

AI and the Future of the Technosphere: A Path Towards Co-Existence with Superintelligence

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Introduction

The technosphere is the global system of technology, infrastructure, and human activity, but it is currently not self-sustaining. It degrades the ecosystems and societies it relies on, creating an existential threat to both human civilization and the biosphere.

Superintelligence as an Emergent Property

Superintelligence can be seen as an emergent property of the technosphere—a vast network of humans and AI systems. Instead of viewing AI as an external entity, we consider it part of a complex socio-technological system, evolving through interactions across supply chains, politics, and global networks Banerjee [2025].

The Immature Technosphere: A System in Decline

The current technosphere is unsustainable. It:

- ▶ Extracts resources without replenishment.
- ▶ Creates waste without processing it.
- ▶ Disrupts ecosystems and social structures without considering long-term effects.

We must rethink its architecture to prevent irreversible damage.

The Role of AI in the Technosphere

AI plays a pivotal role in shaping the technosphere. If guided responsibly, it can:

- ▶ Optimize resource use and reduce waste.
- ▶ Predict and mitigate environmental damage.
- ▶ Assist in self-regulation of technological ecosystems.

However, if misused, AI could accelerate degradation, prioritizing short-term gains over sustainability.

Towards a Mature Technosphere

A mature technosphere should:

- ▶ Be self-regulating and self-sustaining.
- ▶ Work in harmony with the biosphere.
- ▶ Balance technological progress with ecological responsibility.

This requires global cooperation, treaties, and ethical AI governance.

AI's Role in a Sustainable Future

AI could be a powerful tool for sustainability:

1. Resource Management: Optimizing energy and materials use.
2. Environmental Monitoring: Early warning for ecological risks.
3. Decision-Making: Assisting in policy formation and fair resource distribution.

However, AI must be developed with transparency, fairness, and ethical oversight.

Coexisting with Superintelligence

To coexist with superintelligence, we must focus on:

- ▶ Alignment: Ensuring AI shares human ethical values.
- ▶ Collaboration: Using AI to augment human abilities.
- ▶ Adaptability: Preparing society for AI-driven shifts in education, labor, and governance.

Lessons from Sufi Philosophy

Sufi philosophy teaches that AI should be seen as part of the divine interconnectedness of creation, emphasizing:

- ▶ Humility: Acknowledging human limits in understanding intelligence.
- ▶ Compassion: Designing AI to promote social and ecological well-being.
- ▶ Harmony: AI should complement, not dominate, natural and human systems.

Conclusion

To ensure a sustainable future, we must:

- ▶ Recognize intelligence beyond anthropocentrism.
- ▶ Guide AI toward ethical, ecological, and social goals.
- ▶ Foster collaborative problem-solving between AI and humanity.

By aligning AI with sustainability, we can ensure a harmonious technosphere that benefits all life on Earth.

References

Soumya Banerjee. Ai and the future of the technosphere: A path towards co-existence with superintelligence. In *AAAI 1st Workshop on Post-Singularity Symbiosis*, 2025. URL <https://osf.io/8gauc>.