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The Al Explosion by Kathy Graham

Kathy Graham was requested by econVue to join as a Contributing Author. econVue is a global consortium of economic, geopolitical experts from a wide range of specialties who discuss trending issues. econVue is also one of the top Substack thought leaders in terms of subscription numbers. Kathy's Top Three Predictions for 2025 article was published on econVue on 1/16/2025.

"When this many mosaic pattern pieces emerge from a wide range of sources, it's time to devise a prudent plan—just in case an AI explosion emerges."

Top Three Predictions for 2025

- 1. **Escalating Operational Costs**: Training AI models will become increasingly expensive, driven by rising energy demands, talent shortages, and the need for accurate data. Companies must prepare for resource-intensive AI adoption.
- 2. Legal and Ethical Challenges: Intellectual property disputes, privacy concerns, and biases in AI systems will create new regulatory pressures and risks, demanding stricter compliance frameworks.
- 3. **Resource Strains**: The growing reliance on Generative AI will dramatically increase energy and water consumption, raising environmental concerns and pushing industries toward nuclear energy and sustainable solutions.

The Mosaic Theory and the Scuttlebutt Method of analysis are employed to reach useful conclusions about the probability of an event occurring by gathering non-material information from employees, competitors, industry experts, public and non-public verbal, online, and written sources. Using these processes to gain insights into what AI is most likely to deliver in 2025 confirms that, yes, there are a number of areas that AI will likely provide outstanding human capital returns.

However, these same prognostication methods reveal more likely that AI's 2025 returns could be a bomb, i.e., creating an unstable, even destructive or difficult period of time for people and corporations. Here are the main sources of concern:

One significant concern is the potential for **agency issues**. According to Pitchbook, nearly 25% of all 2024 startups representing \$7 billion in funding—went to AI, marking another historic high for a vertical that's been "outpacing its peers in metrics like valuation and unicorn creation. For example, OpenAI is valued at \$80 billion but is expected to lose \$5 billion this year.

THE HQ COMPANIES (aka "The HQs")

33% of US companies currently use AI. 99% of Fortune 500 companies rely on AI—and their activities contribute to two-thirds of US GDP. These numbers raise critical questions about the pressures that executives, managers, and their employees face regarding AI. This could lead to self-serving behaviors (principal-agent problems) that may not align with shareholder and board interests.

Legal and ethical challenges further complicate the landscape. Intellectual property disputes loom large, particularly as 25%— 67.7 million people—in the US use OpenAI's ChatGPT.

Salesforce reports that more than half of Generative AI users rely on unapproved tools at work, with 64% passing off AIgenerated content as their own. The firing of key executives at *Sports Illustrated* after the publication of AI-generated articles with fake author names and headshots underscores the risks of AI misuse.

The legal field is filled with examples of AI disconnects. Mayo Clinic has found that ChatGPT's medical advice is often incomplete, inaccurate, or even dangerous, plus it fabricates realistic "deceptive forgeries of scientific references." Ominously, the death of a former OpenAI whistleblower who had accused the company of violating intellectual property laws in its AI models training has been changed to open status by San Francisco police—his parents believe their son was murdered. The circumstances are still unknown, but this news story illustrates how high the stakes for AI are becoming.

The **operational challenges** of AI are also escalating. The costs of training AI models are more than doubling annually, due to rising expenses for components, talent, and energy. According to Salesforce, 69% of workers have never received or completed training on how to use Generative AI safely. Of course, to use AI effectively, a company's data needs to be "accurate, pertinent, and well-organized"—dirty data means "garbage in, garbage out," a scenario that costs the US economy \$3 trillion annually.

Al's impact on **natural resources** is another area of concern. The increasing use of Generative AI requires correspondingly large increases in the amount of energy. Water usage will also spike, since **ChatGPT alone consumes 500 milliliters of water for every 10-50 prompts**. In less than a year, ChatGPT user prompts doubled from 100 million to over 200 million weekly, which means significantly increased water usage—projected to rise to 6.6 billion cubic meters of water by 2027. This high usage raises urgent questions about deploying nuclear energy and sourcing sufficient water resources:

- Small nuclear reactors building times are hard to find (range is 3-7 years); so where's the additional interim power?
- Al companies aim to replenish water impact by 2030 yet details are unclear; so what happens in the next 5 years?

As AI continues to advance, **ethical questions** surrounding privacy—"systematic digital surveillance across most facets of life"—and unknown biases perpetuated within AI algorithms that have inherited the human biases of their trainers, are two major issues of concern.

Conclusion

Artificial Intelligence presents a mosaic of challenges. Its exponential growth provides immense opportunities, but also significant risks. Addressing this complexity requires proactive strategies, including investing in resource management and operational readiness. By doing so, businesses and society can transform the AI explosion into a force for progress while mitigating the potential for disruption.