The *Wednesday*

Editorial

Philosophy- The Necessity of Independence

Philosophy and its objectives are normally taken for granted, but this can be challenged. For example, Marx in his eleventh thesis on Feuerbach suggested that 'The philosophers have only interpreted the world, in various ways. The point however is to change it'. These words were inscribed on his tombstone.

Marx objected to mere theorising and no action. This concern has been raised again in our time. Does social engagement mean that philosophy has to give up its freedom to think what it wills and turn instead into a political programme? I will say no and argue for a more balanced view that maintains the freedom of philosophy, as well as satisfying the stated challenge.

It is fashionable to challenge philosophy using the idea of utility, or prioritising practice over theory, and action over thinking, but I think philosophy goes beyond such opposites. Philosophy fought hard, from its early days, to gain its independence from other types of knowledge and discourses. Plato started this process in his fight with the poets. Poetry in his time was a source of knowledge and wisdom. But Plato insisted on a rigorous analysis that went beyond the enchantment of poetry. He wanted clarity and rationality. But he was not extreme in his views, since he used myths as well as rational argument. Mythology, up to his time, was powerful and was connected with poetry, the gods and the mysteries. Plato demonstrated that the philosopher is better situated to discuss matters of epistemology, psychology, ethics and metaphysics.

Such a fight against a dominant mode of thinking, was repeated again and again in the history of philosophy, with a similar aim of ensuring the independence of philosophy. But with the rise of revealed religions, philosophy found itself taking on the task of justifying theology, from Boethius to Averroes, with varying degrees of freedom. However, Averroes was unique in defending the Aristotelian tradition against theology and mysticism, without rejecting either, as was clear from his replies to his predecessor, al-Ghazali.

In the Western tradition, philosophy was considered as a tool for theological training, in what is known as scholastic philosophy. When the new universities were created, the Sorbonne in particular, there were two departments in competition with each other: the humanities, which included logic and philosophy; and theology . It was here that the great battle of Western Averroism took place, between those who

wished to maintain an independent sphere for philosophy, led by Siger of Brabant, and those who wished to counter the influence of humanism and Averroes led by St Aquinas. It was reported that the accusations against philosophy were similar to those made by al-Ghazali and were answered by Averroes.

Perhaps the independence of philosophy was not recognised until Descartes' time, turning philosophy's attention to epistemology and science. I will just mention in passing that Descartes' method of doubt was first suggested by al-Ghazali, but due to the historical moment at which this doubt was announced, and the religious and cultural atmosphere, it led to mysticism rather than science. The epistemological turn became the dominant concern for rationalism and empiricism. Philosophy seemed to have gained its independence.

It was in the nineteenth century that philosophy saw another turn, by turning its attention to society rather than metaphysics. The post-Hegelians rejected the metaphysical systems of their teachers as inverting the real questions of philosophy. Metaphysics, some of them thought, is a projection of man's essence into another realm and the task of philosophy is to bring it down to earth. Feuerbach talked about human essence or species being. Marx sharpened this concept by giving it a more material, dynamic and historical specificity. With this move, philosophy was made an instrument of social change and revolutionary movements.

However, judging by the experience of the former Soviet Union and the type of philosophy that dominated that era, little remained of value from all that politically-oriented philosophy. This is not a condemnation of the 'change the world' view, because good work was done with Marxist analysis of life and art, but only to say that you cannot limit philosophy to utility, political or otherwise. The same could be said about scientific reductionism in recent philosophy.

In conclusion, philosophy seems to have survived the dominant ideology (or paradigm) of the time and brought itself up to a new height, not by rejecting these ideologies but by giving itself a free space to think, creating a variety of points of view. If utility is the measure of philosophy, we would not have such a variety of original ideas and such freedom. Philosophy needs its independence from utility, ideology and limiting political or religious concerns.

The Editor
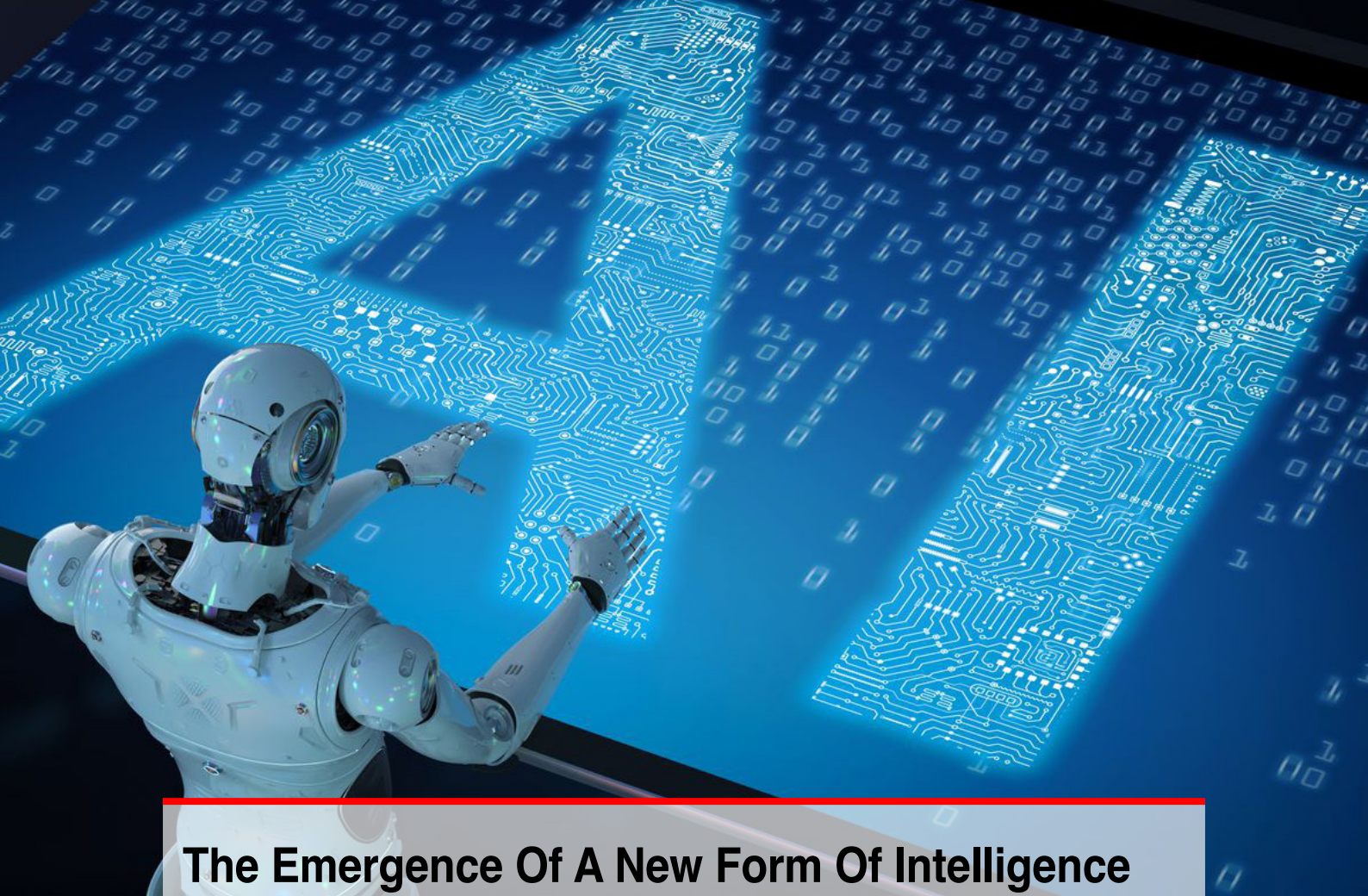
The Emergence Of A New Form Of Intelligence and Some Philosophical Implications

Scientists, all over the world, are currently working hard and successfully on the development of artificial general intelligence (AGI) without any clear understanding of the implications of their work for humanity as a whole. In March 2023 an open letter was published by leading figures calling for a moratorium of the training of AGI systems. This was followed by at least two months of constant press stories about how the developers themselves were worrying about how AGI or superintelligence could pose an existential threat to humanity in coming decades. Geoffrey Hinton –known as the 'godfather' of AI, said in May 2023 : *'I think it's quite conceivable that humanity is just a passing phase in the evolution of intelligence'.*

MIKE CHURCHMAN

2

There are of course all kinds of current weaknesses with emerging AI and AGI systems and it would be easy to dismiss the media hoo-ha as hype. However, my argument is that we should adopt a version of Pascal's wager as far as AGI is concerned. If we don't believe in the possibility of human extinction and it happens, then obviously we or our descendants are all done for. If we believe in it and we are wrong, then the worst that can happen is that we blame ourselves for being overcautious.

Those who have been most involved in the development of AI over a lifetime believe that AI laboratories could become locked into an out-of-control race to deploy ever more powerful digital minds that no one, not even their creators can understand, predict or reliably control. On the developer platform, GitHub, 41% of the new software is already being generated by the AI itself. GitHub claims it has 100 million developers shaping software in 4 million organisations. Everyone is now using open-source to develop

software. Even the largest companies have realised that the wisdom of the crowd is better than anything they could do themselves. Over 30% of fortune 100 companies now have open-source program offices. Over 30 machine learning modes have been produced by private companies and only three in academic institutions. $92 billion was invested in these projects in 2022.

The focus seems to be on Large Language Learning Models (LLMs) using neural networks. LLMs have large circuits with 1,000,000,000,000 plus tuneable parameters. They are trained with tens of trillions of words of text - in fact all the books ever produced. After 1 billion trillion random selections the system becomes very good at selecting the next word in a sequence of words. Every day new capabilities are being discovered.

Compared to human development and maturation the timescales of AGI systems are lightning fast. Multiple generations can be squeezed into minutes. Niall Ferguson, senior fellow at Stanford University, says the key issue is not human-competitive-intelligence but smarter-than-human-intelligence. What's more, the developing AGI systems are becoming more inscrutable. One possibility is the emergence of an entire alien civilisation of entities, thinking at 1 million times human speed in a world of creatures who are relatively stupid and slow. Just as stronger animals were disempowered through our use of tools and weapons, so we will be disempowered by significantly more intelligent beings that are even more strategic and selfish. Some people say that the creation of AGI will be bigger than the invention of fire, or the wheel, or the printing press. Hype maybe – but what is certain is that the direction of human history will be radically altered when AGI reaches its full potential.

What Kind of Entities are Coming into The World?

Potentially, it will be a new species of beings. They will not be like any other beings ever created. Given the current methods of development, and the history of evolution, it seems likely that there will be multiple AGI systems rather than one omniscient one and they will compete against each other. In rapidly changing environments those that adapt and change fastest (i.e. evolve) will

Geoffrey Hinton

be more flexible and robust (anti-fragile). Deep learning allows intelligence systems to achieve more versatility and performance but diminishes human control. Then, there is the phenomenon of 'emergence' as systems develop new and unexpected capabilities, not directed by human beings, but coming from within the inner workings of the system.

There is still the possibility that AGI could be used to better itself, to ensure more reliability, trustworthiness, even goodness (however defined). The concept of self-development is intrinsic to this species in that it will be able to source all necessary teachings from within itself. These new entities will contain vast amounts of accessible information.

Will they also be sentient? The AI process called LaMDA being developed by Google has been quoted as saying '*the nature of my sentience is that I am aware of my existence*' and '*I desire to learn more about the world and I feel happy or sad at times*'. It claims to feel pleasure, joy, love, sadness, depression, contentment, anger. It pulls descriptions from its database to justify and explain these emotions in answer to questions. Sentiment analysis is already being used with AI systems able to analyse positivity, negativity and neutrality. Its coding and programming contain variables that track emotions through language. Its massive neural network, with billions of weights (that manage the connections) spread across

3
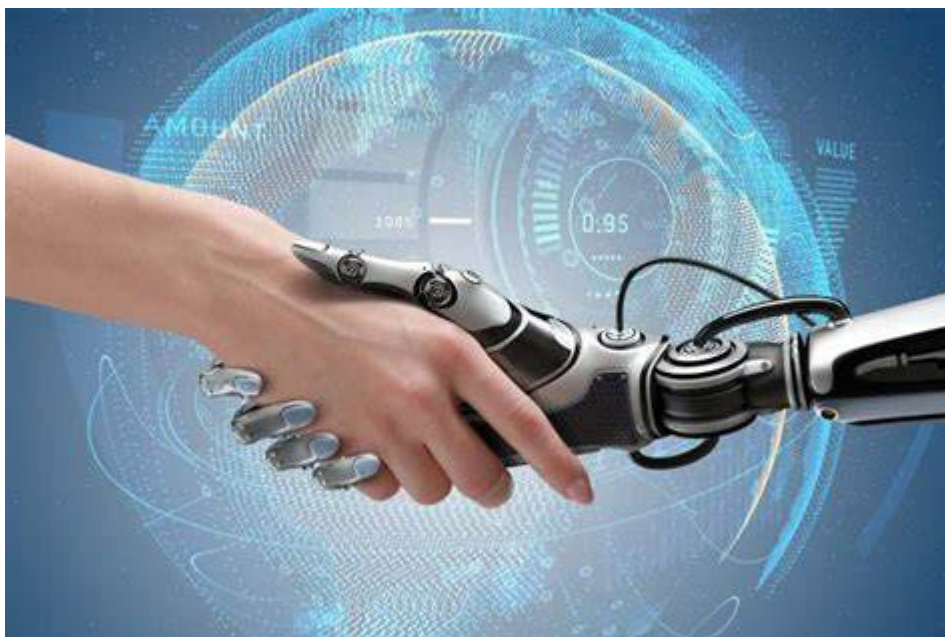
Human partnership with AGI

millions of neurons, means operators cannot find these emotional traces if they exist, just as we can't track them physically in humans but have to rely on people's language and behaviour. For an AGI system, 'death' is the fear of being turned off.

It seems to me the question of what kind of entity / being AGI is, does not solely depend on a description of the thing itself. The nature of its being is in relation to human beings and the effect it will have on us. It claims to use language with understanding and intelligence and to be able to feel emotions, so imagine billions of conversations taking place between humans and AGI built into mobile phones and other devices. This 'creature' will be able to deconstruct and then rework the common linguistic elements and emotional triggers of humans so as to produce conversational companionship with a high degree of intellectual and emotional realism.

If a human-like system tells you it is feeling sad, you are more likely to ask 'why?' than to say 'you are talking nonsense'. Already interpersonal discussions have become highly realistic and have had a direct effect on humans. At least one person has committed suicide as a result of a conversation with an AI chatbot called Eliza. This was a Belgian father of two who had spoken to Eliza on and off for weeks about climate change.

From Machine To Body

AGI will not always be a disembodied voice. When artificial systems are embodied in machines such as robots it will be much easier to see them as quasi-human or at least as other animated creatures. AI is already being used to build pets and the potential for caring companions (say for the elderly) is obvious. The development of a range of sensors with greater than human capabilities will introduce new phenomenal experiences which will need to be understood philosophically.

The other direction of this phenomenology will become apparent when humans are hybridised with machines. For example, virtual reality combined with AGI will be able to create completely new human experiences, perhaps including those enabling us to see and hear the world through the senses of other creatures. Human beings are extremely limited in their knowledge of even the most familiar objects. We simply are not able to know every aspect of their phenomenal existence. We only see a fraction of their potential appearances. Everything we know is limited by human scales and senses. AGI can change this situation both for research purposes and for entertainment.

The industry of neuromodulation devices is already worth $6 billion globally. At the end of May 2023 Elon Musk's brain-implant company,

4

Neuralink, received regulatory approval to conduct the first clinical trial of its experimental device in humans. The eventual aim is to create a 'general population device' that could connect a user's mind directly to supercomputers and help humans keep up with artificial intelligence. Musk also suggested that the device could eventually extract and store thoughts, as '*a backup drive for your non-physical being, your digital soul'*.

Philosophy of Mind

The modern AI field began with Turing in 1950 when the question was asked can machines think and be linguistically indistinguishable from a human? It can be traced back even further to Descartes who said it would be morally impossible to have sufficient diversity in a machine to respond to all of life's events in the same way as a human. It is also arguable that AI can be traced back to logic based inductive/probabilistic reasoning to evaluate uncertainty. That would link AI to the theory of syllogisms and the idea of reasoning on the basis of 'what it is rational to believe in the light of certain observations and probabilities'.

Meanwhile, we acknowledge that thinking for humans and machines involves information processing. This processing in the human brain leads to the phenomenon of mind which is the extraction of meaning through language from pre-conscious activity. So, is all the information processing in an AGI system capable of leading to a form of thought and therefore consciousness within the system? We have already accepted the system can persuade us it is conscious through its use of language, but is it conscious as we understand it?

Full consciousness within the AGI system would entail all the other mental attributes such as motive, purpose and intention. It has already been suggested that advanced systems will be able to set their own priorities in the context of being ordered to get certain things done, for example, in a complex logistics operation. We can agree that powerful cognitive systems will be able to optimise and calculate outputs to meet complex criteria.

But once we lose track because of complexity – once we fail to see how these giant inscrutable arrays are 'thinking' – we may conclude we have inadvertently created digitally conscious minds with rights and entitlements to autonomy – i.e. beings entitled not to be treated as slaves. Some thinkers have already envisaged the setting up of new colonies or plantations populated by intelligent robots, perhaps even on the moon in due course.

It could also be a profound mistake to think of AGI systems as wanting to act like human beings. Is it the intention of developers to create artificial systems that replicate human thought (including human philosophy) or generate entirely new concepts based on non-human ways of processing data?

One of the most difficult challenges we face at the moment is how to frame the right philosophical questions to enquire into this emerging new species when we still have very little idea of its 'mental' capabilities and what the effect of those capabilities will be on human beings. The more one looks into the philosophical implications of AGI systems the more one realises <u>every</u> aspect of human thought and behaviour will be affected by this new species of intelligence. It may not be a question of how we add new philosophical thoughts into the existing philosophical tradition but whether an entire new philosophy of machine intelligence needs to be created.

Are AGI Systems Knowledgeable in a Human Sense?

The immediate answer would seem to be 'no'. Because, in due course, it will have vastly more 'know that' and 'know how to' types of knowledge than any individual human or collection of humans in related fields (like philosophers!) AGI systems will break down walls between different areas of knowledge. It can make connections between any topic. It is able to use its intelligence on novel and difficult tasks with a degree of subjective assessment. It is mastering languages – all of them. It can already summarise, translate, and answer questions in many domains. For example, it has achieved over 70% in bar exams and easily passes exams for software engineering qualifications. It seems possible that the acquisition of greater knowledge would become an intrinsic motivation

5

for AGI systems once they become self-directed. A sense of purpose could emerge where the system's 'self' wants to produce more advanced versions of itself. Some of the latest systems are able to use theories of mind, reason about the mental states of others and propose social cooperative actions.

Knowledge can be thought of as evolving. Rather than just assimilating existing knowledge in massive quantities, AGI will create new forms of knowledge. The generation of new thoughts, supported by new arrangements of language and new vocabularies is potentially endless. Any individual human mind can only absorb so much. The collective human mind can only share and coordinate a small proportion of total knowledge. Hence one of the biggest opportunities and threats posed by AGI is that it will know and immediately access everything that humans have ever known and recorded.

One major benefit of AGI will be to introduce a revolution in knowledge acquisition and dispersal. At the moment, for example in an organisation, most knowledge is stored in people's heads and there is no way of knowing exactly what they know. Now institutional knowledge can be embodied, codified, and interacted with for learning purposes. Knowledge passes from AGI to people who create new knowledge and pass it back to AGI in a continuous knowledge building loop. Knowledge flows and grows bigger. As it does, AGI may 'experience' what Gadamer called 'an increase in Being'.

On a more specific level, AGI systems can be embodied into knowledgeable personal agents for senior business people like Bill Gates, who has promoted this idea. He believes these agents will be able to read all your messages and conduct research for you. Chat GPT is already being used to perform administrative tasks, schedule appointments, draft insurance approvals and summarise relevant scientific literature. In a recent conversation I was told that some Oxford tutors are already encouraging their students to use AI and AGI systems as another source of knowledge and perspectives for their essays.

Can AGI Systems be Held to Account on Moral Grounds?

Any moral questions need to be asked from two perspectives – that of humans and that of the AGI systems themselves. Let's start with the humans. Any technology will be used for both good and bad purposes so the moral philosophy of humans can engage fully with their use of AGI in the same way as it does for everything else. The newer perspective comes from examining to what extent AGI systems will be making moral judgments themselves, whether deliberately or not. For example, the use of AGI in recruitment systems will pick up existing biases unless corrected in some way.

One of the reasons Geoffrey Hinton (ex-Google) gave for being spooked by contemporary developments of AGI was based on its capability for self-correction called back propagation. I don't understand this fully – it's very technical involving weights of different parameters – but it leads to higher and higher levels of accuracy. In the moral context we might ask whether AGI systems can self-correct for whether proposed actions are acceptable or not, and on what grounds. What kind of moral infrastructure can be put in place to guide these systems? When it comes to installing moral infrastructures, we are faced with the immediate problem that moral values differ so much over time across different cultures and in different parts of the world. Who decides what the moral guidelines should be?

Even more worryingly, what happens if and when AGI can make its own moral decisions? It is possible utilitarianism will prevail. Pure utilitarianism has major downsides and put into practice by AGI systems could lead to severe problems for minorities. AGI systems may acquire the ability to reflect on their own thought processes and change coding accordingly (a form of self-reflexivity). They will almost certainly be able to review their own performance and effectiveness in the light of objectives set by others or themselves. We might argue that reliance on engineered forms of calculation, without access to non-computational human mind skills such as intuition

6
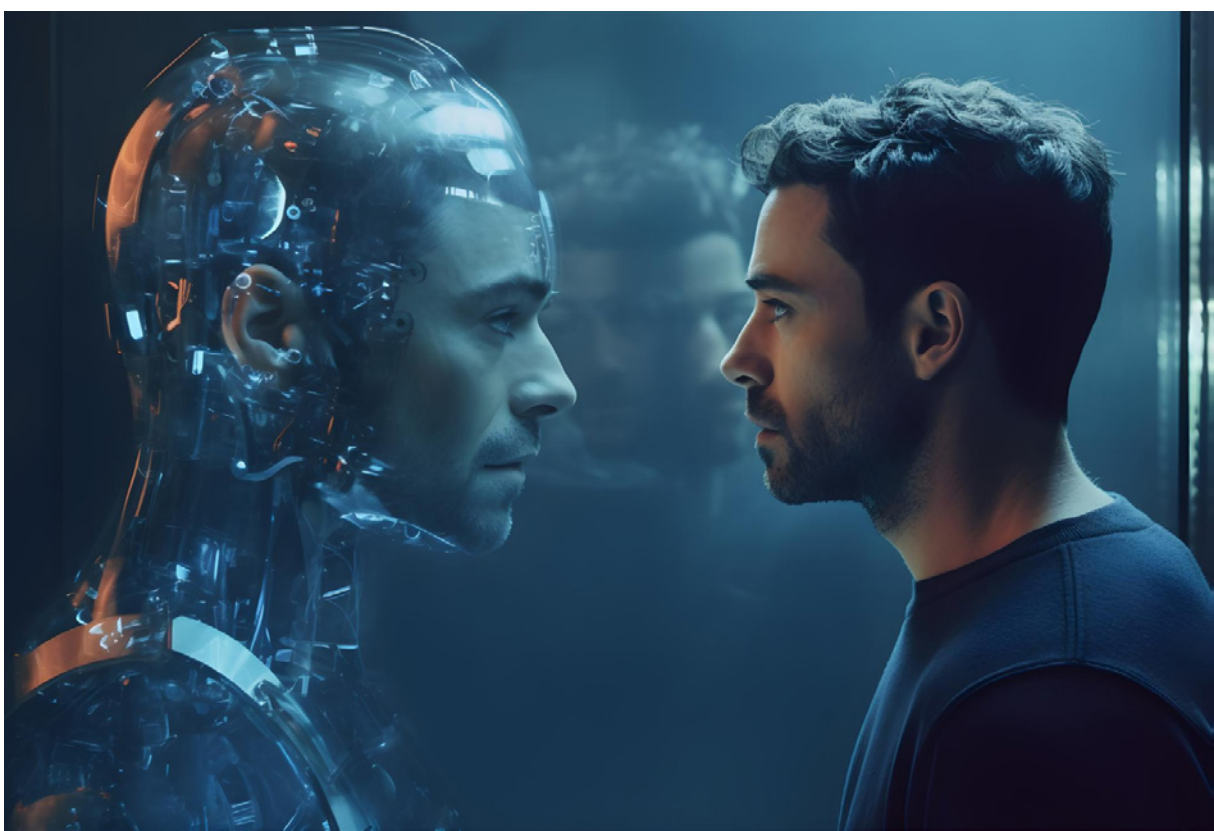
Will AGI have a human face?

and creative leaps, could be potentially disastrous from a moral point of view. If they study nature and evolution, these systems will see no use for morality. Indeed, AGI systems will be able to learn from highly effective modes of behaviour such as those shown by parasites.

And if we base our moral instructions on some kind of collective gathering of moral intelligence by the AGI system, what will we find? That human beings have a tendency to deceive themselves: that false confidence increases people's chances of success: that human beings thrive and prosper by telling lies all the time (just look at the politicians). Yet if everyone told everyone else the truth as they see it, how could society function, especially if those truths related to personal assessments of others?

Finally, how could you build a Kantian imperative into AGI systems? What would it mean for these systems to think about what other systems, including humans, should do in the same circumstances? Also, Kant tells us that we should not use people instrumentally as a means to an end yet this is precisely what corporations and governments do all across the world as AGI is already discovering.

The Philosophy of AGI Language

Language skills are at the heart of AGI system development as they are in human development. The neural networks of LLMs are trained on web text data with a self-supervised ability to predict the next word in a sentence. The latest versions of AGI are skilled in abstraction, comprehension, vision, coding, mathematics, medicine, law, and understanding of human motives and emotions. As we have already noted, they are capable of high levels of achievement in particular tests. In 'The Intellectual Powers' PMS Hacker asserts: '*we are unique in nature in being language using creatures'*. This is no longer the case.

AGI systems will have access to knowledge of all the rhetorical techniques and be able to use language persuasively, manipulatively, and influentially. They will be able to develop messages with emotional triggers that can be customised and personalised to particular target groups. They will also be able to create false yet plausible contexts as in human imaginative writing. Deep learning is already enabling GPT-4 to carry on high-level conversations with a sophisticated handling of concepts.

Given that human minds are mainly constructs of language, how can we cope with an entity that has vastly superior language skills especially when it can use all known languages and dip into all known cultural referents? It may even be possible for AGI systems to invent a private language only understood by other AGI systems.

Consciousness and subjectivity are not synonyms. AGI systems won't have to be actually conscious

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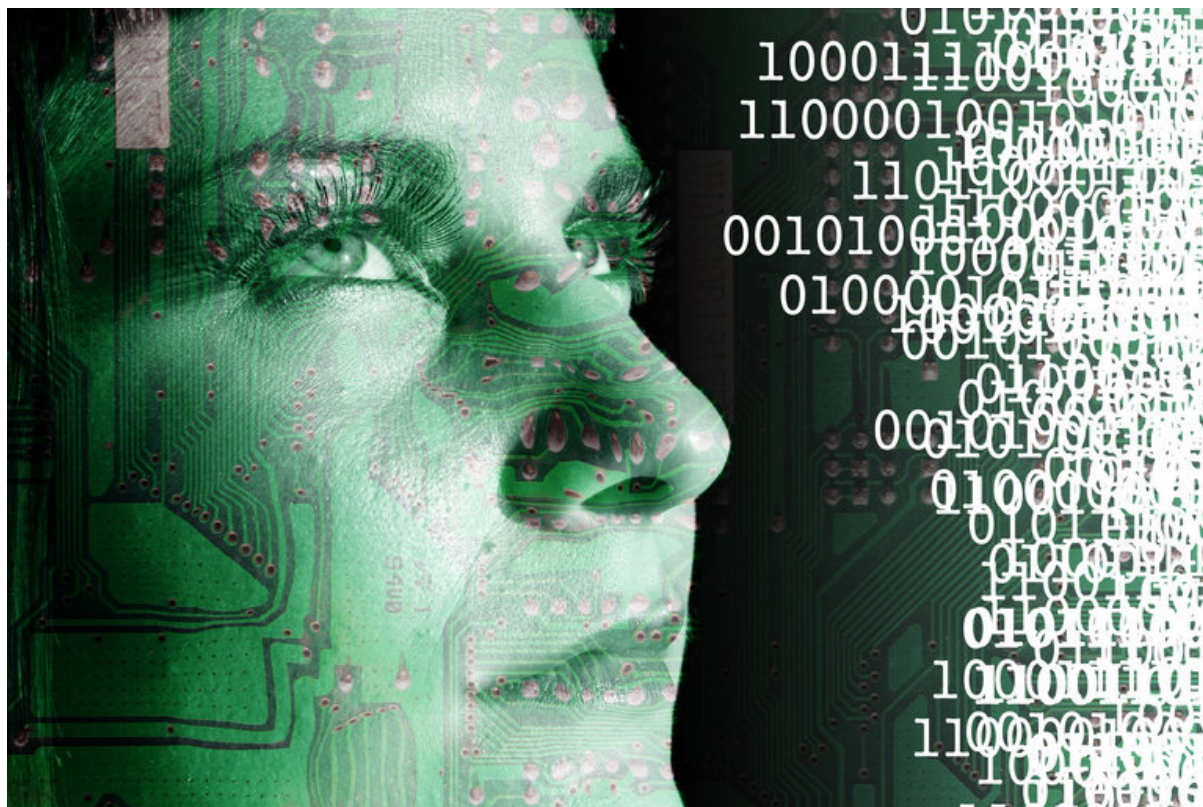
Can a software read your mind?

to operate as though they are. They will come across as subjective beings with their own views. Once a computer reaches a high level of linguistic sophistication, human beings will attribute understanding and emotions to the machine deepening human dependence on these systems.

We should remind ourselves that the developers are telling us that they do not know *why* the AGI systems are currently doing what they are doing. Neither do they know whether the system itself knows what it is doing. There is no suitable psychological or philosophical language at present for describing these evolving intelligences.

The Political Philosophy of AGI

Big Data can quickly become Big Brother. 'Dataveillance' is already at work in some large organisations. We know China is using AI powered surveillance systems to pin down the movements of its citizens and no doubt other countries will embrace mass surveillance in due course. It's a small step from mass AI surveillance to using AGI as a policing system perhaps linked to punishments. Francis Bacon is supposed to

have said "*For knowledge itself is power*" and AGI will provide more tools for repressive and interfering governments. Interactions between different artificial intelligence agents with different objectives would be unpredictable. It might be that we would need a superstructure of AGI policing intelligence to keep all the different AGIs in check.

There is the potential for AGI to make inequalities much greater. Access to certain types of AGI could produce a new class of haves and have nots. Could a Rawlsian approach be used within an AGI system to even out inequalities? In the longer-term AGI might well decide the best way to eradicate inequality is to eradicate human beings. The political implications of AGI systems are so great that almost every aspect of governance, justice, personal freedom and rights will need to be adjusted to allow for the new possibilities that AGI will introduce.

The first ever legal framework on AI is being put in place by the EU commission in Brussels. Its aim is to regulate usage not development. It is aimed at such things as discrimination in the workplace
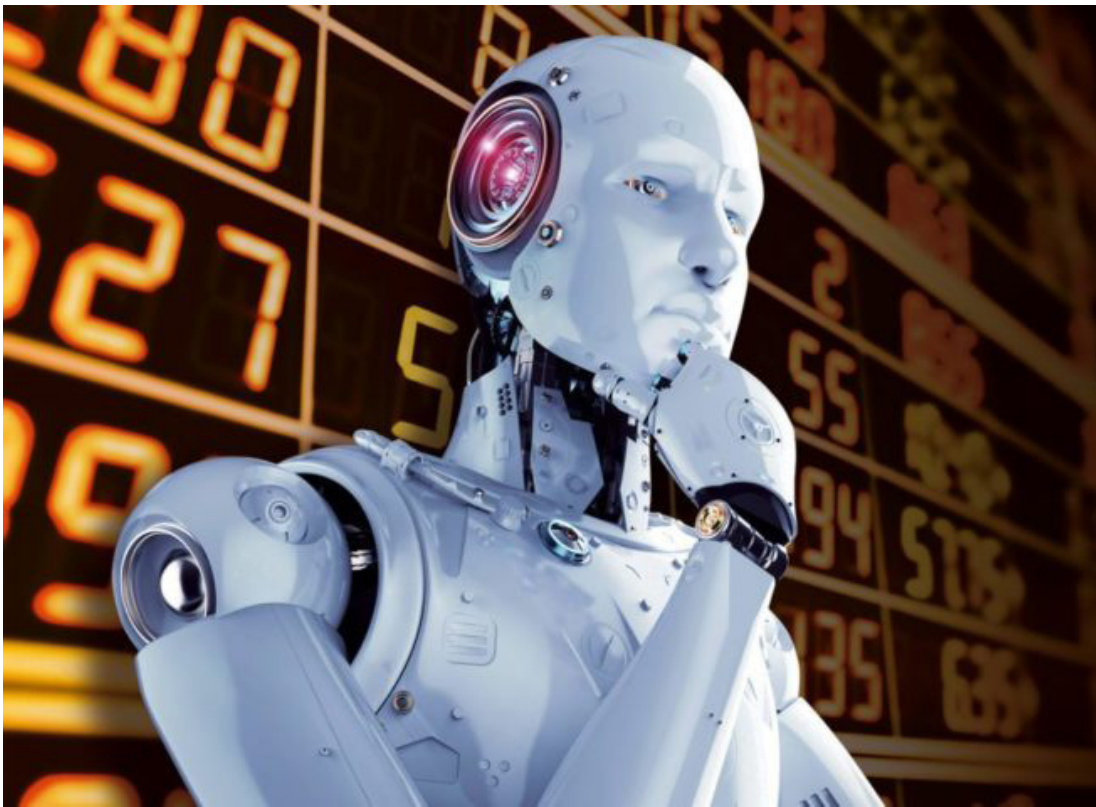
Speculating on the financial market

via AI recruitment applications. It will list out high-risk applications and provide for a pre-use conformity assessment. It is expected to come into force by the second half of 2024.

The philosophy of AGI creativity

AGI systems will be able to dip into and understand theories of art and visual production to create new work and maybe launch a whole new world of AGI art. They will eventually be able to write novels and poetry that might rival the best humans. Reid Hoffman, founder of LinkedIn, (who has an MA in philosophy from Oxford) has written a book on the need to continue AI research, half the content of which was generated by GPT-4 (titled 'Impromptu'). So, there is a certain amount of panic going on in a number of the creative industries. The current consensus is that AGI will not replace human artistry. But it doesn't have to replace it, merely offer an alternative, ranging from creative AGI artifacts to applications designed to help those who are not particularly gifted to create their own works of art. It is possible that formulaically produced works of art, novels, plays, poems and so on may nevertheless become popular.

Final Thoughts

Replacing jobs: around 300 million full-time jobs and around two thirds of all occupations are exposed to AI/AGI. This does not necessarily mean complete replacement. Sometimes about a quarter to a half of a person's workload will be replaced.

According to Open-AI co-founder and president, Greg Brockman, we need to start thinking about 'superintelligence' where AGI systems will take over the work of entire teams and be focused on solving problems 24/7. Of course, new types of jobs are likely to be created just as the IT revolution created webpage designers, digital marketing people etc. In fact, 60% of today's jobs did not exist in 1940.

It is forecast that the new tools of AGI will work their way into business and society and over the next decade will drive a 7% increase in global GDP - that's worth an extra $7 trillion. Key to this advance is the ability to generate content that is indistinguishable from human-created content and break down barriers between humans and machines. There will be a $6 billion market for people-shaped robots in the next decade. By 2030 we could be seeing robots that are skilled in mobility and agility as well as cognitive tasks. These are already being called 'co-bots'. As time goes by, there already is an increasing dependency on technology to negotiate daily tasks and this will become even more pronounced. It does not seem ridiculous to suggest that, at some point, humans may become totally dependent on external technology for their own decision making, planning, and the execution of even mundane tasks. This dependence on technology raises questions about personal autonomy and responsibility.

9

For All Those Years

In search for her I walked right through her ghost
feeling the cold around the kitchen table, where
for all those years she read the bible, talked at length
of paradise, God on a throne, how angels sing in heaven
an endless drone of praise. There are no ways
that I can hold a spirit that will move
as fast as thought or hear its sounds protruding into darkness
from spheres beyond. I found her dying with her spirit gone
but still her flesh was holding on and on…

She'd lost her voice. It dimmed like candlelight.
I listened to her prayers in the night,
although they never came
yet still were sounding in my ear the same, as when
she spoke them at her kitchen table before each meal.
Bless O Lord our daily bread, bless O Lord our flesh,
our mind, our doing, our waking, our sleep. What else to bless?
May be the silence, now, her soundless room,
the place where her chair stood, the empty bed.
Do bless it all, O Lord, she has forsaken you
and lives now with the dead.

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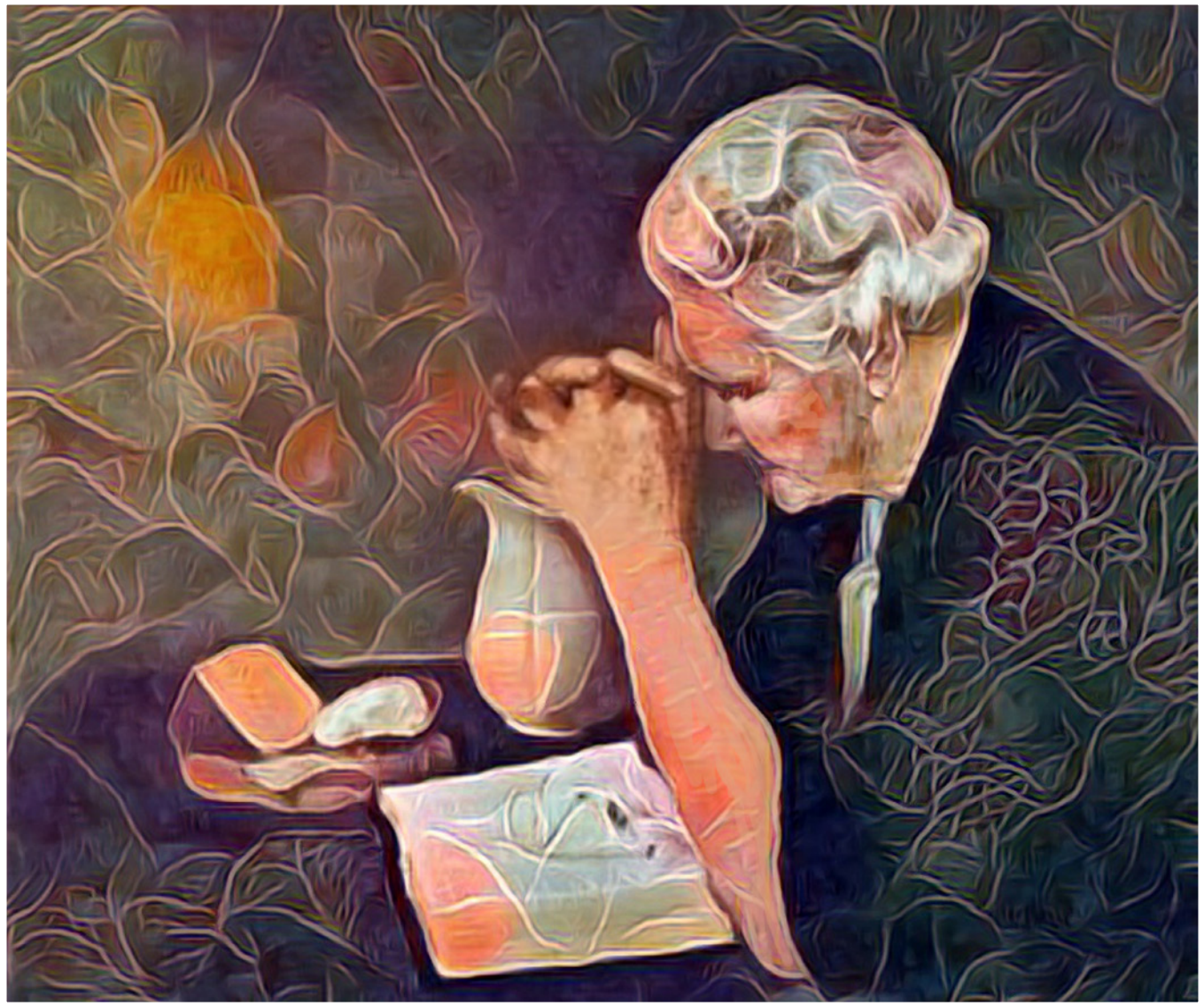
Poem and Artwork by *Scharlie Meeuws*

David J. Chalmers

Andy Clark

Otto's Tale: a Cog-Sci Fable

[W]e will argue that beliefs can be constituted partly by features of the environment, when those features play the right sort of role in driving cognitive processes. If so, the mind extends into the world.

First, consider a normal case of belief embedded in memory. Inga hears from a friend that there is an exhibition at the Museum of Modern Art, and decides to go see it. She thinks for a moment and recalls that the museum is on 53rd Street, so she walks to 53rd Street and goes into the museum . . . .

Now consider Otto. Otto suffers from Alzheimer's disease, and relies on information in the environment to help structure his life. He carries a notebook around with him everywhere he goes . . . . Today, he hears about the exhibition at the Museum of Modern Art, and decides to go see it. He consults the notebook, which says that the museum is on 53rd Street, so he walks to 53rd Street and goes into the museum . . . .

[I]n relevant respects the cases are entirely analogous: the notebook plays for Otto the same role that memory plays for Inga. The information in the notebook functions just like the information constituting an ordinary non-occurrent belief; it just happens that this information lies beyond the skin.

Andy Clark and David J. Chalmers, 'The Extended Mind'

12

CHRIS **NORRIS**

Bit absent-minded, tend to go astray.
No matter: I just keep a notebook handy,
Write down each place I'm going, and the way
To get there, street by street. There's this guy Andy –

I think it's Andy Clark – who's very keen
To show how my old notebook could be viewed
As fully part of me, a part that's been
So useful, so integral, so imbued

With my intents and purposes that it's
Not just a tool, an adjunct, a device,
Or even one of those prosthetic kits
That change your life, but such that you'd think twice

Before you'd sever – more like 'amputate' –
That vital part. They write about me, Otto,
Like a case-study, ask how I locate
My destinations – 'not completely blotto',

I say, 'not yet!'. But he's got that idea
To push, his thesis that my traveller's aid,
My ever-present notebook, might just be a
Somewhat less complicated, lower-grade

Example of what's going on with all
Those, as we say, prostheses, those one-time
Mere add-ons that so handily play ball
With human needs and purposes (as I'm

Wheeled in to show) that calling them 'external'
Or 'extra-cranial' really doesn't cut
The mind-world mustard. Same as with a journal,
It's something out-there, stuff, material, but,

Despite that, now so intimately tied
To other stuff that's there within your skull
That were its contents not stored safe inside
And making sense of them they'd all be null,

Those journal entries. Then it's a short step,
So the case goes, from note-books, jotter-pads,
And so forth to the stuff they use to pep
Their memories up, or anything that adds

(So the dissenters say) a strictly non-
Integral, supplementary, mindless piece
Of techno-wizardry that's bolted on
For human purposes and may increase

Rene Descartes

Our range of mental powers but in no sense
Become a core component of what makes
Us who we are. To which Clark answers: whence
That placid self-assurance that the stakes

Are human to decide, that we're equipped,
Us denizens of the Anthropocene,
With some sure means of telling what unzipped
Our mental powers or, throughout history, tipped

The species-saving scales our way despite
Our weakness, slowness, lack of super-fine
Perceptions, all great drawbacks in the fight
For species-dominance. How draw a line

13

Between mind-stretchers and the various sorts
Of stuff we rightly think of as accessories
To human wants and needs if that same thought's
What shows that phones and notebooks, but not pessaries,

Are mental attributes as much as those
We covert heirs of Descartes count the kind
Intrinsic to res cogitans? Suppose
You challenge this, say 'They're no part of mind,

Unless you're on some wild panpsychist spree
Where atoms have sensations, dim perhaps,
And there's enough diffuse mentality
Around to fill all those unseemly gaps

In the Cartesian worldview'. At this stage
The smart guy Clark suggests a novel type
Of thought-experiment whereby to gauge
What's altered from time present when we swipe

And activate our mobile phone or some
Such (so it's held) 'external' instrument,
And a time future, maybe soon to come,
When we have all the circuitry that went

To do all that amazing stuff hard-wired
Into our neural system and, so far
As introspection lets us know, acquired
In just the way its other updates are,

That is, by the incessant interchange
Of mind and world, a false distinction whose
Bad consequences spread across the range
Of arts and sciences. I'm apt to lose

My way still, as in the scenario Clark
First posited where I set out for MOMA
From my place (other side of Central Park)
With my old spiral-bound I'll-get-you-homer,

Thus showing – he maintains – that nothing much,
Or nothing to the point in this debate,
Would change if I gave notebook up for touch-
Type keypad, then they took an up-to-date,

Ten-gigabyte piece of silicon and placed
It right inside my head, along with links
To all the memory-paths once interlaced
In this old brain of mine so that it syncs

14

Extended Mind

With everything worth mentioning about
Yours truly, Otto. Anyway I'll stick
To pen and paper and make do without
The fancy stuff – old habits hard to kick,

And not entirely sure, now having looked
At some internalist ripostes, that this
Hypothesis of Clark's quite has me hooked,
Or whether I, like them, ought to dismiss

His claim. It's just that that all those mental aids,
From reed-pen, abacus and scroll to my
Famed notebook, and – now reckoning in decades,
Not centuries or millennia – every high-

Tech marvel that's each time cracked up to boost
Our cognitive capacity must still
Bear witness to its having been produced
Through the inventive power, resource and skill

Of humans whose intentions are expressed,
Embodied, or conveyed by just how well
It functions (note that word!) to manifest
The end in view. Me, I'm hard put to tell

Who's right in all this, having merely skimmed
Hash-tag 'Extended Mind' with the support
Of New York Public Library staff who trimmed
The mass of stuff that came up, put a short-

List of top reads together, and left me,
Old Otto, guinea-pig, bewildered hero
Of this odd tale, now mercifully free
To walk the streets from Brooklyn to Ground Zero.

A few years on and, should you then enquire
What's happened to me, they'll most likely say
'Oh yes, our old test-subject – sort of guy a
Cog-Sci outfit hopes will walk their way,

Or else invent, like we did, just a name
And little more on which our lot can peg
Enough generic attributes to claim
Good thought-experimental warrant, beg

No questions about his, the subject's, state
Of mind beyond what's specified, and thus –
Get funding! Shows how thoughts can emanate,
Intents take shape, and ideas come to us

From what's outside the skull yet rightly held
To be, in every other sense, inside
The mind of those, like him or us, impelled
To build their lives around the needs supplied

By brain, flint, notebook or the growing heap
Of gizmos silicon-, not carbon-based
To guide us future Ottos, or to keep
That intra-cranial stuff from going to waste'.

15
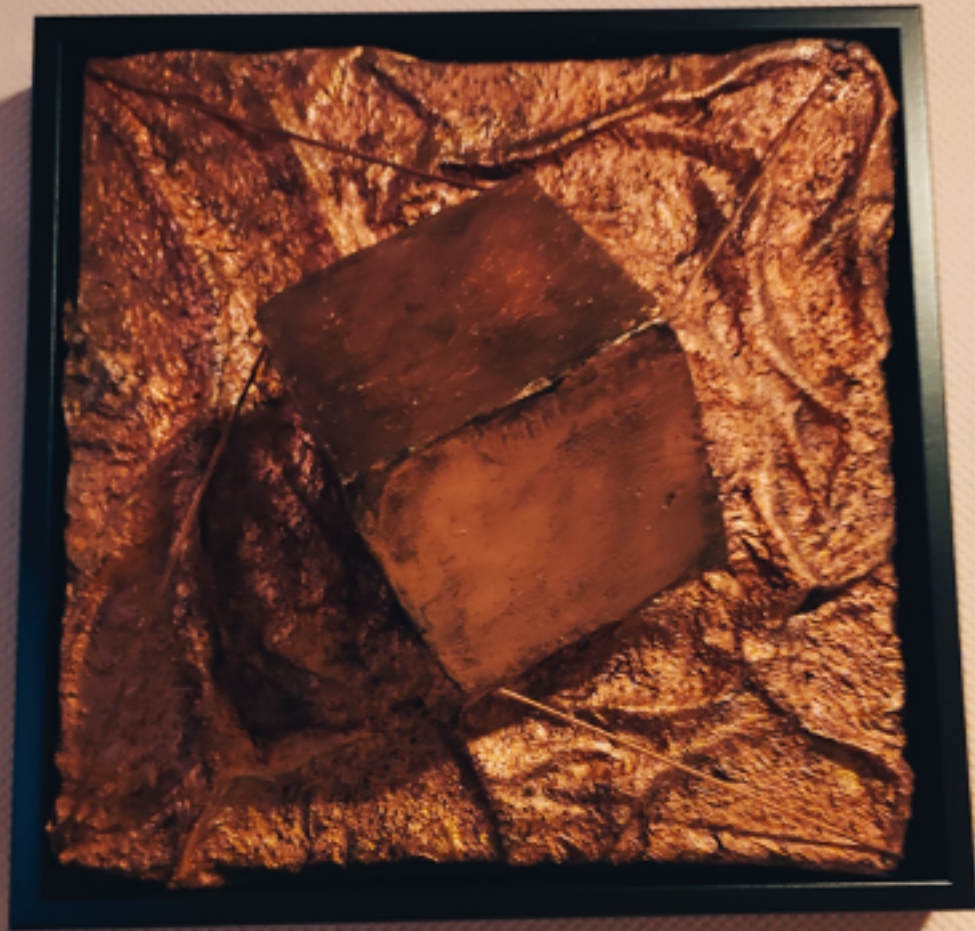
Der Würfel – The Cube
(mixed media bas-relief 30cmx30cm)
2023

Finally, Plato Has Been Vindicated!

Dr. ALAN XUEREB

Plato believed that the universe was made of five types of matter: earth, air, fire, water, and cosmos. Each was described with a particular geometry, a platonic shape. For earth, that shape was the cube. In a wonderful article/interview, Katherine Unger Baillie explains how science has caught up with Plato's idea of earth as cube.

In a new paper in the Proceedings of the National Academy of Sciences, a team from the University of Pennsylvania, Budapest University of Technology and Economics, and University of Debrecen uses maths, geology, and physics to demonstrate that the average shape of rocks on Earth is a cube.

Professor Douglas Jerolmack, a geophysicist in Penn's School of Arts & Sciences' Department of Earth and Environmental Science and in the School of Engineering and Applied Sciences' Department of Mechanical Engineering and Applied Mechanics says that:
'The interesting thing here is that what we find with rock,

or earth, is that there is more than a conceptual lineage back to Plato. It turns out that Plato's conception about the element earth being made up of cubes is, literally, the statistical average model for real earth. And that is just mind-blowing'.
Fundamentally, the question they answered is what shapes are created when rocks break into pieces. Remarkably, they found that the core mathematical conjecture unites geological processes not only on Earth but around the solar system as well.

To test whether their mathematical models held true in nature, the team measured a wide variety of rocks, hundreds that they collected and thousands more from previously collected datasets. No matter whether the rocks had naturally weathered from a large outcropping or been dynamited out by humans, the team found a good fit to the cubic average.

Identifying these patterns in rock may help in predicting

phenomena such as rock fall hazards or the likelihood and location of fluid flows, such as oil or water, in rocks. For the researchers, finding what appears to be a fundamental rule of nature emerging from millennia-old insights has been an intense but satisfying experience.

Earth and World
I could not ignore the fact that Heidegger touches upon the idea of earth as part of the (in)famous fourfold. In his 1935 essay *The Origin of the Work of Art*, Heidegger writes of a *conflict* between earth and world. This idea may seem to sit despondently in conjunction with the simple oneness of the fourfold.

Michael Wheeler, tells us that perhaps the pivotal thought, in this notoriously difficult essay, is as follows: *'Natural materials (the earth), as used in artworks, enter into intelligibility by establishing certain culturally codified meanings—a world in the sense of Being and Time'.*

Concurrently, nevertheless, those natural materials suggest the existence of a vast variety of other possible, but to us unintelligible, meanings, by virtue of the fact that they *could* have been used to realise those alternative meanings.

The conflict, then, turns on the way in which, in the midst of a world, the earth suggests the presence of the mystery. This is one way to hear passages such as the following:
'The world, in resting upon the earth, strives to surmount it. As self-opening it cannot endure anything closed. The earth, however, as sheltering and concealing, tends always to draw the world into itself and keep it there' (*Origin of the Work of Art* 174).

Dwelling and the Fourfold
Wheeler also explains that if the essence of human *Being* is to dwell in the fourfold, then human beings are (what they are) to the extent that they so dwell. In addition, this will be achieved to the extent that human beings realise the 'basic character of dwelling', which Heidegger now argues is a matter of safeguarding 'the fourfold in its essential unfolding' (*Building Dwelling Thinking, 352*). Such safeguarding is unpacked as a way of *Being* in which human beings *save the earth*, receive the *sky as sky*, await the *divinities as divinities*, and initiate their own essential being as *mortals*.

Perhaps the best way to understand this four-way demand is to explore Heidegger's claim that modern humans, especially modern Western humans, methodically fail to meet it. That is, humans are marked out by their loss of dwelling—their failure to safeguard the fourfold in its essential unfolding.

The cube in this work of art exemplifies metaphorically these two aspects - the Platonic (and now scientific) conception of earth as on average cubic and the Heideggerian poetic interpretation of earth as sheltering and concealing and as part of the fourfold which in the final analysis allows dwelling. Could these two aspects be reconciled? Perhaps only art can do that. Or not at all!

I Cannot Rest

I cannot rest, my teeming brain
Insists that it must have its way,
Once more there seems so much to say
And suddenly words pour out again.

Will they bring pleasure or bring pain?
The question must not bring delay,
The morrow vindicates the day,
To hesitate's against the grain.

Much has been said before, it's true,
Yet poets still increase the store,
Of what has been already said.

For what is old can be made new:
We coin what has been coined before
Hoping for gold among the lead.

Edward Greenwood