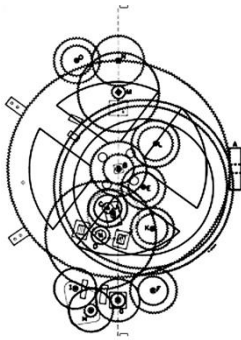


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Strategic Policy and the Economy of Ideas **Part I of II**

The Long Unfolding of Ideas: From Plato's Forms and Aristotle's Logic to the Age of Artificial Intelligence

By Angelos T. Kolokouris

(Born in Vlahiotis-Laconia Greece, obtained a BSc in physics from CUNY USA, followed by graduate studies in nuclear engineering and an interdisciplinary Master's in quantum mechanics at Penn State, and doctoral studies in Philosophy (Mathematical Logic) and Computer Science at Temple University, focusing on the Logical Foundations of AI. In the 1980s and thereafter, his companies played a pioneering role in theoretical & applied AI, developing PROLOG interpreters & systems tools and implementing major AI systems in critical civic and defense areas. He works on AI policy and R&D mostly to (a) counter disinformation and (b) implement predictive AI systems)

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*Nowadays, the **power of a nation**, whether economic, military, diplomatic or cultural, rests less on what it owns than on what ideas it can process and what it can think. This first of two articles traces how ideas came to be recognised as the decisive source of value, following two long lines of thought that meet in today's economy of ideas, now driven by artificial intelligence. The second article turns to the maturity of that economy, its implementation in strategic policy, and the gains it offers to national power.*

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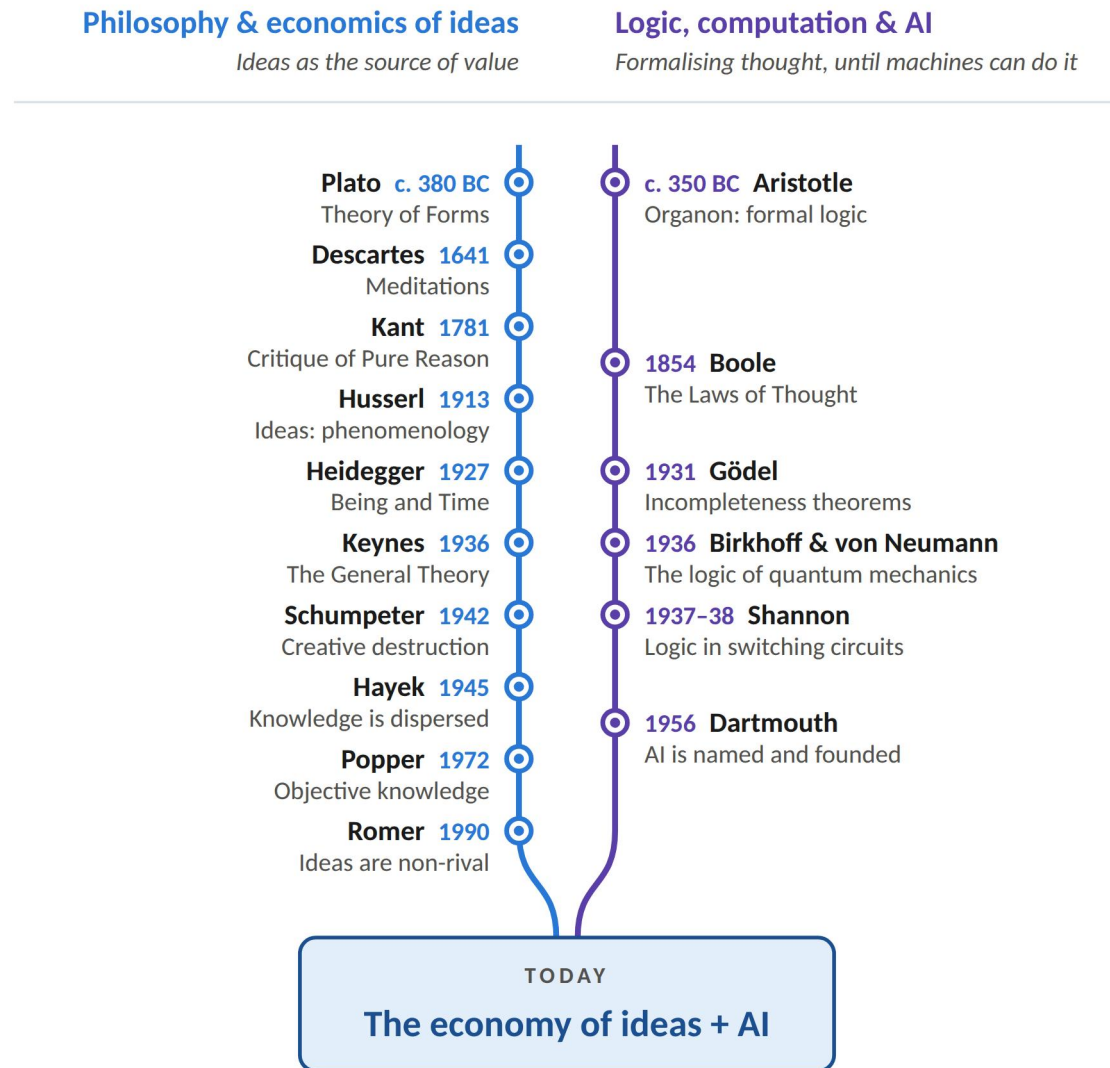
1. Introduction

Every disruptive moment in human history, from the invention of the wheel to the development of the internet, began as a simple idea in a human mind. Ideas are intangible and can be reproduced without limit. Yet they have the power to reshape economies, alter political and social landscapes, and extend the boundaries of human capability.

The economics of ideas seeks to explain a disruptive paradox: how something that costs nothing to reproduce can become the most valuable resource in the modern economy. Furthermore, following the ancient Athenian tradition, it democratizes the innovative process, as it examines the delicate balance between encouraging innovation and ensuring that its fruits are not captured by a select few. In doing so, it forces us to revisit basic assumptions about ownership, cooperation, trust and the role of institutions in the transfer of knowledge. The economic value of ideas is not only about markets; it concerns the nature of democracy and the very architecture of progress.

The central role of ideas has been recognised across every field of human activity. Eleanor Roosevelt wrote that "great minds discuss ideas; average minds discuss events; small minds discuss people." Years earlier, Auguste Comte had observed that "ideas govern the world, or throw it into chaos." For the state, the stakes go beyond growth. National power in all its forms, from economic strength and defence capability to diplomatic weight and the soft power of attraction, is increasingly generated by ideas and by the institutions that produce, test and circulate them. Strategic policy, the long-horizon choices a state makes about where to build capability, was designed for an economy of land, labour, energy and material capital. The economy of ideas, accelerated by artificial intelligence, calls for a parallel reformulation. Before that reformulation can be made, we need to understand how the idea itself came to be seen as a source of value. Two long lines of thought lead there (Figure 1).

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Milestones in date order; spacing not to scale.

Figure 1. Two lines of thought converge in the economy of ideas

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2. The philosophy of ideas

Since Plato formulated his monumental Theory of Forms (Ideas), successive generations of thinkers have worked to analyse this foundation and adapt it to stimulate thought and support reflection more effectively. From the many philosophers who engaged with it, we select a small number, from the Enlightenment to the recent past: Descartes, Kant, Husserl, Heidegger and Karl Popper. Descartes does not belong to the Enlightenment proper, but he is certainly its critical forerunner. Across these thinkers, the concept of the idea evolves in several directions (Table 1).

Table 1. The evolving status of ideas

Thinker	Status of ideas	Transformation of Plato's concept
Plato	Ontological foundation	Original formulation
Descartes	Mental representation	Internalised it
Kant	Regulative principle	Set limits to it
Husserl	Essential structure of experience	Re-founded it
Heidegger	Object of critique, since Being comes first	Deconstructed it
Popper	Element of objective knowledge, fitted to the character of the sciences	Reconstructed it within a critical, scientific framework

Among philosophers of science, Popper's position can be described as a form of "critical Platonism." It leads to a hybrid view: ideas are real, objective and independent, but they are shaped over time. This view matters for policy: **If ideas are objective yet evolving, then the institutions that test, refine and transmit them are not neutral background; they determine how fast and how well a society learns and adapts.**

3. From philosophy to economics

As the role of ideas was recognised across human activity, economists began to place them at the centre of their accounts of change and growth. Three thinkers stand out before modern growth theory.

John Maynard Keynes

In *The General Theory of Employment, Interest and Money*, Keynes observed that "it is ideas, not vested interests, which are dangerous for good or evil." Ideas lie behind many

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of history's great institutional transformations, from the abolition of slavery in the United States and the movement for women's suffrage to the reform of the welfare state. If economic development follows technological change, and technological change follows the generation and circulation of new ideas, then there is an urgent need for a distributed ecosystem: an international innovation network with a steady focus on mathematics, philosophy, the natural and social sciences, political and legal thought, and the advanced technologies that underpin the spaces of ideas.

Joseph Schumpeter

Schumpeter placed entrepreneurs and innovative ideas at the centre of economic change. His concept of "creative destruction" describes the process by which old economic structures are destroyed and replaced by new ones, chiefly through new technologies, new business models and new ideas. He also recognised that ideas drive booms, in which innovations multiply, but can also trigger crises. His view of ideas as forces of change remains one of the most far-sighted aspects of his theory.

Friedrich Hayek

For Hayek, the economy was not simply a system of production and exchange; it was a system of knowledge, beliefs, traditions and learning. A society's success depended not only on its resources or technology, but on how it organised and used the ideas dispersed across its population. Intellectuals, writers, philosophers and educators shape the moral and political climate in which institutions develop. Prosperous societies, Hayek argued, do not arise from central control, but from systems that let ideas and knowledge develop freely through spontaneous cooperation.

4. The Aristotelian Path: from logic to artificial intelligence

The second line of thought begins with Aristotle, who showed systematically that reasoning follows formal rules. The *Organon* was used in the same form Aristotle wrote it, as the main textbook for logical reasoning. It contained six of his logical works, grouped together by later editors (probably Andronicus of Rhodes): The Categories, On Interpretation, Prior Analytics, Posterior Analytics, Topics, Sophistical Refutations. It required Aristotelian logic first to be rendered in algebraic form and then to evolve into mathematical logic, a process that led to the modern computer.

Aristotle's logic, as set out in the *Organon*, was taught in the exact form its author gave it until the second half of the nineteenth century. In 1854 the mathematician George Boole rendered it in algebraic form, point by point, translating it into a mathematics better suited to scientific and technical use. In the first half of the twentieth century, alongside

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the revolutions of relativity and quantum mechanics, mathematical logic produced three remarkable results, all three within the momentous decade of the 1930s:

1. Claude Shannon's discovery, during his master's thesis research, that electrical circuits can be expressed in logical form using Boole's algebra.
2. The logical foundations of quantum mechanics, quantum logic formulated by John von Neumann and Garrett Birkhoff.
3. Kurt Gödel's revolutionary incompleteness theorems, which built on a paradox known since antiquity: the Epimenides, or Liar's, Paradox.

Building on this progress, a group of scientists and specialists in mathematical logic, among them Claude Shannon and John McCarthy, returned to Aristotle's ancient quest at the 1956 Dartmouth Workshop and founded the field of artificial intelligence. The gradual development of AI, together with the upgrading of electronic systems through the use of logic that Shannon first applied, steadily raised the economic value of intangible, idea-centred products relative to traditional material goods.

5. Paul Romer and the economics of ideas

Nobel laureate Paul Romer gave the fullest account of how ideas drive growth. For Romer, growth comes from technological change that results from deliberate investment decisions. As he puts it, "the economic problem is essentially about designing all our institutions so that we explore this space of possible ideas efficiently, discovering ever better ones. His theory rests on four claims:

01 Technology drives growth

Technological change lies at the heart of economic growth.

02 Incentives drive technology

Technological change arises largely from the deliberate actions of people responding to incentives.

03 Ideas are different

Once the cost of creating a method, rule or algorithm is covered, it can be reused again and again at no additional cost.

04 Circulation, not scarcity

Value depends on wide circulation and abundant use. With the right education policy, the source of ideas is inexhaustible.

Two consequences follow. First, it is up to us to activate the sources of ideas available to the knowledge economy. Second, our era is marked by powerful, versatile machines that recombine knowledge and apply it to problems once considered intractable. Ideas and talent, however, do not emerge in a vacuum. For Romer, the stock of human capital determines the rate of growth. **The nature and speed of innovation are shaped by the intellectual climate, by the fabric of social relations** (trust, networking,

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cooperation) and by high-quality, targeted education. In the late 1980s and 1990s Ireland adopted a model of "social partnership" that strengthened exactly these elements of social capital, and contributed decisively to its sustained rise as a centre of technological development.

6. Where the two lines meet

Two long lines of human thought now converge. One runs from Plato's Forms to Popper's objective knowledge and, through Keynes, Schumpeter, Hayek and Romer, to the recognition that ideas drive growth. The other runs from Aristotle's logic, through Boole, Shannon and Gödel, to Dartmouth and to the AI systems that now process and recombine knowledge at machine speed. At their meeting point, **an idea becomes both the principal object of economics and, for the first time, something that machines, albeit algorithmic, help to produce.**

For the state, this convergence changes the source of power itself. **A nation's strength increasingly depends (a) on how well it generates, tests, protects, and shares ideas, and (b) on how wisely it uses and governs AI.** The second article documents the economic inversion this has produced, visible in half a century of S&P 500 data, and sets out how strategic policy can be rebuilt around it to strengthen every dimension of national power, from the economy to defence and foreign affairs.

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