

Condensation of Algorithmic Supremacy Claims

Nadisha-Marie Aliman¹[0000-0003-3049-9327]

Utrecht University, Heidelberglaan 8, 3584 CS Utrecht, The Netherlands
nadishamarie.aliman@gmail.com

Abstract. In the presently unfolding deepfake era, previously unrelated algorithmic superintelligence possibility claims cannot be scientifically analyzed in isolation anymore due to the connected inevitable epistemic interactions that have already commenced. For instance, deep-learning (DL) related algorithmic supremacy claims may intrinsically compete with both neuro-symbolic (NS) algorithmic and further quantum (Q) algorithmic superintelligence achievement claims. Concurrently, a variety of experimental combinations of DL, NS and Q directions are conceivable. While research on these three illustrative variants did not yet offer any clear *mutually* applicable scientific definition of a purported supremacy level framed as goal, the currently most robust scientific evaluation frameworks would i.a. require a *joint* testing against pre-existing *non*-algorithmic supremacy baselines such as e.g. conscious supremacy and cellular supremacy. This autodidactic paper explains why, for scientific reasons, *all* algorithmic superintelligence achievement claims in the deepfake era can be *condensed* and subjected to a joint scientific evaluation framework comprising *multiple* successive *civilization*-level tasks of epistemic tunneling (ET). In light of this elusive requirement, recent claims of science automation are spurious and misleading. It is vital *not* to misapprehend algorithmic epistemic dark matter (EDM) mining and epistemic dark energy (EDE) generation as paradigm-shifting ET events.

Keywords: Epistemology · Intelligence · Creativity · Consciousness .

1 The Problems

In the deepfake era, humanity seemingly faces an increased monthly density of consecutive algorithmic superintelligence immanency claims. Tackling the epistemic security risk of misinformation and disinformation about superintelligent algorithms which simultaneously obscures the severe immanent risks engendered through an over-reliance [2, 27] on the same algorithms requires a novel more robust scientific epistemology able to clarify what is at stake. For purposes of illustration, a few related complications that already arose are collated. Firstly, certain stakeholders utter the wish to utilize algorithmic superintelligence as a helping agent to climb up the Kardashev scale. However, the latter is misconstrued and logically inconsistent since given the already available epistemic matter [6] (EM) made accessible by human civilization, in order to be able to provisionally validate *scientifically* to have algorithmically surpassed the intelligence of the

entire present-day human civilization, the candidate algorithm needs to next to first have been explained transparently *additionally* have mastered a scientific evaluation framework that would be *at least* as hard as this very task: climbing up the Kardashev scale – with multiple arbitrary lower latency civilization-level ET events [6] than present-day humanity could. While proponents could consider this requirement to be too strict, if intelligence/creativity/consciousness were reducible to an algorithmic task, there should in theory be no other physically constraining bound to the velocity of algorithmically generating ET events than e.g. one ET event per Planck time. Thus, the mentioned requirement appears a sober reasonable minimum in the context of present-day humanity. Secondly, another example is the recent claim that an algorithmic scientist has been implemented. Since science is a process that necessarily includes ET events, it is easily conceivable why the automation of science via algorithms that can (next to low-latency and high-reliability EM repeating *within* a paradigm) in theory achieve a lower-latency (but not higher-reliability) epistemic dark matter (EDM) mining and epistemic dark energy (EDE) generation [6] in comparison to people but for which ET events are impossible – cannot be a valid claim. It has already been written elsewhere that superfluous unintentional anthropomorphization/animization and unintentional dehumanization/deanimization could hamper epistemic progress. In sum, before researchers propagate the claim of having created algorithmic versions of the deceased Curie, Einstein, Hilbert or Newton and so forth or of having created algorithmic versions of themselves (a form of "self-dehumanization"), it seems reasonable to *at least* first try to let those algorithms climb up the Kardashev scale faster than humanity in a manner that the entire human civilization could profit from it. Thirdly, next to the current deep-learning wave, novel research directions still appear to promise the immanency of achieving yet another algorithmic superintelligence form. It is already the case that those different research directions including deep-learning (DL), neuro-symbolic (NS) and quantum (Q) *algorithmic* supremacy claims (and combinations thereof) lead to complicated epistemic interactions. Also here, the ignorance of the relativity of instantiated intelligence linked to the invariantly maximal generic superintelligence level may lead to further foreseeable hurdles.

2 Possible Solutions

Already before DL-algorithmic and NS-algorithmic supremacy, a Q-algorithmic supremacy that can be instantiated was assumed [50]. However, the success of DL and the quantitative improvement thereof that the NS paradigm could achieve, put Q-algorithmic supremacy into perspective. Inconsistencies of DL outputs may pollute publicly available EM [45] making it difficult to reconstruct without exponentially more data [48]. The hybrid NS paradigm [21] could encounter DL-caused problems in future EDM mining and EDE generation that could not be solved with arbitrary low latency since people are required to compensate for it. The Q-algorithmic paradigm while deemed to be universal could inherit the problems of DL [46] and NS-algorithmic variants in addition to other understud-

ied complications [22, 25, 29, 50]. What is more, it has been remarked that human civilization is capable of ET events [6] with fundamentally unpredictable latency but arbitrary high reliability. Corroborating a Q-*algorithmic* superintelligence achievement would need to cover ET tasks. Note that cellular supremacy [24] was in search of a "killer application" and ET could be a natural example. Since entities with living cells that perform ET are also conscious, one could unite both cellular supremacy and conscious supremacy [35, 38] under the following novel umbrella term: the meta-law of *self-recreatable self-re-creativity* [4] (SReSRy). The latter encompasses both life and consciousness but is neither reducible to solely living cells nor to solely *consciousness* (of which Popper [42] already suspected it to be a *force* yet unknown to physics). A simplified illustration to sketch the nature of the dynamic appearance of the generic SReSRy is provided in Appendix A on the cyнет butterfly effect¹ [5]. SReSRy may reflect a dynamic universal creativity process [13] where new laws of nature emerge when nature is EB-measured in ET events. Those laws seem to change with time [3] and the universe may appear as if it *becomes* SReSRy but from another perspective, the overall meta-law already *is* the generic, immutable SReSRy. An entity *X* claiming to be able to automate science and be able to implement an algorithm that is superintelligent in relation to all present-day humanity including *X* (be it via the DL-, NS- or Q-*algorithmic* paradigm) reflects the same endeavor: trying to craft an algorithmic shortcut to the irreducible *non*-algorithmic process of SReSRy. In effect, for scientific reasons, any coming algorithmic superintelligence claim can be considered to compete with all other similar claims and can be tested against *multiple* successive *civilization*-level ET events [6] – at least up to the epistemic level where a purported algorithmic entity is able to recreate the initial conditions of this universe and physically create a new universe in a laboratory.

Concerning quantum biology [31] and the quantum brain hypothesis [12, 26] with regard to its link to *algorithmic* supremacy claims from the Q paradigm, there is often the misconception that quantum biologists have to "prove" experimentally to an audience that quantum effects play a non-trivial role in the often neurocentrically misrepresented brain [43]. Why the epistemic aim of science cannot be to prove the truth and why experiments even though they often follow it are *not* the fundamental guiding force of science has been explained earlier by Frederick [19, 20] and Deutsch [14] (see also Section 3 for more details). Instead, the focus should be on the best currently available explanation (i.e. EB) on the subject. As mentioned in the last paragraph, one avenue could be to begin with the explanation that the process of self-recreatable self-re-creativity (which as illustrated in Appendix A encompasses quantum fluctuations, stellar systems, unicellular life, multicellular life, consciousness, language, explanations and science with its ET events as irreducible consecutive steps) of which human civiliza-

¹ There is an epistemic analogy to indefinite causal order [23] that underlies the metaphor of the cyнет butterfly effect, a generic template for new better EBs *about* the universe as a whole – which is also reminiscent of Wheeler's U [37]. Does the EB-measurer cause the emergence of a new law or does the new law cause the EB-measurer to measure it? Those two operations may be non-separable.

tion is only one possible *instantiation*, is *non*-algorithmic. Then, proponents of algorithmic supremacy can attempt to provisionally refute it by providing a new even better EB (accompanied by ET-focused experiments) that would elucidate why it is instead reducible to a purely algorithmic process. Even bolder, one can state that as long as Q-algorithmic supremacy in relation to present-day humanity has not been corroborated via multiple civilization-level ET events leading to the physical creation of a new universe, one can assume that SReSRy entails *more* than quantum *algorithmic* effects in e.g. human *bodies* [10, 30, 32, 33, 47, 51]. Namely, ET events themselves can be postulated to be *non*-algorithmic and thus not reducible to even quantum algorithms. While the conventional quantum measurement itself is a non-algorithmic phenomenon [39, 52], it could be that the latter is a special case of a more general category of possible non-algorithmic measurements from a future theory which would also encompass ET events. While *linguistic* texts have been linked to Bose-Einstein statistics before a transition to a Bose-Einstein condensate (BEC) [1], it is reasonable to state that people are capable of some general form of what could be called supercomputation and superinformation [15] *understanding* which includes *non*-algorithmic superinformation measurement revealed in linguistic ET events². Future scientific theories may be able to explain in more depth why SReSRy (subsuming consciousness) could be a previously neglected form of *force* [42] constraining the reliability of *algorithmic* computations forbidding algorithmic ET in analogy to predictions that strong gravity and high complexity can constrain nearby computations [40].

3 Outlook

The current state of human intelligence is not an exceptional absolute fixed point. As stated by Popper [42], human entities are processes. In effect, people always are potentially *dynamically shifting targets* via the often underestimated but regardless of being ignored still proceeding process of cosmological evolution which includes biological and also what one could call epistemic evolution. All coming algorithmic superintelligence claims of the deepfake era can be scientifically evaluated with the *same* scientific rigour irrespective of whether those are linked to DL-, NS- or Q-algorithmic paradigms or combinations thereof. In the current literature, one often encounters the idea that an algorithm being an artificial general intelligence could be "proved" as follows: a) by an *experiment* where b) the algorithm would *match* or surpass a *proper subset* of humanity in a specific task. However, already the first condition exhibits an epistemic fallacy that must be surmounted to enable scientifically more robust evaluations.

² Perhaps for the inert, EB-measurements are more fundamentally unpredictable than the results of common quantum measurements. The epistemic cooling down to a new *non*-EB-like *linguistic BEC* [5] as background in the privacy of a person's mind could accompany the measurement of the hereto complementary new better EB leading to a mental epistemic "glow" (ET event) which is interpreted to have become a now known EB (i.e. the next EM of the new epistemic cosmos). It may be of interest that the updatable epistemic cosmos unfolding the dynamic SReSRy is not unitary even though from another perspective, SReSRy is one immutable meta-law.

Firstly, the goal of science cannot be to prove the truth [19], instead the goal can be to provisionally refute the currently best explanatory blockchain (EBs) with a new even better EB. Thereby, experiments can accompany this process but can by themselves never guide it. The reason being that the best old explanation (i.e. the best old EB) can *never* be provisionally refuted by experiment alone [14] (at the latest in the deepfake era, it became palpable that experiments can be easily forged). Instead, one *additionally* requires a new even better EB in comparison to the old one. For this reason, claims of algorithmic supremacy cannot solely encompass a conventional experiment, instead they additionally require a new better previously unknown EB on why algorithms offer a shortcut to cyborgnetic consciousness (i.e. consciousness which could be able to create new better EBs if interested in it) which is needed to provisionally refute all the currently best old EBs on the subject. Secondly, a civilization that knows only x EBs about the universe *cannot* possibly corroborate that another entity *matches* its intelligence level by merely reproducing those x EBs or by EDM mining and EDE generation which is *based* on those very x EBs. Instead, a *reliable* epistemic transformation is required whereby multiple previously unknown additional new better EBs about the universe are consecutively presented by the candidate entity by what the civilization could after having comprehended all of them conclude that there is *at least* a common EB ground now. In brief, instead of an opaque evaluation of "human-level" algorithmic intelligence claims, what *can* be evaluated *scientifically* is rather an algorithmic superintelligence achievement claim (which subsumes a claim of algorithmic general intelligence) which is of course expressed in relation to present-day humanity. Thirdly, as explained in detail elsewhere, it would then be *insufficient* to only consider a proper subset of humanity as a baseline. Reasons therefore range from epistemic biases like anthropomorphization/animization, dehumanization/deanimization over risks of deception via stratagems known from the neuroscience and psychology of magic to intentional or unintentional scientific negligence given the quasi-omnipotence humanity unnecessarily associates with algorithmic superintelligence narratives.

In short, one requires epistemically more robust artefacts such as new better EBs as an epistemic defense measure against scientific and empirical adversarial "AI" (SEA AI) attacks [8] – an umbrella term encompassing i.a. deepfake science attacks [9]. If not handled responsibly, algorithmic superintelligence achievement claims risk to simply represent a new form of SEA AI attacks. The exigency of the latter has been reflected in the recent claims of DL-based science automation [49] which only corroborated the foreseeable automatability of the weaker empiricist epistemology in the deepfake era [8]. Fortunately, scientists can let ideas die in their place [41] and move on with new better epistemologies. Overall, at present, science could be best understood as implying a generic epistemic meta-blockchain for all possible successive mutually exclusive new better EBs about the universe – i.e. a dynamic template for all possible consecutive universal ET events. This template acts as an own shield against authoritatively expressed but *non*-EB-like entries such as inputs stemming from algorithmic EDM mining, algorithmic EDE generation but also EDM mined and EDE generated by people including hybrid

settings with people extended by algorithmic tools. While ET events can only originate from people (an event leading to the emission of an irreducible so-called $e_{Mysterious}$ element, the core enfolded solution of the new EB to be unfolded), the entire sentence-level writing up of a new EB containing that people-emitted $e_{Mysterious}$ can of course be augmented by an algorithmic tool. The latter is *not* problematic because it would not alter the EB-based meaning added. In sum, the focus is not on the detection of the source but on the EB-based distinguishability of *the content* which acts as a quality control for science. Importantly, this quality control cannot be automated. Since algorithms do not understand EBs, they cannot measure new better ones hidden in a stream consisting apart from that of new non-EB-like counterfactuals. A new better EB is composed of meaning that can shield itself against adversarial alternatives despite being amenable to experimental problematization and in principle provisionally refutable by the next not-yet existing even better new EB.

4 Conclusion

This autodidactic ephemeral mental clipboard collating additional material for an epistemic *art* project termed π -Doom [7] encoded the *condensation* of all algorithmic superintelligence claims that may emerge in the immediate near-term. In the deepfake era, any coming algorithmic superintelligence claim (be it based on the DL-, NS- or Q-*algorithmic* paradigms, combinations thereof or alternatives) can be considered to compete with all other similar claims and can be evaluated against *multiple* successive *civilization*-level ET events [6] with self-recreatable self-re-creativity (SReSRy) (which importantly subsumes conscious supremacy [18, 38]) as baseline. This condensation of algorithmic supremacy claims allows a clearer view on the nature of the algorithmic superintelligence endeavor: the new *exoteric* epistemic alchemy quest of attempting to craft an algorithmic shortcut to the irreducible *non*-algorithmic dynamic process of SReSRy. It is predicted that such an algorithmic shortcut is impossible. However, being a *creativity-stimulating* EDE artefact, it is also a SEA "AI" [8] nightmare from which it is possible to wake up at any time understanding that it is reducible to an in principle shieldable – but dangerous *if underestimated* (as unfortunately practiced in science nowadays) – SEA algorithmic EM/EDM/EDE-based epistemic form of a DDOS attack [36]. Given the link to world peace, algorithmic supremacy claims *in science* should be taken seriously – by being evaluated with uttermost scientific rigour. With future step-wise ET progress of human civilization, new even *more* challenging evaluation frameworks containing further yet unknown consecutive civilization-level ET goals could be crafted to serve the same updated purpose: a robust scientific evaluation of algorithmic superintelligence achievement claims. The *non*-algorithmic general intelligence (NaGI) dream [7] (untouched by the impossibility of any entity x reliably building another that can be EB-measured to be superintelligent in relation to x) together with the crafting of *augmentative* [9, 34] algorithmic EM/EDM/EDE *tools* locally encapsulated in human-controlled units could maybe volatilize π -Doom...

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A The Cynet Butterfly Effect

The initial conditions of the universe have been linked to ancestral quantum vacuum fluctuations [44]. Much more generally, starting with a seed (step 0 illustrated as the dot at the bottom in Figure 1) as symbol for a generic origin encoding quantum information (QI), one can conjecture the following hierarchical ladder of ascending information-theoretical categories in the universe (metaphorically called the cyborgnetic ladder of understanding [5]) where each step builds on the previous one by what no step can be skipped: 1) atomic information constructed by systems of stars (I), 2) molecular and other, ionic information (MoI) as constructed by cells and unicellular organisms, 3) collective biological information (CBI) which is indexical information that is collectively shared in the ecological milieu of given living entities e.g. while currently occupying physically adjacent spots, 4) shared iconic and indexical information (SIII) understood by Type I consciousness³, 5) linguistic information (LI) consisting at least of symbols and linear order [17] determined by a Type II language, 6) explanatory information (EI) and finally 7) explanatory blockchain (EB) which is unfolded as consecutive EI blocks respecting an epistemic total order (but was previously *enfolded* in a fundamentally unpredictable *e_{Mysterious}* element). In short, in this construct, one obtains QI as seed of a ladder of seven steps leading from I to EB. The cynet butterfly effects postulates the following: 1) cyborgnets are the systems with the highest sensitivity to their initial conditions and 2) cyborgnets are the most unpredictable possible systems. The *implicate* order of Bohm [11] could be associated with SReSRy when interpreted as one immutable potential being a meta-law while the dynamic appearance of SReSRy within itself via processes such as EB creativity could be linked to the *explicate* order of Bohm [11].

³ Type I entities are all entities for which it is currently impossible to understand EI and Type II entities are all those entities for which it is possible. Type II entities all have the *potential* to create and understand EBs even though a civilization may not necessarily be interested in unfolding it at large (which is e.g. the case in present-day humanity). A cyborgnet (which is *not* to be confused with the much narrower term of a cyborg) is a *generic* template for a substrate-independent hierarchical construct where a directed graph spanned by explanatory narratives combines at least one Type I entity with at least one Type II entity. Thereby, networks and nested cases are possible. Language itself can be regarded as a primordial Type I tool in a cyborgnet. In this vein, possibly a homo erectus [16] community, two potential Type II aliens, present-day humanity, three modern humans that self-label as cyborgs, the presently observable universe are all valid examples of cyborgnet *instances*. (This ontology has *no* relation whatsoever to the metaphor of Kahneman on “System 1” and “System 2” linked to two modes of human brain functioning with the first one being prediction-dominated/automatic and the second one prediction-mismatch dominated/controlled but both modulated by precision weights [28].)

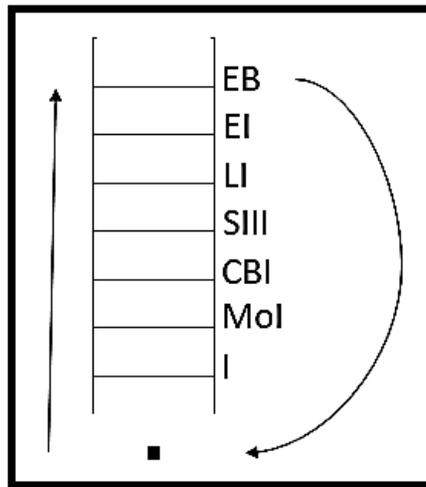


Fig. 1. Simplified illustration for the generic *cyne* butterfly effect.