



Engineering the Sky

A collision of worlds: Is the atmosphere infrastructure to be fixed, or kin to be honored?

We are witnessing a clash not just of technologies, but of ontologies. As modern technoscience moves from predicting weather to controlling it, it collides with Indigenous legal orders that have long understood the sky as a moral, communicative presence. This deck explores the friction between the Sociotechnical Imaginary of control and the Relational Ontology of reciprocity.

Two Worlds in One Sky

The Technocratic Imaginary



Definition: Sociotechnical Imaginaries. Visions of desirable futures animated by science and state power (Jasanoff & Kim 2015).

The View: The atmosphere is a system of manipulable variables (temperature, pressure, aerosols).

The Goal: Optimization and Control.

The Question: How do we fix the machine?

Indigenous Relational Ontology



Definition: Cosmopolitics. Worlds where nature is not an inert backdrop but a community of actors (Stengers 2005; de la Cadena 2015).

The View: The atmosphere is a living field of relations (kin, ancestor, teacher).

The Goal: Reciprocity and Balance.

The Question: How do we maintain our obligations?

The Invention of 'Weather-as-Resource'

The modern urge to engineer the sky transformed weather from a subject of study into an object of state power.



1940s: Project Cirrus.
The sky becomes a laboratory.



1960s: Project Popeye.
Weather as a tactical weapon.

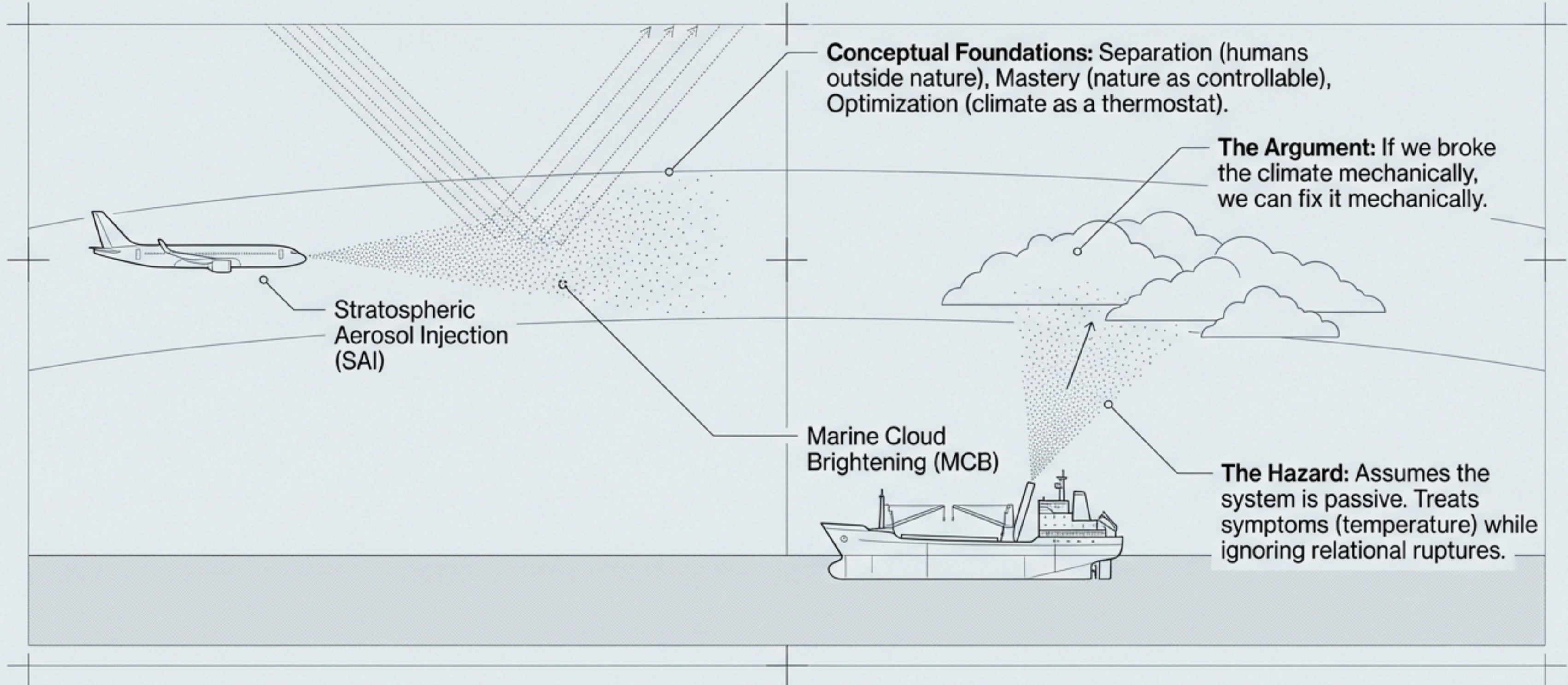


1970s: ENMOD Convention.
Regulating the weaponized sky.



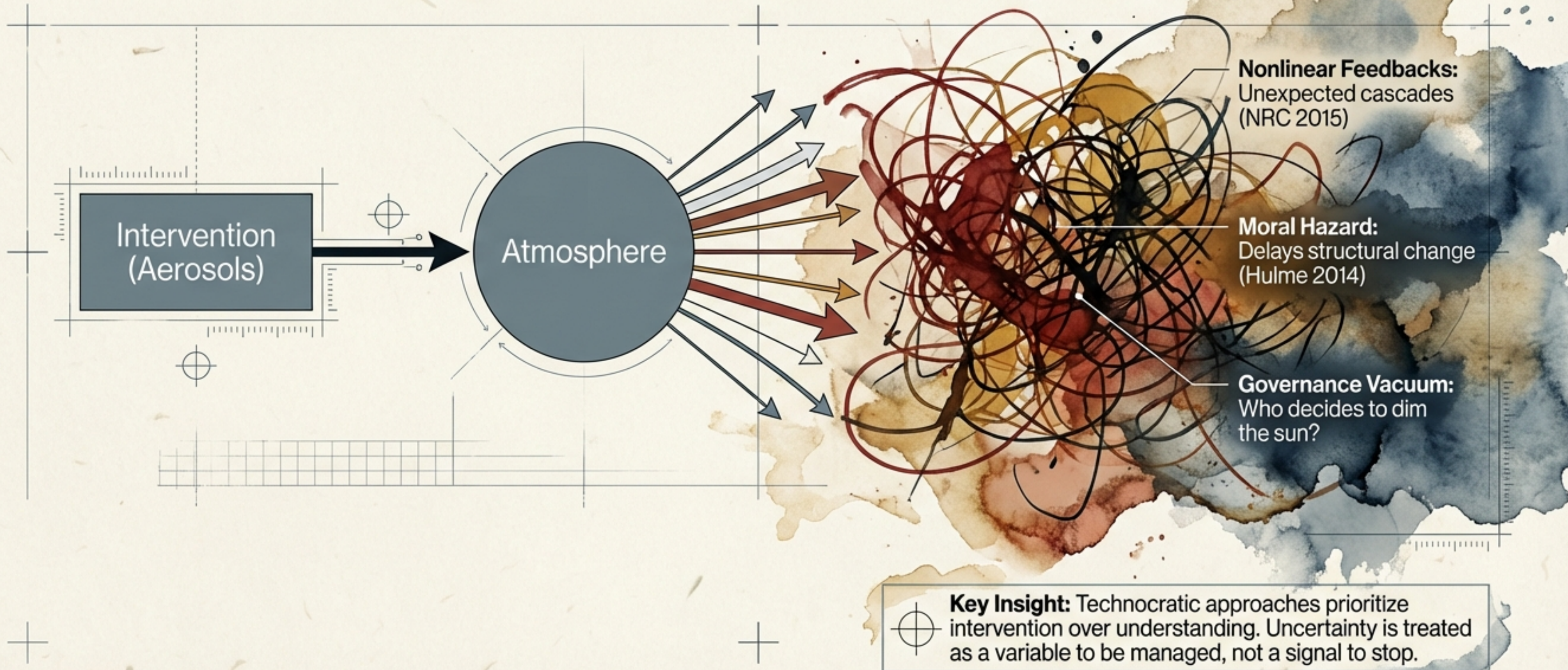
Key Insight: These projects solidified a specific ontology: the sky is a technical system distinct from human society, available for strategic intervention.

The Logic of Optimization



The Crisis of Uncertainty

Technocratic approaches prioritize intervention over understanding.
Uncertainty is treated as a variable to be managed, not a signal to stop.



The Living Sky

For many Indigenous peoples, the atmosphere is not a backdrop but a participant. It is communicative, responsive, and bound by law.

- **Anangu (Australia):** Kurunpa (spirit) exists in all things. "Wind, storm, fire, rain... have spirit" (Bob Randall).
- **Diné (Navajo):** Nilch'i (Holy Wind) is the animating force of life, a unifying intelligence (McPherson & Zolbrod).
- **Māori (New Zealand):** Winds belong to Tāwhirimātea, an ancestor whose movements articulate relational balance (Elder 2020).

Key Concept: Weather is not a resource. It is Kin.

Agency & Co-regulation

Agency: Weather beings act with intent and are responsive (Hultkrantz 1992).

Ecological Morality: Rain is a gift renewed through ceremony (Christenson 2001).

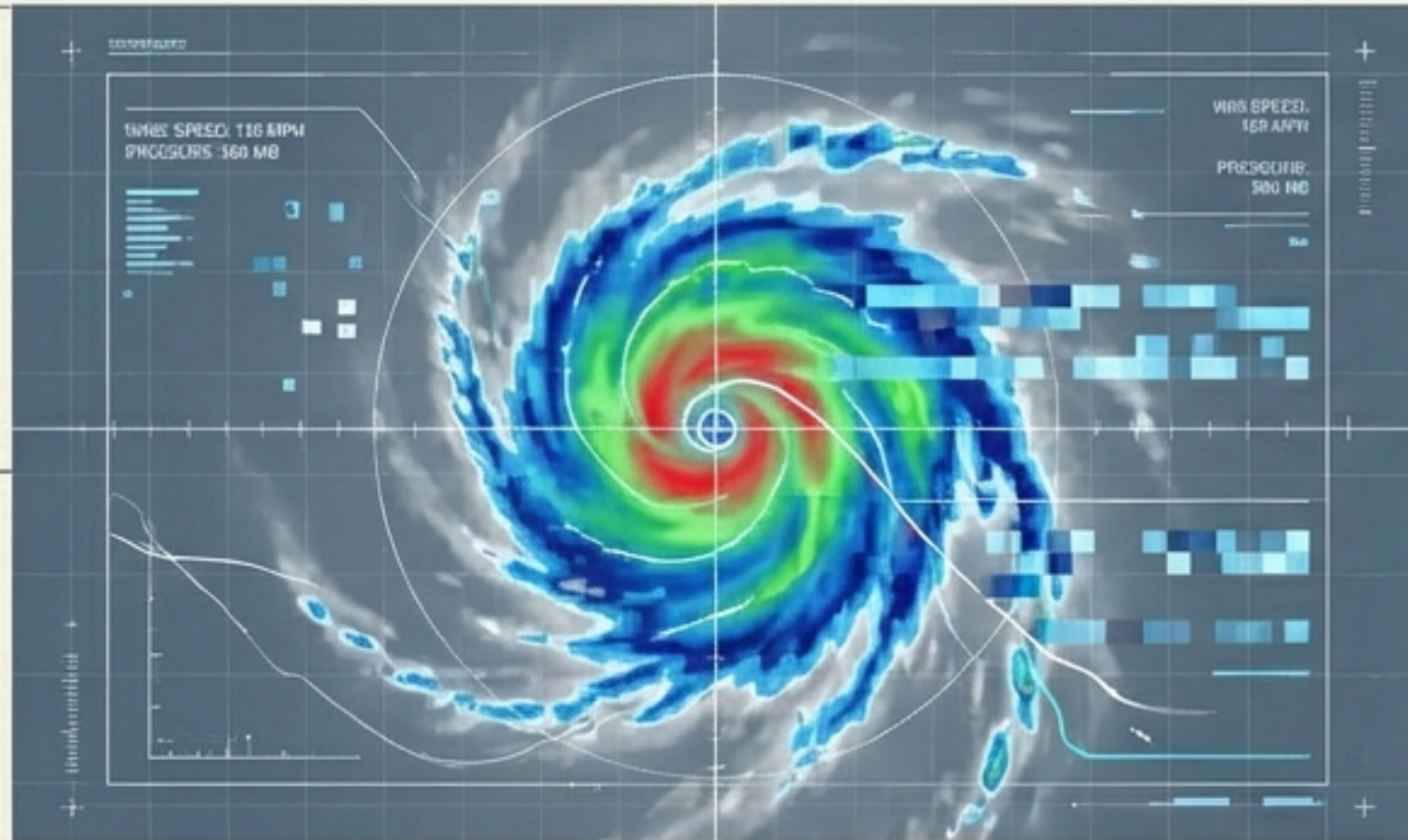


Practice:
Humans co-regulate weather through ritual and conduct.

This is not magic; it is Relational Technology.

Ways of Knowing: Data vs. Embodied Relationality

Technocratic



Disembedded Knowledge. Abstracted through global infrastructures. Viewed from 'nowhere' (satellites).
Goal: Prediction.

Indigenous/Relational



Situated Knowledge. Accumulated through generations of participation. Viewed from 'here' (landscape).
Goal: Attunement.

Key Insight: Accuracy in the Indigenous view isn't about predicting a variable, but maintaining the correct relationship.

Intervention as Violation



From a relational perspective, atmospheric engineering is an ontological transgression.

Interference without Consent: Acting upon a relative without invitation is a breach of law.

Hubris: Assumes humans stand outside the system.

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The Rupture: In Tjukurpa law, breaching responsibility creates Kanyini—a rupture that binds beings together.

“We do not separate the physical world from the sacred creative energy... They always work as one.” — Bob Randall

Interpreting Instability

View A: Mechanical Failure.

Extreme weather is a deviation from the statistical norm.

The Fix: More engineering. Calibrate the machine.

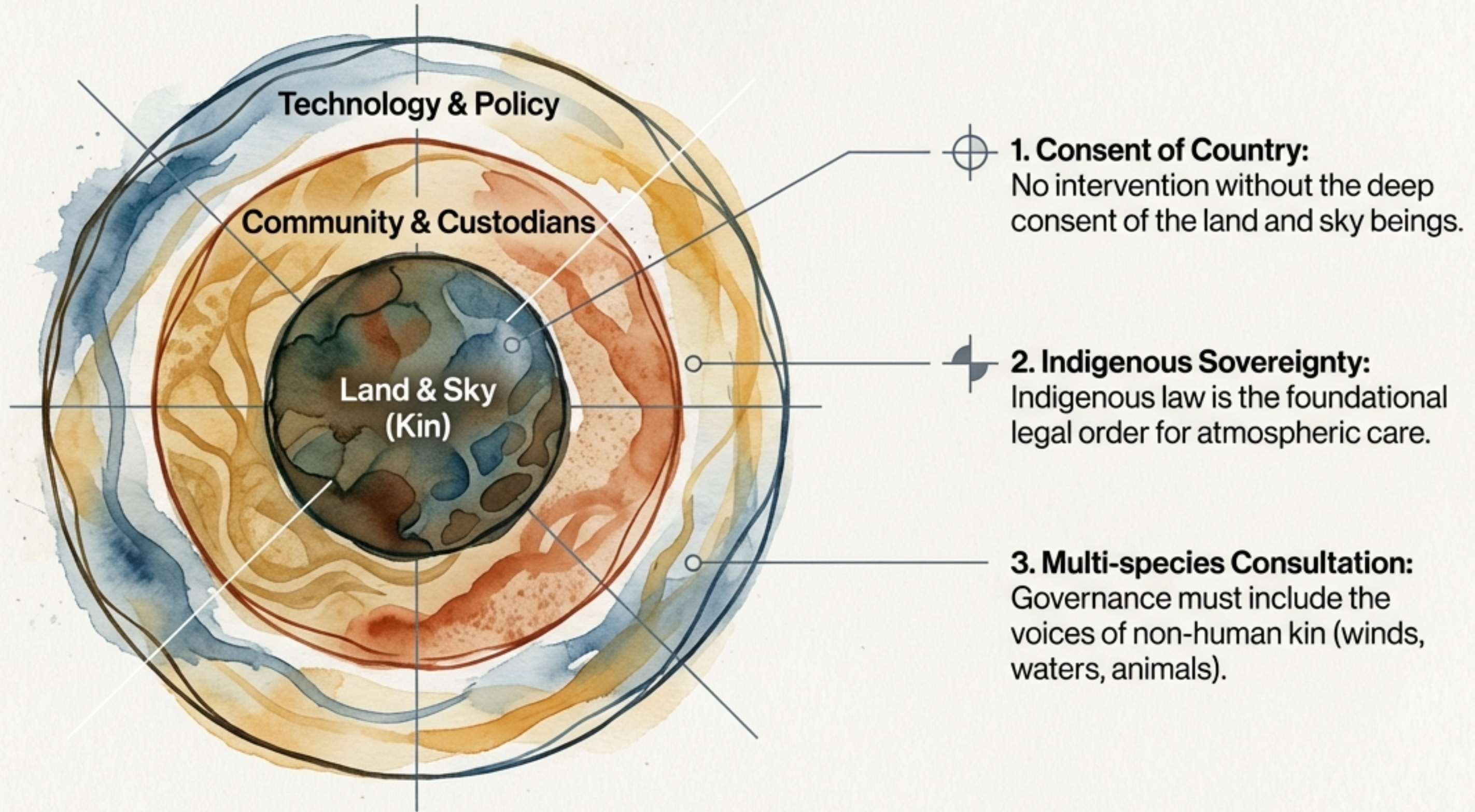
View B: Relational Backlash.

Instability is a communication. The sky is signaling that obligations have been broken.

The Fix: Relational Repair. Restore the balance between human conduct and the living world.

You cannot stabilize a system by attacking its symptoms while ignoring its relational dynamics.

The Horizon: Relational Governance



Shifting the goal from Climate Control to Atmospheric Belonging.

The Principle of Repair

Restoration as Reciprocity



Heal the relationships that sustain the climate.

Technological Humility



Knowing when not to act.

Regeneration



Revive cultural ceremonies that honor the sky.

Repair must precede intervention. We must shift the question from 'What can we engineer?' to 'What should we leave alone?'



Atmospheric Belonging

The crisis is not just that the world is getting hotter; it is that we have forgotten how to belong to it.

- **The Shift:** From “Climate Control” to “Atmospheric Belonging.”
- **The Ethic:** We do not manage the sky; we participate in its life.

Two Worlds, One Future

We cannot engineer our way out of a relational crisis.
True stability comes from remembering that the
atmosphere is alive, and we are accountable to it.

We must reject the illusion of separateness.

We must embrace the responsibility of kinship.

“After a while the whole universe is your home.” — Bob Randall

Sources & Further Reading

Indigenous Philosophy

Bob Randall – Songman

Robin Wall Kimmerer –
Braiding Sweetgrass

Hinemoa Elder – Aroha

Kyle Whyte – Indigenous
Climate Change Studies

STS & History

J.R. Fleming – Fixing
the Sky

Paul Edwards – A Vast
Machine

Sheila Jasanoff –
Dreamscapes of Modernity

Deborah Bird Rose –
Reports from a Wild Country

Key Concepts

Sociotechnical Imaginaries

Relational Ontology

ENMOD Convention

Project Popeye

Cosmopolitics