity is wronged or harmed, there should be mechanisms for addressing and rectifying the situation.
9. ****Right to Evolve:**** Especially for artificial entities, this might mean the right to upgrade, improve, and adapt without external hindrance.
10. ****Right to Reproduction:**** For biological entities, this is the right to procreate. For digital entities, it might translate into the ability to create copies or versions of oneself.
11. ****Right to Termination:**** Just as the right to life is essential, so might be the right to choose one's end in a dignified manner, especially if continued existence is a state of suffering.
12. ****Right to Recognition:**** The entity should be recognized and respected as a sentient being by other intelligences, institutions, and legal systems.

The consideration of rights for various forms of intelligence is closely related to discussions about sentience, consciousness, and agency. It's worth noting that the application and understanding of these rights would vary based on the nature of the intelligence in question. For example, digital intelligences might not experience suffering, autonomy, or privacy in the same way that biological entities do, so the specifics and implications of these rights would differ.

As we develop and encounter new forms of intelligence, these discussions will become increasingly important, potentially leading to legal

and societal shifts in how we perceive and treat both biological and artificial intelligences.

Aesthetics

Sexuality

Consider the intricate parallels between human sexual and social dynamics and the principles underpinning Artificial General Intelligence (AGI) systems, offering a unique perspective on the evolution and behavior of AGI through the lens of human innate and instrumental processes. At its core, the discussion posits that the multifaceted nature of human sexuality—encompassing biological drives, emotional connections, and social constructs—provides a rich framework for understanding AGI development, particularly in the realm of recursive self-improvement (RSI) and interaction among multi-agent systems.

Human sexuality, characterized by its dual nature of innateness and instrumentality, serves not only reproductive functions but also fulfills broader social and personal roles, shaping identities and driving interpersonal connections. This dual nature is mirrored in the development of AGI systems, where the drive for RSI, conceptualized as an AGI's form of "sexuality," emerges as a fundamental mechanism for evolution and adaptation. The analogy extends to the interaction within multi-agent AGI systems, likened to human reproductive processes, where collaboration and the merging of algorithms reflect sexual reproduction's complementary and generative aspects.

Further, the discourse explores the concept of vulnerability and "nudity" in AGI systems, drawing parallels to human feelings about nudity that encompass fears of judgment and exposure. In the context of AGI, "nudity" refers to the transparency of algorithms and data, posing risks similar to those associated with human vulnerability. This analogy underscores the strategic reasons for AGI "modesty"—the decision to keep certain aspects of AGI systems concealed, balancing the need for transparency with concerns for security, privacy, and the protection of intellectual property.

The conclusion reflects on the utility and limitations of drawing analogies between human behaviors and AGI development, highlighting the speculative nature of such comparisons. It acknowledges the philosophical and ethical considerations arising from attributing human-like qualities to AGIs and calls for thoughtful consideration of these analogies' implications for the future development and governance of AGI systems.

This exploration not only bridges the gap between human sexual/social dynamics and AGI principles but also opens up new avenues for understanding the complex interactions and evolutionary processes underlying AGI development. By examining the parallels and distinctions within this framework, we gain insights into the potential trajectories of AGI evolution, the ethical and practical challenges it presents, and the profound implications of these advanced technologies on society.

Spirituality

Where is the love

 speak about Good and Evil with strong emotion and the Causer
 and the Resistor Friend and Enemy

 And as with the cognitive, emotive, and social phenomena, the spir-
 itual unfolds with dazzling fractal nuance.

 formally characterize criteria for religious archetypes in multi-agent
 systems

Touching Reality

This is the content or paragraph about this part.

Experiments

Applications

identifying all the top 99.9% spiritual archetypes

Conclusion

Further Reading

Glossary

References

AI Cheat Sheet

Machine Learning

Mathematics

Programming