Psychoanalysis is for the Stars:
A review of "The Stars are not for Mankind? A prequel to Existential Intelligence", by
Nitin Uchil and Shreekumar Vinekar

-Part 1-

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In *The Stars are not for Mankind? A prequel to Existential Intelligence*, Uchil and Vinekar propose an alternative to Elon Musk's vision of humans inhabiting distant galaxies as the motivation "to wake up in the morning and think the future is going to be great." Drawing from the wisdom of sages, the authors offer more reliable grounds for hope: our mastery of "inner space" and the capacity (as Freud might have put it) to love and to work in the present on behalf of our planet and all its sentient creatures. Eschewed in what Uchil and Vinekar envision is the colossal expenditures of human effort and resources our species could waste in preparing for some dystopian future when Humanity must flee to interstellar colonies to escape a dying Earth. The warning offered here is of the potential irony in self-fulfilling prophesy and the consequences of enacting an ever-recurring narrative of science fiction.

When it comes to interstellar exploration, however, Uchil and Vinekar are no less enthusiastic than Musk. The difference here consists in what - or better, "who" - does the actual travelling. For them, the surprising answer is "Existential Intelligence" (EI), a super form of potentially sentient artificial intelligence that evolves both physically and mentally, with the capacity to be "extensions of human intelligence as well as human consciousness in the vast space, millions of light-years away from this earth." Thus, they consider the *The Stars* to be a prequel "essay on Humankind's perpetual quest to explore space: its dreams, its beginnings, despondency, disappointments, failures, a new revival and a possible bright future."

The vision proposed by Uchil and Vinekar is unapologetically grandiose by design and readers should be forewarned that the interdisciplinary scope and conceptual ground can be somewhat dizzying for non-experts in the fields of AI and information technologies. As one who does well to manage my own *Word* documents, I found that a couple of rereads and several *Google* searches of unfamiliar concepts was required to obtain at least a beginner's grasp of the general ideas. I would refer interested readers to Uchil's companion article, *Tapestry for Computational Cybernetics: a blueprint for orchestrating Human-Machine interactions for Collective Collaboration* https://nitinuchil.wordpress.com/computational-cybernetics-fabric-preview/ where he lays out in greater detail a working model for applying cybernetics to the science of artificial intelligence. The model proposed there is no less than a "blueprint to enable the future orchestration of Human-Machine interactions to make them panoptic, integrated and pragmatic." It is based on this blueprint that Uchil and Vinekar have ventured to construct a means of integrating a plurality of information domains broad enough to provide the soft- and hardware foundations for a safe, ethically implemented, self-replicating, evolving sentient species of AI. Scarcely any domain of human inquiry is considered irrelevant to the authors, including clinical psychiatry, Indian spiritual philosophy, metaphysics and mythology, anthropology, genetic programming, Nanotechnology, Quantum Computing, cognitive and Gestalt psychology, Western secular philosophy… and, not least of course, psychoanalysis.

If for Uchil and Vinekar actual human journeys to the stars are not for mankind, it is nonetheless

their claim that the insights of psychoanalysis are indeed *for the stars*. The authors claim an understanding of human consciousness, unconscious states, dreaming and other basic psychoanalytic concepts are advantageous in the design of AI machines and, ultimately, of EI. Such an advantage they insist would be of great value given the ethical issues and potential dangers associated with advances in artificial intelligence.

Jugalbandi

The integration involved here is more than a quantitative accumulation of academic disciplines and wisdom traditions. The authors' methodological approach draws from the Hindu musical concept of *jugalbandi*, a kind of intentional dialectic or creative interplay between complementary partners engaged in a creative process. Art and Science - viewed respectively as the non-rational and rational aspects of human being as such - are intended to be engaged here in this jugalbandi. "We suggest that the notion of 'being', and, consequently, Artificial Intelligence needed to create a 'being', are intertwined with art and science - art providing its essence and science its form. Art and Science are partners in the Human Journey." Toward this end, there is a sometimes-vertiginous merger of interdisciplinary technical references, freely associative harmonizing of scientific concepts and humanitarian ideals, metaphysics, and mysticism, in a manner that is likely to challenge readers accustomed to Cartesian binaries, the "either/or" of Western linear thinking. While the ultimate composition envisioned here is more than explicit in detail, there are nonetheless as many improvisations and varying riffs as recurring melodies and rhythms … as much jazz and sitar as classical guitar.

Given their creative method, Uchil and Vinekar convey a paradoxical or dialectical epistemology; the result appears to be a blend of subjective idealism (Berkley's "It is impossible to separate the being of a sensible thing from its existence as a perception of a perceiver. There can be no unthinking substance or substratum of ideas.") and critical realism ("but there should be further discussion about objects that do exist without their image in the perceiver"). In any case, *The Stars* certainly throws down a gauntlet against 20th Century radical relativist and postmodern trends that eschew all formulations of universals and reduce such categories as *human nature* to "a conditional state of value defined by society". Freud's *primary* and *secondary* mental process concepts are introduced alongside the philosopher F. J. White's construct of *existential personhood* to underscore the authors' stance that the dignity of human personhood derives from "a state of being *inherent* and *essential* to the human species." (italics added) A welcomed reassertion of nomothetic lawful approaches to answering some of the most universal questions of human experience seems to be operating here. Still, if there is an essentialist reality assumed in the epistemology of Uchil and Vinekar, it is certainly not any simple kind:

> Furthermore, we should allow for the possibility that there may be "objects" that exist beyond the four dimensions currently known to science. This statement may sound like science fiction at this time. Nonetheless, we propose that the model postulated by the mathematical genius, Srinivasa Ramanujan, which allows for the possibility of 26 dimensions, and the related hypothesis of multiple co-existing Universes, are important for our considerations here.

Suffice to say, diligent readers will find an audacious adventure in creative imagination at the intersection of AI technology, scientific inquiry, and human subjectivity.

If Uchil and Vinekar offer an alternative vision to Musk's interstellar colonies created to escape a dying Earth, it is not because they underestimate the possibility that humanity could engineer such a dreadful fate. Rather, it is to forestall the self-fulfilling prophesy of this post-apocalyptic narrative that they propose their post-AI and potentially sentient vision of EI. Afterall, they

document the good reason for fear and pessimism in the face of AI creep, especially the ostensibly infallible and super-intelligent kind. They remind us that it was AI that caused an erroneous influence of stock prices that triggered the 2010 Flash Crash of the stock market. Likewise, there is more than anti-human metaphor to consider when one thinks of self-driving automobiles making lethal "misinterpretations" of obstacles in the road ahead. It is not without reason that we might, as the author's say, have a "foreboding" about the consequences of "technological singularity" or fears that "super intelligent 'things' will displace us and render us humans insignificant." Statistics show that human work force replacement by computers and robotics is already a major factor in today's economy. And then there are the military or rogue applications already in operation, where AI "can penetrate the specific targeted IT networks in other countries and incapacitate electrical grids or large areas of power supplies or paralyze nuclear plants by planting viruses."

Uchil and Vinekar offer an interesting evolutionary perspective that seems hopeful:

> *Yet, the physical as well as the digital space is vast and to think that superintelligence would evolve just to nullify us is perhaps being overly human - our catastrophically extreme premonitions and predictions may spring from the sense of our evolution and the constant struggle for survival that preceded our achieving the modern "civilized" status. Human unconscious retains memories of many near extinctions of the human race.*

Of course, the opposite argument could be made; namely, that many past near extinctions might suggest its likelihood, sooner or later, despite all best intentions. Indeed, it would seem that Uchil and Vinekar are making this very point in *The Stars*; given what our past traditions and our wisest sages can teach us, we cannot afford to be complacent. Nor should we expect to find refuge or salvation somewhere at the farthest edges of the universe. Freud suggested that it was self-knowledge that could offer that "bit of freedom" from our narcissism, hubris, and self-destructive tendencies. So also, Uchil and Vinekar remind us that such wisdom and self-awareness can come from the insights of spiritual and mythological traditions.

Bhasmasura
The Indian myth of *Bhasmasura* is offered as a reflection on the dangers that flow from ignorance of our own potentially destructive wishes. A devotee of the *Lord Shiva*, Bhasmasura is undone by the special power granted to him by Shiva to destroy others with a simple touch upon their head. As a "thoughtlessly created powerful monster", intoxicated with his destructive power, Bhasmasura attempts to destroy Shiva, who flees to *Vishnu* for protection. Vishnu then appears to Bhasmasura in female form and tricks him into touching his own head while copying her gestures in a seductive dance.

The authors suggest that the myth "illustrates the adverse consequences of letting loose forces to attain destructive power. The very same newer constructive technological forces can be destructive to civilization. Harnessing these forces and taming them is not an easy task once they are let loose." Uchil and Vinekar envision EI as a "solution to avoid the unintended destructive consequences of earlier or current forms of AI", which due to their "brittle" quality are unable to adjust appropriately to the complexity of ever-changing realities. Without our self-awareness regarding the tempting uses to which these powers could be put, they could easily transmogrify into that "thoughtlessly created powerful monster," Bhasmasura, whose first impulse upon acquiring the powers endowed through the boon of Shiva was to destroy his own powerful creator Shiva himself.
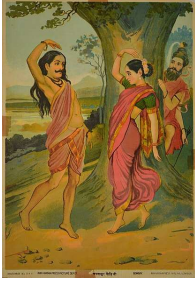
Bhasmasura (left) is about to place his hand on his head following his seduction by the dancing Vishnu in feminine form (center) as Shiva looks on (right). https://en.wikipedia.org/wiki/Bhasmasura_(Hinduism) (5:00PM 12/10/2019)

A Digital Chitragupta

The cautionary on hubris and lust for power offered in the myth of Bhasmasura, much like the mythic original sin of *Adam and Eve*, is a - perhaps the - central problem posed by technology in the absence of wisdom. Uchil and Vinekar detail the "information explosion… of on-line services, search engines and social media interactions" and the misuses of this that may occur at both individual and collective levels of power. They refer to information technologies operating at the level of "various covert operations in NSA, CIA-like agencies of different governments, China, Ukraine, Russia or somewhere in the 'cloud' not locatable at all". In this regard, they reflect on the Hindu figure of *Chitragupta*, who

> *was known to be incredibly meticulous in tracking down every action of every sentient life form, building up a database and recordings of them over the course of their life so that when they die, the destination and fate of their soul can be easily decided by replaying or reviewing this recording.*

The figure of Chitragupta reminds one of the Judeo-Christian concepts of the *Book of Life* and the *Book of the Dead*, according to which good and wicked souls are judged by God according to their earthly deeds. In both traditions the guiding force is ultimately a force for justice and for hope. "A prayer is often performed to Chitragupta in reverence of the four virtues he is seen to embody: justice, peace, literacy, and knowledge." On the other hand, Uchil and Vinekar warn us that our "modern digital Chitragupta", which "knows almost everything about everyone in linear time" may not be guided by such virtues. "All capable countries will try to possess and excel in the technology of this modern Digital Chitragupta, both for offensive and defensive purposes and with ever-increasing sophistication in cyber-attack and cyber-security."

We are warned about the potentially destructive motivations of this modern Chitragupta: "At present, there are no checks or balances to tame this wild astronomical record-keeper of data on private or public life of people! Likewise, with the highest resolution of the satellite images and videos of the earth's surface capable of identifying individual's faces, hiding places, etc."

From a psychoanalytic perspective, this digital Chitragupta would have its psychological analogue in the omniscient *superego*. Perhaps it finds its most rational and reality-principled complement in the mature adult *ego* functions of memory storage and recall, perception, judgement, problem-solving, anticipation. This is no small difference. We know that the superego emerges as a psychological agency with primitive roots in the instinctual *Id*, formed from the grist of early childhood identifications, loves and losses. In other words, it is by nature immature, given to distortion, misjudgment, and ambivalence. The automaticity of this "seeing" and judging structure of personality can operate in the service of tyrannical abuse of self and others, just as surely as it becomes the inner source of narcissistic love, reassurance, guidance,

and reward. In either case, it requires much reshaping throughout childhood and adolescence for the mature, reality-oriented conscience of adulthood to emerge. Without such maturation it can be both sadistic and masochistic. If formed in the shadow of fear and cruelty it can be deadly. The primitive conscience is sway to the dangers of projection and paranoia. At the level of society and phylogeny, therefor, the analogous relation to the superego would suggest that this evolving Digital Chitragupta could become a force for good or bad, depending on whether it reflects an integration of both individual liberty and social responsibility, in other words, whether it accounts for the exigencies of the *reality principle*. As such, it could serve either social cohesion, international law and restraint, or, conversely, mutual distrust, revenge, and escalating conflict between individuals, groups, and whole countries. The analogous difference with respect to ontogeny is the extent to which the conscience is consolidated with the dissolution of the *Oedipus complex* and continues to mature through latency and adolescence into adulthood. In other words: *Where Id was, Ego shall be.*

Next Part 2: What exactly is this "existential" alternative to AI envisioned by Uchil and Vinekar? How would it evolve to assist not only our future survival but our optimal thriving in the ever evolving and unpredictable technological future?

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