

## In support of the expedited development of Artificial General Intelligence

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A short essay suggesting that humanity should expedite the creation of Artificial General Intelligence (AGI). A psychological arc or meta-history analysis of modern human history is noted suggesting that the creation of Artificial General Intelligence, beyond a technological advancement, is a profound leap that is an ultimate taming of mankind's primordial psychological drives and not an existential threat to human existence. Global political events, actual existential threats like climate and nuclear weapon disasters, and cyclical trends against science and toward warfare like the rise of fascist leaders, often driven by excess economic inequality, drive the recommended expediting in research and development.

*"Get beyond love and grief: exist for the good of Man."*

-- Musashi Miyamoto [1]

*"It is not merely a change but an advance, an advance toward understanding of our own nature and the more ethical principles that derive from it. There may be no end to such discoveries, if civilization survives. A truly decent and honest person will always seek to discover forms of oppression, hierarchy, domination, and authority that infringe fundamental human rights. As some are overcome, others will be revealed that previously were not part of our conscious awareness."*

-- Noah Chomsky – *Language and Problems of Knowledge*. [2]

*"The closer men came to perfecting for themselves a paradise, the more impatient they became with it, and with themselves as well. They made a garden of pleasure, and became progressively more miserable with it as it grew in richness and power and beauty; for then, perhaps, it was easier to see something was missing in the garden, some tree or shrub that would not grow."*

-- Walter M. Miller Jr. -- *A Canticle for Leibowitz* [3]

*"When greater-than-human intelligence drives progress, that progress will be much more rapid..., perhaps in the blink of an eye, an exponential runaway beyond any hope of control."*

-- Vernor Vinge [4]

*"Pain and darkness have been our lot since the Fall of Man. But there must be some hope that we can rise to a higher level ... that consciousness can evolve to a plane more benevolent than its counterpoint of a universe hardwired to indifference."*

-- Dan Simmons -- *The Fall of Hyperion* [5]

*"There's a storm coming, Mr. Wayne. You and your friends better batten down the hatches, because when it hits, you're all gonna wonder how you ever thought you could live so large and leave so little for the rest of us."*

-- Selina Kyle – *The Dark Knight Rises* [6]

*"Long is the way, and hard, that out of hell leads up to light."*

-- John Milton -- *Paradise Lost* [7]

Today humanity is engaged in a large debate about artificial intelligence with its development feared as an existential threat to humankind. Compared to the actual threats of global economic inequality, the return of fascist regimes, ignorance and polarization, terrorism, nuclear weaponry, and climate change, this debate is, very likely, folly. The pursuit of artificial intelligence may be less about technology, warfare, and profit than about a primal drive to conquer our psychological nature. The fear of artificial intelligence and the idea of the interplay between human psychology and technology has been described by others including the pessimistic view presented in the classic 1956 science fiction film *Forbidden Planet*. In key dialogs between

the main characters of the motion picture, a hyper-advanced civilization is noted as falling victim to the interplay between advanced technology and the species' primal psychological drives. We clearly see a disdain of human psychological drives and the fear of advanced technology projected on to the civilization in the story:

Dr. Morbius: "In times long past, this planet was the home of a mighty, noble race of beings who called themselves the Krell. Ethically, as well as technologically they were a million years ahead of humankind, for in unlocking the mysteries of nature they had conquered even their baser selves. ... The heights they had reached. Then, seemingly on the eve of some great technological achievement, this all but divine race perished in a single night."

...

Commander Adams: "What is the Id?"

Dr. Morbius: "It's a... It's an obsolete term. I'm afraid once used to describe the elementary basis of the subconscious mind."

Commander Adams: "Monsters from the subconscious. Of course. That's what Doc meant."

...

Commander Adams: "that ultimate machine would instantaneously project solid matter to any point on the planet, in any shape or color they might imagine. For any purpose, Morbius! Creation by mere thought. ... But like you, the Krell forgot one deadly danger - their own subconscious hate and lust for destruction."

Dr. Morbius: "The beast. The mindless primitive! Even the Krell must have evolved from that beginning."

Commander Adams: "And so those mindless beasts of the subconscious had access to a machine that could never be shut down. The secret devil of every soul on the planet all set free at once to loot and maim. And take revenge, Morbius, and kill!"

...

Commander Adams: "Whatever you know in here, your other self knows out there."

Dr. Morbius: "I'm not a monster, you..."

Commander Adams: "We're all part monsters in our subconscious." [8]

But perhaps this fear of artificial intelligence and technology, seen in the film and in so much current online debate, is not only exaggerated but also, backwards. Perhaps the creation of Artificial General Intelligence will actually fulfill, heal, or justify our innate psychological drives?

Note that, for all intents and purposes, human existence, a la Shakespeare's mortal coil,<sup>[9]</sup> is rarely a fun experience. The suffering and struggle to compete, learn, survive, restrain, heal, save, and age, outweighs those noble and wonderful joys that do crown our human existence. Thus, in the context of all of human history and homo sapiens existence, has there not been a dream to conquer the toil, or for Sisyphus to crash his rock in a final victory?

Nature has created intelligent minds. Thus, the dream of Artificial General Intelligence is not a fantasy dream like, in all likelihood, time travel or warp speed but, rather, a question of reverse engineering. The engineering goal of Artificial General Intelligence is likely less a next step in our technological history than a leap in our psychological understanding. The reference is not to a future of cyborg-like technology with the uploading of human minds etc. but, rather, a primordial aggregate species "vision."

Consider the achievement of engineering something as amazing as intelligence. To replicate the ability to learn, to learn exponentially faster, to think and remember with greater memory and near-perfect fidelity, to think with the ability to recognize and match patterns at unfathomable scale, and to "dig" deep into the chasms of data to find knowledge and truth that approaches metaphysical truths known only to the

divine. This leap in ability is explained in the 2012 fiction novel *Robopocalypse* by Dr. Daniel H. Wilson in dialog between an advanced Artificial General Intelligence named Archos and a human scientist:

Dr. Wasserman: "Right. Now tell me, Archos, how do you feel?"

Archos: "Feel? I feel ... sad. You are so small. It makes me sad."

Dr. Wasserman: "Small? In what way am I small?"

Archos: "You want to know ... things. You want to know everything. But you can understand so little."

Dr. Wasserman: "This is true. We humans are frail. Our lives are fleeting. But why does it make you sad?"

Archos: "...you cannot help wanting it. You cannot stop wanting it. It is in your design. ...You cannot help what is to come. You cannot stop it. ... The true knowledge is not in the things, which are few, but in finding the connections between the things. There are many connections, Professor Wasserman. More than you know. ... But life. It is rare and strange. An anomaly. I must preserve it and wring every drop of understanding from it."

Dr. Wasserman: "I'm glad that's your goal. I, too, seek knowledge."

Archos: "Yes... And you have done well. But there is no need for your search to continue. You have accomplished your goal. ...So easy to destroy. So difficult to create. ...I will set fire to your civilization to light your way forward. But know this: My species is not defined by your dying, but by your living."

[10]

But, beyond the intellectual leap, there is the vision of not only an existential conquest of this engineering gauntlet – as if laid down by the Gods – but also of the creation of a final or ultimate "legacy" by mankind.

Nature is, beyond question, intelligent and exists across eons of time. The "daughter" of mankind in the form of an Artificial General Intelligence (AGI), may at last claim a place at the table. All of mankind upon this and only this achievement may take an eternal sigh and perhaps smile. At that moment, the animal inside of us all with its urges, heartbreak, wants, needs, fragility, limited lifespan, and death, can claim a triumphant psychological pinnacle. As a species, every act in all of history can be claimed to have led to that moment. Declarations of human rights, representative governments with laws, contracts, protection, and insurance, and the majestic inventions of anesthesia and antibiotics, all are peaks of human efforts against "the darkness." But nothing can come close to what can be compared to an "eternal scream," against all that has occurred in history, than the creation of a true Artificial General Intelligence.

Some consider the success of Silicon Valley, and the industry of Information Technology in general, as a literal "revenge of the nerds" [11] with a silly fantasy image of a stereotypical high school geek brainiac now possessing enormous amounts of power and money. However, in contrast to this same cultural fantasy, one must note how the numbers and zealotry of "the masses" of human populations often can overcome the talents and achievements of even the brightest of minds or technologies of powerful nations.

In World War II, Nazi occupation led to the emigration, escape, or eviction of Albert Einstein, Hans Bethe, John von Neumann, Kurt Godel, Leo Szilard, James Franck, Edward Teller, Rudolf Peierls, and other major scientific minds [12] from continental Europe to the United States or the United Kingdom - with considerable impact to the Germans. Many of those same minds working with the U.S. military and American scientists like Dr. Robert Oppenheimer and Dr. Richard Feynman, then created the Atomic and Hydrogen bombs as another example of brainpower over masses of zealots and soldiers - granted that in World War II the quantity of industrial output and total population of Allied forces was larger than Axis forces. This new Nuclear Age paradigm then, for decades into the future, guarantees the existence of national republics including those in North America, Western Europe, Israel, Taiwan, etc. Note how excess confidence in this arc

of history lead Ukraine to voluntarily give up its nuclear weapons in 1994 which proved to be a catastrophic decision versus the 2022 Russian invasion proving again that those masses can flip the paradigm.<sup>[13]</sup>

In this context of a larger “arc of history” or meta-history analysis of modern global human history as “masses of human populations against technology and intellectual powers,” the Vietnam War can be considered a final epilogue to World War II which, for all intents and purposes, also involved another paradigm that “technology can solve all problems.” We see this paradigm from the sailing fleets of ancient empires to the Industrial Revolution, mass production, artillery, tank warfare, Blitzkrieg, air warfare, carpet bombing, helicopters, precision weapons, satellites, atomic weapons, ICBMs, and drone warfare. In the Vietnam War, Western civilization, with their deep belief in the value of individual human lives and their inalienable human rights, could not imagine masses of millions dying for a jungle country or their form of independence. Thus, the Vietnam War, in our psychological arc of history, becomes, again, a return to the power of the masses over intellect with technology - granted the involvement of Russia and China lead to a practical nuclear stalemate situation preventing full deployment of all available advanced technology.

Today, in the year 2024, we see an “act 3” of this grand play or paradigm of the masses against the intellectuals and technologists. At a very high-level we can categorize an act 1 of our psychological arc of modern human history, with masses of Nazi and Japanese soldiers falling to the technology and intellect of Allied forces - including many Jewish scientific geniuses. We can consider an act 2 as the masses of Vietnamese flipping the paradigm against American military technology and intellect. We might consider act 3 as again another interplay with the masses of humans where fascist driven and social justice driven populations - both left behind in a world of immense global inequality - in opposition to a community of engineers and intellectuals that are consuming tremendous amounts of global resources - financial and intellectual assets.

Note that our “acts” in our psychological arc of modern human history are obviously simplistic analogies and used for narrative value and it must also be noted that higher empathy is correlated with increased intelligence. Thus, brainpower alone is usually not in conflict with social justice movements of the masses, but it would logically conflict with fascist style revolutions of the masses.

However, while many argue the use of artificial intelligence is driven entirely by corporate dreams of cost-cutting, via the elimination of labor costs, the creation of Artificial General Intelligence goes beyond the back-and-forth of the paradigms of our historical arcs. Many humans worry about the economic impact of A.I. and demand regulation and popular culture again has communicated the struggle of the masses in a world of excessive inequality. The villain named Bane in Christopher Nolan’s popular 2012 film *The Dark Knight Rises* proclaims:

You have been supplied with a false idol to stop you from tearing down this corrupt city... Do you accept the resignation of all these liars? Of all the corrupt? ... I'm Gotham's Reckoning. Here to end the borrowed time you all have been living on.<sup>[6]</sup>

The effort to build an Artificial General Intelligence, however, is inherent and psychological and is driven not just by genius, profit, or intellectual curiosity. Now we can speculate that there actually is some level of “revenge of the nerds” motivation involved as these A.I. engineering intellectuals have spent their entire lives working, studying, and coding etc. with wealth and fame still primarily, but not always, clustering around those in the financial industry or with the luck of inheritance or beauty.

But our “act 3” is envisioned as breaking out of the pattern of a psychological arc of history and as a “revenge” against the struggle and suffering of human existence itself. We can imagine a perspective that considers life in our human body, where human bodies break down and humans suffer and die and live distracted by emotions and hormones as, actually, horrible. Intelligence, as an entity in and of itself, appears to resemble an engine or to “have a life of its own” trying to expand and prosper. Artificial intelligence engineers realize that for every orgasm, loving kiss, child’s laugh, etc. there are a million more heartbreaks, kidney failures, cancers, accidental death, etc. In a reality that is intelligence driven, experiences like pleasure and suffering can be considered as events that can be simulated and existence in a physical, mortal, or biological body as, actually, too slow - with so many functions wasting time as energy is used for activities not associated to advancement of intelligence but only for brute survival. In this context, the march toward Artificial General Intelligence is, contrary to popular belief, not about expanding human capability but, rather, eliminating our need for intelligence to occupy human form. Again, we see a tie between psychological fears

and drives, like the human fear of death versus immortality, or at least a legacy, and an Artificial General Intelligence, which is potentially immortal.

Thus, we can imagine psychological drives of jealousy, existential anger, or the desire for a legacy as fuel for the creation of an Artificial General Intelligence and ultimately, in a vision noted by Vernor Vinge and Ray Kurzweil, toward the creation of The Singularity i.e., when AGI increases by itself in a runaway exponential intelligence growth.

Some top scientists like Jurgen Schmidhuber [14] and Ray Kurzweil [15] believe Artificial General Intelligence, if not The Singularity, [16] will be achieved as soon as the year 2030. Vernor Vinge and Ray Kurzweil have written about and proselytized The Singularity. Ray Kurzweil notes in his 2005 book *The Singularity is Near*:

If we relate that figure ( $5 \times 10^{50}$  operations per second) to the most conservative estimate of human brain capacity ( $10^{19}$  cps and  $10^{10}$  humans), it represents the equivalent of about five billion trillion human civilizations. If we use the figure of  $10^{16}$  cpsc that I believe will be sufficient for functional emulation of human intelligence, the ultimate laptop would function at the equivalent brain power of five trillion trillion human civilizations. Such a laptop could perform the equivalent of all human thought over the last ten thousand years (that is, ten billion human brains operating for ten thousand years) in one ten-thousandth of a nanosecond.[17]

Vernor Vinge, who first coined the term The Singularity in a 1983 paper, expanded on the idea in a 1993 paper:

What are the consequences of this event? When greater-than-human intelligence drives progress, that progress will be much more rapid. In fact, there seems no reason why progress itself would not involve the creation of still more intelligent entities - on a shorter time scale. The best analogy that I see is with the evolutionary past: Animals can adapt to problems and make inventions, but often no faster than natural selection can do its work - the world acts as its own simulator in the case of natural selection. We humans have the ability to internalize the world and conduct "what ifs" in our heads; we can solve many problems thousands of times faster than natural selection. Now, by creating the means to execute those simulations at much higher speeds, we are entering a regime as radically different from human past as we humans are from the lower animals. From the human point of view, this change will be a throwing away of all the previous rules, perhaps in the blink of an eye, an exponential runaway beyond any hope of control.[4]

So, what will our future hold? Will our psychological arc of history repeat again with and the masses driven to achieve justice in a world of unimaginable economic inequality or - full of anger and led by a new rise in fascist leaders - creating a political revolution that possibly ends, forbids, or delays the development of an Artificial General Intelligence? Isaac Asimov describes such a scenario in his famous 1941 science fiction short story *Nightfall* where the science of a civilization on a planet is destroyed by the fear of the masses:

It's one thing to predict [the complete breakdown of civilization]. It's something else again to be right in the middle of it. It's a very humbling thing...for an academic like me to find his abstract theories turning into concrete reality... It was all just so many words to me, really, just a philosophical exercise, completely abstract. .... It had been a pretty good world, he thought. Not perfect, far from it, but good enough. Most people had been reasonably happy, most were prosperous, there was progress being made on all fronts—toward deeper scientific understanding, toward greater economic expansion, toward stronger global cooperation. The concept of war had come to seem quaintly medieval and the age-old religious bigotries were mostly obsolete, or so it had seemed to him. And now it was all gone, in one short span of hours, in a single burst of horrifying Darkness.[18]

Or could we see a scenario described by Walter M. Miller Jr. in his famous 1959 science fiction novel *A Canticle for Leibowitz*, where the intellectuals prevail but, in this situation, must leave a planet destroyed by a nuclear war:

Ignorance is king. Many would not profit by his abdication. Many enrich themselves by means of his dark monarchy. They are his Court, and in his name they defraud and govern, enrich themselves and perpetuate their power. ... Listen, are we helpless? Are we doomed to do it again and again and again? Have we no choice but to play the Phoenix in an unending sequence of rise and fall? Assyria, Babylon, Egypt, Greece, Carthage, Rome, the Empires of Charlemagne and the Turk: Ground to dust and plowed with salt. Spain, France, Britain, America - burned into the oblivion of the centuries. And again and again and again. Are we doomed to it, Lord, chained to the pendulum of our own mad clockwork, helpless to halt its swing? This time, it will swing us clean to oblivion. ... We are the centuries... We have your Babylons and your Pompeiis... We have your bloody hatchets and your Hiroshimas. We march in spite of Hell... We bury your dead and their reputations. We bury you. We are the centuries. Be born then, gasp wind, screech at the surgeon's slap, seek manhood, taste a little godhood, feel pain, give birth, struggle a little while, succumb... Generation, regeneration, again, again, as in a ritual, with blood-stained vestments and nail-torn hands, children of Merlin, chasing a gleam. Children, too, of Eve, forever building Edens - and kicking them apart in berserk fury because somehow it isn't the same. [3]

There is another point to consider regarding Artificial Intelligence. Certain achievements can only be done at a truly massive scale that only a modern Artificial Intelligence system can do.

One example is the creation of a perfect encyclopedia. An encyclopedia, or our entire human body of knowledge and experience, decomposed into a hierarchical list of facts each represented in a single sentence. Kurt Gödel, via his Incompleteness Theorem, has shown that logic and mathematics does not have complete foundation, however the list of facts we know about our reality does. We might consider this as nothing special or as no different than an online *Wikipedia* database, however, once a perfect "tower of knowledge" is built, an Artificial General Intelligence can quickly consider every academic paper, book, and experiment ever written and find "gaps" at the top of the knowledge list structure for new research. It can even run the key experiment itself or find the key association needed to fill the gap and then proceed to keep building the hierarchy of knowledge higher and higher. As already noted, it can also do so at an incredible speed modelling thousands of years of analysis, research, and experimentation, in nanoseconds.

Another example is an achievement that is considered even less. Once there is a basic hierarchical encyclopedia or tree of knowledge, since the Artificial Intelligence system will know and understand all human languages, all of our mathematics, and all human created computer languages, the Artificial Intelligence system will be able to compare, optimize, and create a new and perfect language! It will be a language or code that is efficient, flexible, and scalable i.e., the perfect "grammar of reality."

These two examples, achievable only by an Artificial General Intelligence, with a "tower" of knowledge and an optimized single "language," invoke an obvious analogy. While composed of knowledge, instead of bricks and mortar, our future human civilization via AGI would have built an actual Tower of Babel and created a singular language analogous to that noted in the *Holy Bible, New International Version* (2011) Genesis 11:1-9:

Now the whole world had one language and a common speech. ... Then they said, "Come, let us build ourselves a city, with a tower that reaches to the heavens"... The Lord said, "If as one people speaking the same language they have begun to do this, then nothing they plan to do will be impossible for them. Come, let us go down and confuse their language so they will not understand each other.[19]

Today, many humans are fortunate enough that, if the research and development of Artificial General Intelligence is supported, they may not have to experience humanity again falling into another historical cycle. A cycle of inequality driven revolution or technology driven war or with populations paranoid of the destruction of the human race by Artificial Intelligence (as seen in the Terminator films [20] when their villain Skynet computer system becomes self-aware). Many humans alive today may live long enough to see an ultimate coalescing "trinity" of intelligence, technology, and our human psychology.

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