

Beyond Imitation: The Case for Calling AI “Super Intelligence” (SI)

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Abstract: The language that is employed to discuss computing systems and their state of advancement influences both research agendas and policy and societal frameworks, as well as the perception of those systems. To reflect the rapid progress leading to capabilities that the U.S. government called "Super Intelligence" (SI) instead of "Artificial Intelligence" (AI), the U.S. government signed an executive order on 29 September 2026 that put a fresh spin on the term AI. On 29 September 2026, the U.S. government issued an executive order that reframed the term Artificial Intelligence (AI) to Super Intelligence (SI), which was an appropriate change with the recent advancements in capabilities. This article supports the conceptual validity of the terminological shift and recommends its internationalization. We believe that "artificial" and "synthetic" are origin-based terms and do not necessarily limit the possible uses of a system. "Super Intelligence", by contrast, is a performance-based term which directly targets the metrics that are of major concern to scientists, regulators, investors and the public today. In this paper we recap the scope and limitations of the executive order, discuss the evolution of the executive order's naming, and offer six reasons to adopt it widely: accuracy, precision, communication, governance, safety, and coordination. A capability indexed working definition is proposed as is a roadmap for a gradual progression toward adoption, in response to the first objection, that the technical definition of superintelligence is too narrow for the order's applications. This paper is not empirical; it does not contain findings with regard to the effects on trust, investment and governance, but it provides hypotheses for further empirical research based on a conceptually oriented and policy analysis of a documentary examination of the order.

Keywords: Super Intelligence, artificial intelligence, synthetic intelligence, AI terminology, AI governance, capability levels, executive order.

Introduction

Science is by no means value-free. Names a field selects draw attention and shape expectation (Lakoff & Johnson, 1980) and they help set the conceptual terms with which law and policy are built. The term artificial intelligence was coined in a proposal for the Dartmouth Summer Research Project (1955) whose goal was to "give machines the ability to use language, form abstractions and concepts, solve problems that are now the exclusive province of humankind, and improve themselves" (McCarthy et al., 2006). Seven of the project's participants followed this project in the summer of 1956 as represented in Figure 1 (Solomonoff, 2023). Almost 70 years later, the systems envisioned by that vision do many things for which the creators could hardly have guessed.



Figure 1: Seven participants in the 1956 Dartmouth Summer Research Project on Artificial Intelligence (stylized reproduction of the group photograph; Solomonoff, 2023).

On 29-Sept-2026 the President of the United States signed what was dubbed an executive order inaugurated the era of Super Intelligence (The White House, 2026a). The order mandates the adoption of "Super Intelligence" (SI), in place of "Artificial Intelligence" (AI) in official correspondence, public communications, websites, reports, policy documents and other non-statutory communications. The stated reason is that these technologies are getting better and better and are more and more a sign of "not just artificial intelligence, but a new era of Super Intelligence" (The White House, 2026a).

This article believes the concept of the executive order is well thought out and should be introduced to the international community. We endorsed in an earlier paper the use of the term "synthetic intelligence" (Okujagu & Ekeinde, 2025) but have now come to see this as replaced by a "Super Intelligence" based approach focussed on capabilities. The aim of this paper is to clarify the need for this change, the evidence for widespread use of the new term and to recognize the limitations of our case.

The analysis is supported by the documentation and conceptualization. We are dealing with the executive order and its accompanying fact sheet as primary source material, using contemporary legal and technical commentaries for interpretive context and a wide range of scholarly interpretations on machine intelligence more broadly. Finally, when our claims make predictions about the consequences of trust, investment, or governance on the future, we explicitly state these claims as expectations to be addressed in a future empirical study.

What the Executive Order Establishes

With the public discussion of the order having been extensive with little precision, it is important to precisely draw the boundaries of the exact scope of the order. The main issues addressed by the directive have been outlined in Table 1.

Table 1: *Principal Provisions of Executive Order “Inaugurating the Era of Super Intelligence” (29 September 2026)*

Provision	Content
Terminology directive	In all official communications, activities or publications by executive departments and agencies, the terms “Super Intelligence” or “SI” shall be used to replace the terms “Artificial Intelligence” or “AI.”
Operative definition	For the purposes of this order, and for purposes of any other law for effecting such changes, the words "technology" and "system" shall mean similar technologies and systems covered by the existing definition of "artificial intelligence" in 15 U.S.C. 9401(3).
Federal definition	The Assistant to the President for Science and Technology shall place before Congress, within 60 days, proposed legislation that would incorporate an updated federal definition of "Super Intelligence" as embodied in the capabilities outlined in the order to determine if the provisions of existing federal statutes should be amended.
Limits on scope	Does not alter rules issued earlier; does not affect or revoke presidential orders, contracts, grants or other documents that have preceded, does not establish private rights and is enforced in accordance with the existing law.

Note. Data from The White House (2026a), Freshfields (2026) are used in the preparation of this report.

These are certain aspects of the executive order that are worth special mention. First, it does not affect general statutory law - it only affects the language of the executive branch of government. Second, it intentionally allows for the ongoing use of the current statutory definition for immediate operational purposes, but at the same time requires the setting up of a new operational definition that adheres to capability (Freshfields, 2026; Gonzales, 2026). Third, the order was issued concurrently with an agreement signed by some of the nation's leading technology companies that the President described as “morally binding” on the companies although it imposes no legal obligations (Freshfields, 2026; Mahajan, 2026).

The statutory definition, from which the order is currently relying, must be looked at for an understanding of the breadth of this change. The National Artificial Intelligence Initiative Act of 2020 (2021) defines AI as “a machine-based system that, for a specified set of human-determined goals, makes predictions, recommendations, or decisions in one or more domains of interests impacting real and virtual environments.” The technologies in this “legacy” definition are traditionally nested in a hierarchical manner as shown in Figure 2. The executive order is most accurately viewed as the first step in a process that must ultimately yield draft language for legislation by late November 2026 for the purposes of reforming the definition.

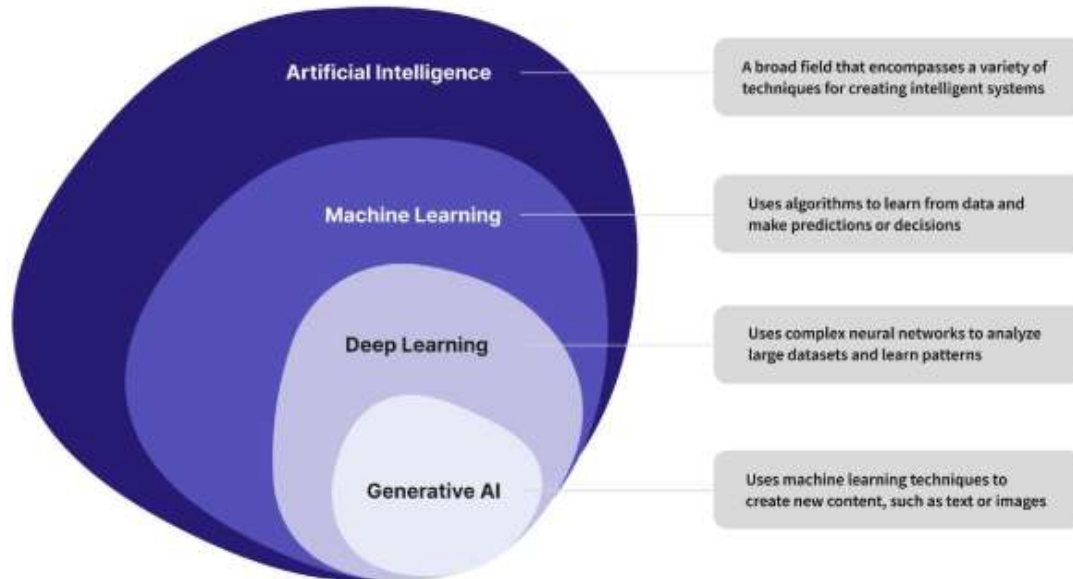


Figure 2: Conventional nested taxonomy of artificial intelligence technologies, from the broad field of AI to machine learning, deep learning, and generative AI. (Cowden & Quraishi, 2025)

From Origin to Capability: A Terminological Genealogy

Three naming frameworks are now in play. *Artificial intelligence* classifies by origin and, in its founding decades, by the goal of imitation; Turing (1950) framed the test of machine intelligence as indistinguishability from human conversational behavior. *Synthetic intelligence*, which we advocated in 2025, is also an origin term. It stresses that systems are assembled by human design, which is accurate but, as we now recognize, adds little to “artificial.” Simon (1996) had already used “artificial” in precisely that neutral sense, as anything shaped by design. In contrast, “*Super Intelligence*” evaluates systems based on demonstrated capability relative to the human benchmark. Table 2 provides a detailed contrast of the three frameworks.

Table 2: *Artificial, Synthetic, and Super Intelligence as Naming Frameworks*

Dimension	Artificial	Synthetic	Super
Axis of naming	Origin	Origin	Capability
Question answered	Who made it?	How was it assembled?	How capable is it?
Reference point	Human behavior (imitation)	Human construction	Human performance (surpassing)
Implied goal	Imitate	Engineer	Exceed and extend
Open to empirical test	Weakly	Weakly	Yes, against benchmarks

Note. Conceptual summary prepared by the authors.

The Conceptual Threshold of Superintelligence

Mathematically, the concept of superintelligence can be expressed as a function of human and machine intelligence over time. Superintelligence is often conceptualized as the point where machine intelligence significantly surpasses human intelligence across multiple cognitive domains (Bostrom, 2014). This can be represented as:

$$S(t) = f(H(t), M(t)) \quad (1)$$

where $S(t)$ represents the intelligence level at time t , $H(t)$ is human intelligence, and $M(t)$ is machine intelligence. Superintelligence is conceptually achieved when $M(t) \gg H(t)$ across a broad spectrum of cognitive abilities. Equation 1 encapsulates the theoretical basis for defining superintelligence relative to human intelligence.

Arguments for Universal Adoption

Accuracy: The Name Should Match the Frontier

Imitation is no longer the operative benchmark. Capability frameworks now classify performance relative to human skill, from emerging through competent, expert, and exceptional to superhuman, and they recognize that some narrow systems already occupy the superhuman tier (Morris et al., 2024). A formal account of intelligence as the ability to achieve goals across many environments (Legg & Hutter, 2007) likewise places no ceiling at the human level. A term whose very wording denotes imitation is a poor description of systems evaluated by whether they exceed human performance. The executive order makes this point in its rationale (The White House, 2026a), and the point is sound.

Precision: A Capability Term Can Be Tested

An origin-based term reflects very little information of what a system actually implies, for any system built by a human or synthetic by nature is really an artificial or man-made system. A capability-based term on the contrary can be empirically validated or refuted. The scientific rationale for the terminological change is the most significant epistemological one: this is the main reason why in our view "Super Intelligence" is a genuine improvement on our previous definition. When used to refer to 'Super Intelligence,' the term can be audited as long as there's an explicit definition it is meant to describe that's published and clearly evaluable. On the other hand, statements about "artificial" intelligence or "synthetic" intelligence are impossible to audit because they refer to historical developments – not the measurable product indeed.

Communication: Words Shape Public Understanding

The sense of 'counterfeit' which we discussed in our previous work (2025) as negative connotations of 'artificial' relating to language coincides with cognitive work on the relation between language and perception. In particular, framing theory shows that the term insidiously degrades the perceived "legitimacy" and "value" of the technology (Lakoff and Johnson, 1980). In contrast, the presidential blueprint is based on a different assumption: that "Super Intelligence" is the best way of capturing the promise and potential of these systems and their rapidly expanding capabilities (The White House, 2026a). An appreciation of this extraordinary power and the necessary duties should contribute to the overall maturation and complexity of a public discourse. Yet we recognize that no scientific test can definitely prove whether the new terminology is an effective bulwark against public opinion's change. As of now, it is still an empirical question, not a conclusion (see Research Agenda), and this should not be taken as a given.

Governance: A Single Vocabulary Supports Coherent Policy

Regulation, procurement, export control, and standard-setting all depend on shared definitions. By moving the federal vocabulary and commissioning a federal definition, the order creates a single reference point for the world's largest research and technology jurisdiction (The White House, 2026a, 2026b). Divergent vocabularies impose real costs: they complicate treaty drafting, cross-border compliance, and the comparison of national strategies. Convergence on one term, early, is cheaper than reconciliation later.

Safety: Naming the Frontier Foregrounds Its Hazards

The scholarly literature on superintelligence is overwhelmingly a literature on control, alignment, and accountability (Bostrom, 2014; Good, 1966; Russell, 2019). A central unresolved difficulty, that techniques adequate for overseeing current systems may not scale to systems more capable than their overseers, is illustrated in Figure 3 (Aschenbrenner, 2024). A name that places the possibility of systems exceeding human capability at the center of discourse directs institutional attention to these problems. The accompanying voluntary accord reflects that logic: it calls on developers of frontier models to maintain internal controls, monitoring and remediation processes, independent external assessment, and board-level oversight (Freshfields, 2026). Whether voluntary commitments suffice is a legitimate debate, and the accord does not itself require signatories to adopt the new terminology (Freshfields, 2026). That the vocabulary of the frontier should include its risks is, in our view, difficult to contest.

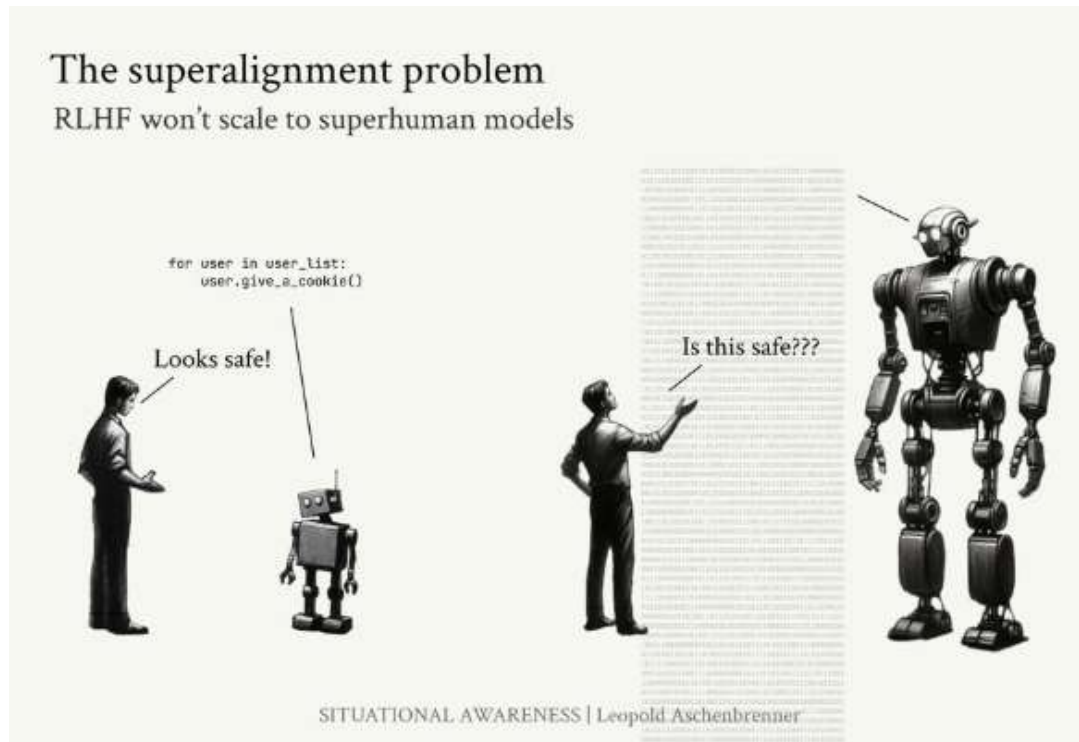


Figure 3: The superalignment problem: oversight techniques adequate for current systems may not scale to models that surpass human capability (Aschenbrenner, 2024).

Coordination: Why Adoption Should Be Universal

The rules, markets and scholarly sources in this field are inherently "international". Since SI is not the new protocol for the rest of the world, there will be a split in the terminology, with one commentator predicting this will be a dual parlance (Mahajan, 2026), and consequential ambiguities. This risk is exacerbated by the current regulatory setting; for example, the European Union has recently introduced an Artificial Intelligence Act (Mahajan, 2026) with conformity-assessment requirements for high-risk systems which are outlined in Figure 4. On the other hand, the industry is already moving towards capability-oriented terms, with one of the biggest labs already using the label "superintelligence," and their products are seen as minor leaps toward it (Meta Superintelligence Labs, 2026; Zuckerberg, 2025). The introduction of "SI" to all schedules would make this fragmentation a thing of the past, giving researchers, regulators and the general public one common name for one field, worldwide.



Figure 4: Conformity-assessment pathway for high-risk AI systems under the EU Artificial Intelligence Act, illustrating a regulatory regime built around the term "AI system" (Regulation (EU) 2024/1689, 2024).

Objections and Responses

The technical meaning of superintelligence is narrower. Technically speaking, the term "superintelligence" has a more limited connotation. This is the one that's the most serious. Within the minds of scholars, the term describes an intellect that is massively superior to human achievements in practically every area of interest, a condition that actually has not yet been reached (Bostrom, 2014; Good, 1966). When used in existing systems it may then seem over the top. We have 3 answers. In one sense, the executive order concedes uncertainty over the definition of the term: it explicitly deems a formal definition to be "offers," a term that will become subject of a future "formal definition" (The White House, 2026a). There's second: The term can be used precisely, with a maybe a tier descriptor to convey precisely where the specific system falls on the spectrum, and maybe the tier term itself to convey the field in general, as well as the aspiration of the field (Morris et al., 2024). Third, science's historical roots are full of names which were at first somewhat strictly defined but from time to time became more inclusive with the expansion of corresponding sciences. The correct approach would be to come up with a concise, coherent definition, of course, not a term from the past that doesn't correspond to the systems being discussed.

The order is limited and may be reversed. The executive order does not change the law and bar only applies to the federal executive branch and excludes historical documents (Freshfields, 2026). These limitations do not run against our recommendations; they support our recommendation of comprehensive international and legislative measures. A domestic

executive order is an initial necessary but restricted measure, and the need to be coordinated globally highlights just how important global adoption needs to be.

Private actors are not bound, and usage may diverge. By no means will the order force private businesses to change product names or forgo the use of “AI” altogether (Gonzales, 2026). This puts up a risk of a transition to “SI”: Federal reports may start applying ‘SI’ and industry-academic research may still apply ‘AI’ creating some friction between the institutions. It is not however an excuse to keep an obsolete term. Instead, it is an interesting suggestion for internationalizing and speeding up definitional efforts, in order to arrive at a common language for all the sectors.

The term invites hype. In the context of media coverage, Mitchell (2021) showed that the public debate about AI is a cyclical phenomenon where affectations of rhetorical competence regularly exceed shows of actual competence. This is not hypothetical nor theoretical, but a documented risk! Its impact, however, can be greatly reduced by limiting the definition of “Super Intelligence” to information that is independently documented and verifiable and not merely the developers' words. A strict definition, that is based on assessment standards, is a counter to hype, not an accelerator.

Understanding versus performance. The famous Searle's position (1980) was that symbolic manipulation is not real understanding. The problem of philosophy is expressly ignored in a capability-based definition; it records the things that systems are capable of doing rather than what they experience or even understand. The proposed terminology begs no question about consciousness or comprehension the questioning of which is ardent and contentious—and is yet scientifically useful in that the given term refers to action as it can be observed.

The change is political. It's because it issued from a specific administration, and for some, the shift in terminology was driven by techno-nationalism (Mahajan, 2026). We do recognize this concern. We make our argument, however, not on the basis of how effective it has been to produce a more comprehensive political vocabulary by including terms, but for what conceptual and practical benefits it has for naming a range of capabilities currently absent in it. We implore readers with political reservations to hear us on the merits of our argument.

Recommended Definition and Adoption Roadmap

We suggest that international entities should use the following working definition, until such time as the proposed U.S. federal definition has been published, with caveats: Super Intelligence (SI) refers to technologies and/or systems that were previously considered as artificial intelligence (AI), but are now assessed by how well they perform relative to human performance, and only classified as superhuman when evaluated comparison tests are transparent and repeatable. This definition matches the spirit of the executive order, and meets the stringent standards for the concept to be used for empirical measurement.

For a smooth transition we suggest a phased adoption:

- **Phase 1 (Year 1):** Federal definition of a component published in the USA and initial use by national research agencies and professional societies. At the same time, general reference information for capability bands to be issued.
- **Phase 2 (Years 2- 4).** Incorporation into international standards work, including international bodies that are responsible for producing AI related standards, and into intergovernmental guidance. Concurrent invention in major academic journals and conferences, with a transitory term used in the publications to preserve continuity between the two different designations of “artificial intelligence” (AI) and “machine learning” (ML).
- **Phase 3 (Year 5 and above):** Extensive discussion of academic curriculum developments, legislation and overall effectiveness of the term in clarifying technical and public debate.

Research Agenda

A research agenda needs to be targeted, in order to empirically validate the proposed conceptual shift. There are at least two dimensions of the framing of “Super Intelligence” (SI) versus “artificial” intelligence that should be measured in survey experiments to understand the differential effects it has on the risk perception, trust, and investment behavior of both lay and

expert audiences. Secondly, independent benchmark consortia need to design and agree on realistic and capability-based thresholds for the formal definition of ‘superhuman’ performance. Third, independently run scoring and audits should be conducted on the instances of success in which the public boasts of superintelligent performances in order to gauge the extent to which it is actually true. Fourth, comparative policy analyses should be carried out to determine whether capability-based regulatory regime are able to improve governance and safety outcomes more effectively than traditional, label-driven regime. Last, but not least, bibliometric analysis should monitor the longitudinal application and development of the concept “Super Intelligence” in scientific, technical and policy literature.

Conclusion

Finally, the debate about advanced computational systems has moved beyond origin-specific terms like ‘artificial’ and ‘synthetic.’ This analysis makes it very clear that the emphasis is no longer on manufacturing these systems but on what they can accomplish. The September 2026 Executive Order requiring the adoption of ‘Super Intelligence’ (SI) is a much overdue and welcome direction toward the capability-based approach. There are some good arguments for a more limited technical definition of superintelligence; but these are conceptual baggage that can be managed by the suggested capability-based working definition and gradual timetable for implementation. In the future, scientific, standards and policy communities must cooperate to establish this language. The designation of ‘Super Intelligence’ as a scientific term for a specific capability would allow stakeholders around the world to handle the challenges of science accurately, effectively communicate those capabilities, set rules for governance, manage hydrophysical safety, and communicate capabilities in a coordinated manner. The transition to this language and concept will ultimately bring a certain level of clarity, which is essential for empirical research and for testing the hypothesis related to the effects of these revolutionary technologies for Society in the contour of the trust and governance arrangements.

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