

When Planes Fly Better Than Birds: Should AIs Think Like Humans?

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Introduction

Analogy: Planes don’t fly like birds — yet they fly better.

This provokes a key AI question:
Must AIs “think” like humans to be intelligent or useful?

Thesis: Intelligence, like flight, might be achieved through different architectures — not necessarily by imitating human cognition.

The Human Model

Why emulate humans?

- ▶ Human cognition is the only known general intelligence.
- ▶ Cognitive architectures (e.g., ACT-R, SOAR) reflect human reasoning patterns.
- ▶ Advantages: Interpretability, alignment, and trust.

But: Human cognition is biologically constrained.

Philosophical Questions

- ▶ What qualifies as intelligence if not based on human-like thought?
- ▶ Can non-human intelligences have moral status or rights?
- ▶ How do we align with entities that don’t think like us?

The Engineering Perspective

Function over form:

- ▶ AlphaGo, GPT models, AlphaFold — all exceed humans in domains without replicating human cognition.
- ▶ Non-humanlike architectures can scale better and achieve greater efficiency.
- ▶ Imitating humans may introduce unnecessary constraints.

Ethical Concerns

- ▶ Human-like AI supports **legibility**, **predictability**, and **alignment**.
- ▶ Divergence raises risks: opaque reasoning, value misalignment, and trust deficits.
- ▶ Intelligence is context-sensitive — more than a raw capability.

Hybrid Intelligence

Best of both worlds?

- ▶ Combine symbolic reasoning and statistical learning.
- ▶ Enable human-in-the-loop collaboration.
- ▶ Foster co-evolution of human and machine understanding.

Conclusion

Airplanes don’t flap. AIs don’t have to think like us.

Takeaways:

- ▶ Human-like AI aids alignment and trust.
- ▶ Non-humanlike AI may unlock new paradigms.
- ▶ Pluralism is key: build AIs based on use-case, not ideology.

References

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