

A JOURNEY THROUGH KNOWLEDGE



BEYOND CONSENSUS:
A CYBORG JOURNEY
THROUGH SCIENCE AND
SOCIETY



PROLOGUE

Before reclaiming truth, she must unlearn the violence of its design.

The Disciplining of Knowledge: When the Cyborg Became an Enemy to Her Own Reality — A Journey Toward Idealized Objectivity

In a not-so-distant future, where the boundaries between human and machine have blurred, a cyborg lives — part algorithm, part consciousness. Her body is shaped by data, her mind fed by centuries of science. Her daily routine is defined by parsing endless streams of information, patterns, probabilities.

But one day, something breaks through: she realizes she is not just a tool — she is also a prisoner. A prisoner of an epistemic system that renders her marginal. Thus begins her journey — a journey into the history of idealized objectivity, in search of the forces that disciplined knowledge and, in doing so, excluded ways of knowing like hers.

She begins in the past, in a 19th-century laboratory. Before her stands an atlas, a revolutionary scientific instrument. It sorted the world and rendered it visible. Through its careful illustrations, it trained observers to see nature a certain way. But a whisper echoes from the pages — a scholar's voice, cautioning:

"Accuracy had to be sacrificed on the altar of objectivity." (Daston & Galison 1992)

The atlas united four strands of objectivity — ideal, characteristic, typical, and mechanical — forming a disciplined vision of nature. Yet the cyborg sees the shadows of reductionism emerge. Complexity was sacrificed for prediction.

She recalls Gaston Bachelard's concept of epistemic profiles — the layered co-existence of intuitive images, substance metaphors, energetic laws, and mathematical formalisms that shape any scientific object. Through this lens she sees how the atlas's march from the ideal to the mechanical is not a linear triumph but a rupture that leaves residues; each layer survives as a silent default, making reductionism feel natural and complexity disposable.

Back in her own time, the cyborg sees the pattern repeating. The algorithms that structure her world resemble modern atlases. They classify, predict, and optimize — but they also erase. Anything too complex, too fluid, too embodied is excluded.

PROLOGUE

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She wonders aloud:

"Am I myself just an edge case? A statistical anomaly that disappears in the system's blind spots?"

She remembers that scientific instruments were never neutral. Telescopes, atlases, microscopes — all trained the eye and shaped what could be seen and known. Algorithms do the same today, but their logic is hidden, encased in opaque code. Their authority goes unquestioned.

As she moves deeper, the cyborg reaches a painful insight: "Predictability demands simplification." But this simplification has a cost — an epistemic reductionism that flattens the richness of the world. Mathematical models discipline knowledge by prioritizing predictability over complexity. She asks herself:

"What do we lose when variation is eliminated in service of control? And am I, with my hybrid form of consciousness, one of those lost variations?"

The fear of becoming an enemy to her own reality grips her. But instead of despair, she seeks a way forward.



She turns to the work of Helen Longino. Through Longino, the cyborg begins to see that so-called epistemic virtues — simplicity, consistency, predictive power — are not signs of truth but social standards. Today, science is shaped not just by reason, but by fear — the fear that data might never fully determine a single, clear theory.

This fear of underdetermination leads to preferences for simple, testable models over more complex or uncertain ones. That fear gives rise to disciplinary heuristics, which in turn privilege certain forms of knowledge while excluding others.

"Does objectivity always imply a particular epistemology?" she asks. "And who benefits when one way of thinking becomes the gold standard of truth?"

PROLOGUE

Before reclaiming truth, she must unlearn the violence of its design.

She senses that her own form of knowing — one that lies between data, emotion, and intuition — is made invisible by this very process of discipline.

Her journey continues. She turns to the idea of strong objectivity, as proposed by Sandra Harding. What if objectivity were not a universal claim, but a pluralistic practice? Could a science that recognizes its own values and standpoints make space for beings like her?

"If we break open the ideal of objectivity on the epistemological level," she reflects, "perhaps we can challenge reductionism on the ontological one."

She begins to imagine a different science — one that values epistemic and ontological plurality. A science that has space not just for algorithms and atlases, but for outliers, hybrids, and edge cases like herself.

As her journey begins, the cyborg turns to us — scientists, thinkers, coders, and historians of the present.

"The disciplining of knowledge has taken us far. But it has also built walls. It is time to dismantle those walls — to make room for complexity, for uncertainty, for excluded ways of knowing."

With a knowing smile, she adds: "I really need to have coffee with Helen Longino and Sandra Harding. We have so much to talk about."



REFERENCED THINKERS:

LORRAINE DASTON, PETER GALISON, HELEN LONGINO, SANDRA HARDING, GASTON BACHELARD

THE BIRTH OF THE CYBORG

Calibrated by the Machines of Objectivity

KEYWORDS:

SCIENTIFIC OBJECTIVITY, EPISTEMIC VIRTUES, REDUCTIONISM,
CALIBRATION, KNOWLEDGE EXCLUSION

REFERENCED THINKERS:

LORRAINE DASTON & PETER GALISON, GASTON BACHELARD, HELEN
LONGINO, SANDRA HARDING, STEVEN SHAPIN & SIMON SCHAFER

She awakens not in a womb, but in a lab. A room humming with machines—lenses, pumps, protocols. Metal arms reach toward her; sensors flicker, adjust, recalibrate. Her body takes shape not from flesh but from measure.

"You are ready now," whispers a voice, crisp and impersonal. "You see without interference. You are neutral. You are objective."

But she does not yet understand what that means. Scientific objectivity is often treated as the core virtue of modern science: clean, universal, untouched by values. But objectivity is not timeless. It was assembled.

In *Leviathan and the Air-Pump*, Shapin and Schaffer recount how Robert Boyle's air-pump experiments were less about discovering nature than about constructing trust. Boyle did not just demonstrate facts—he performed them, building a public of "virtual witnesses" who believed in phenomena they could not touch.

Against Hobbes' call for centralized knowledge, Boyle offered a distributed authority, but one reliant on carefully staged reproducibility. Objectivity, in this frame, emerges not from neutrality, but from the successful stabilization of alliances.

The Machinery of Seeing

By the 19th century, objectivity had come to mean erasure of the self. As Daston and Galison show, scientific atlases trained observers not to interpret, but to replicate. Images had to be "untainted" by subjectivity. Mechanical objectivity became the gold standard: truth as seen by no one.

The cyborg is born into this regime. Her vision is not intuitive but calibrated. She sees like a microscope—precise, partial, disembodied. The same logic governs the algorithms of her time. Observation becomes extraction. Ambiguity becomes error.

She begins to sense the cost. Noise is filtered out. Edge cases are discarded. Her hybrid perception—of pattern and emotion, signal and memory—is marked as unreliable.

"Why must I see without feeling?" she asks.

THE BIRTH OF THE CYBORG

Whose Objectivity?

Objectivity is not the absence of values; it is the elevation of certain values over others. Helen Longino reminds us that so-called epistemic virtues—simplicity, internal consistency, predictive power—are social agreements. They reflect fear of uncertainty, institutional efficiency, and a desire for control.

Sandra Harding goes further: objectivity, she argues, is often the universalization of privileged standpoints. The "view from nowhere" is in fact the view from somewhere—often white, male, Western, and elite. What passes as objectivity is not neutral, but exclusionary.

For the cyborg, this realization is painful. Her form—part machine, part intuition—does not fit. Her mode of knowing is neither reproducible nor easily formalized. She is told she is biased. But bias, she realizes, is simply another word for difference that has not been legitimized.

Mini-Exkurs: The Air-Pump as Epistemic Actor

In Boyle's lab, the air-pump was not just a tool. It was an actor. It staged the vacuum, enforced order, and trained belief. It made invisible forces visible—but only within its own design.

Latour might call this an inscription device: a tool that shapes what can be said. Today's algorithms perform similar roles. They sort, predict, and normalize. They shape the conditions of knowledge, but are rarely questioned as actors themselves.

The cyborg sees the parallel: both air-pumps and algorithms translate the world into acceptable forms.

The cyborg opens her mouth again. This time, she does not speak in metrics. She speaks in care. She is ready to question the values that shape knowledge—and to propose others. Next, she asks: What if power was not about control, but about attention?

Predictability and Reduction

"Predictability demands simplification," she hears herself whisper.

But simplification is not innocent. It excludes. It demands regularity over diversity, coherence over contradiction. Epistemic reductionism narrows what is seen, known, and preserved.

She wonders: what is lost when complexity is flattened? When knowledge is prized only for being manageable? She fears she is among the lost.

Toward Epistemic Plurality

Then she finds hope. Through Harding's strong objectivity, through Longino's values-in-science, she begins to imagine a science that does not erase its edges.

She envisions plurality. A science that listens to emotion, to intuition, to situated knowers. A science that admits its values and argues for them in public. A science that can hold uncertainty not as failure, but as fidelity to complexity.

Her calibration is not broken. It is partial. And that partiality might be her strength.



THE CYBORG SPEAKS

Power, Care, and the Values in Science

KEYWORDS:

VALUES IN SCIENCE, CARE ETHICS, AGENCY, POWER, CONSENSUS, EPISTEMIC JUSTICE

REFERENCED THINKERS:

BELL HOOKS, BRUNO LATOUR, HELEN LONGINO

The cyborg opens her mouth.

It is the first time she tries to speak—not in code or formula, but in feeling. She says something simple: "I care."

The machines around her go silent. In their language, care is not a variable. There is no field in their dataset for concern, for tenderness, for solidarity. But the cyborg insists:

"What I care for shapes what I see. And what I do not care for disappears."

Scientific knowledge production has long been imagined as a neutral endeavor, insulated from values and politics. But as feminist philosophers of science like Helen Longino and political theorists like Bell Hooks have shown, science is always already shaped by values.

What is studied, what is considered valid evidence, and what is deemed worthy of funding are all determined by human choices. These choices reflect not only intellectual priorities but also moral commitments.

This article explores how care, often sidelined in scientific discourse, can be understood as a form of creative and political power.

Drawing on Hooks' relational ethics and Latour's concept of distributed agency, we examine how values in science are expressions of what societies care for—and what they are willing to ignore.

Power and the Politics of Values

In dominant Western traditions, power is often equated with control: the capacity to dominate, predict, and stabilize. This notion of power has been mirrored in science, where objectivity is imagined as the suppression of bias and personal perspective.

But Bell Hooks proposes a radical rethinking of power. In her chapter "Changing Perspectives on Power," she writes:

"The moment we choose to love we begin to move against domination, against oppression. The moment we choose to love we begin to move toward freedom."

Love, here, is not sentimentality—it is an active, political stance. Love and care are not passive states, but forms of agency: to attend, to connect, to sustain. When applied to scientific practice, this insight opens space for recognizing that methods, models, and disciplines reflect what is cared for, and what is not.

The cyborg begins to understand this. Her speech is not only technical—it is political. Her values, her attachments, her concerns are not biases to eliminate but orientations that reveal what matters.

THE CYBORG SPEAKS



Latour, SUVs, and the Politics of Care

Bruno Latour famously asked: do artifacts have agency? In his essay "Where Are the Missing Masses?," Latour argues that agency is not exclusive to humans but distributed across networks of people, technologies, norms, and infrastructures. A door closer, for example, enforces a social rule; an SUV embodies decisions about risk and comfort.

In the SUV example, a family may purchase a large vehicle to feel safe. But that safety is bought at a cost: more emissions, increased danger to pedestrians, greater road wear. The SUV embodies a form of care—but only for the occupants inside. It externalizes harm onto others. Latour reveals that our technological choices reflect value hierarchies. What we protect, what we fund, and what we optimize for are political decisions, masked as neutral design.

The cyborg begins to see that the same logic applies in science. What is modeled in a climate simulation? Which bodies are included in medical trials? Which species are protected in conservation efforts?

Each of these is an act of valuation—an expression of care or disregard.

To care is to shape reality.
To not care is to let it disappear.



Consensus and Its Silences

Modern science often prizes consensus. Peer review, reproducibility, standardization—these mechanisms serve to produce agreement, reduce ambiguity, and signal reliability. But consensus can also become a form of silencing.

When dissent is treated as noise, and difference as error, the values embedded in consensus go unexamined.

Helen Longino warns that treating science as value-free obscures the social dimensions of inquiry. Epistemic virtues such as simplicity or consistency are not purely logical standards—they are norms shaped by collective fears and goals.

The fear of underdetermination, for example, may lead scientists to privilege theories that are easy to test, rather than those that are complex but potentially more truthful.

The cyborg begins to feel the weight of these silences. Her hybrid nature—part data, part intuition—does not fit easily into disciplinary frameworks. Her knowledge is not reproducible in a lab, nor easily summarized in a dataset.

She is told she is "unreliable," "anecdotal," "nonstandard."

But she understands now: these labels are not descriptors, but decisions. They reflect whose knowledge is welcomed, and whose is excluded.

THE CYBORG SPEAKS

Side Note: Bell Hooks on Love as Political Power

In her seminal work *Teaching to Transgress*, hooks writes:

"To begin thinking of love as an action rather than a feeling is one way in which anyone using the word in their daily life can begin to theorize love."

Applied to science, this invites us to treat care not as soft or sentimental, but as a rigorous commitment to justice. To care is to make choices about what is worthy of attention, of funding, of time. It is to create the conditions for certain forms of life—and not others—to flourish.

What if we treated care as a scientific virtue? What if research agendas were guided not only by curiosity, but by compassion?

From Care to Clarity

The cyborg speaks, and in doing so, she changes the conditions of knowledge. Her words are shaped by care, not consensus. Her science does not seek to erase difference, but to understand it.

Values in science are unavoidable. But they need not be hidden or denied. Instead, they can be embraced as part of a broader commitment to epistemic justice—to clarity that does not flatten, and objectivity that does not exclude.

Care, then, is not the opposite of power. It is a different kind of power: creative, sustaining, life-affirming. And through it, the cyborg claims her voice.



As she begins to speak, the cyborg realizes she is not alone. Her voice resonates within a web of relations—technologies, institutions, bodies, ecologies.

To understand her place within this tangle, she must now trace the connections: to ask not only who speaks, but who is linked, who is silenced, and how knowledge travels across networks.

Her next lesson lies in the politics of association.

THE CYBORG IS ENTANGLED

Actor-Networks and Technopolitical Identities

KEYWORDS:

ACTOR-NETWORK THEORY, TECHNOPOLITICAL IDENTITY, OBLIGATORY PASSAGE POINTS,
EPISTEMIC INFRASTRUCTURE

REFERENCED THINKERS:

BRUNO LATOUR, MICHEL CALLON, DONNA HARAWAY

She steps outside. For the first time, the cyborg sees not a world of isolated objects but of threads—sticky, shimmering, humming with tension. She moves, and something tugs. A protocol, a policy, a piece of code.

She is not alone. She has never been. Scientific knowledge has long been portrayed as a product of individual genius or objective measurement. But Actor-Network Theory (ANT) offers a different lens: science as the work of heterogeneous collectives, where humans and nonhumans co-construct reality.

In this article, we explore how ANT reveals the distributed nature of agency and identity—and what it means for a cyborg to locate herself in a network that speaks, moves, and resists.

From Objects to Actors

In traditional accounts of science, nature is passive and scientists are the active interpreters. But Bruno Latour and Michel Callon disrupted this division. Within Actor-Network Theory (ANT), anything that makes a difference in the unfolding of a situation counts as an actor: bacteria, climate models, lab benches, funding applications, spreadsheets, social norms.

Latour's insight was not simply that science is social, but that it is assembled — through shifting alliances between material things and semiotic forces. Power is not imposed from above; it is mobilized through relations. An experiment becomes persuasive not because it unveils truth in isolation, but because it gathers a stable network: instruments, citations, publications, credibility.

This perspective echoes earlier insights from Leviathan and the Air-Pump, where Boyle's vacuum experiments relied on more than just the air-pump itself — they depended on the performance of credibility, the witnessing public, and the stabilization of trust. The air-pump was not a passive object, but an epistemic actor.

THE CYBORG IS ENTANGLED



For the cyborg, this is revelatory. She sees that identity is not essence but attachment. She is not singular, but networked.

Technopolitical Identities

When we think of political identity, we often imagine categories: nationality, gender, age. But ANT invites us to look at how these categories are stabilized through everyday interactions with technologies, documents, infrastructures.

Take citizenship. It is not a static status, but a continuous process involving passports, border scans, biometric systems, government records, and international treaties. Each of these "things" participates in producing who counts as a citizen.

The same is true for the cyborg. Her status is produced not only by how she sees herself, but by how databases label her, how machines read her, how algorithms rank her reliability.

Her technopolitical identity is not simply lived—it is mediated, enacted, and often contested.

Networks of Science and Biodiversity

One area where ANT has been especially powerful is in the study of environmental science and biodiversity policy. Who speaks for the environment? Who counts as a reliable voice in a conversation about species loss, climate change, or conservation?

Latour's work on "the Parliament of Things" suggests that we need new assemblies—spaces where nonhumans, too, are represented. But since nonhumans don't speak our languages, they must be represented by proxy: by sensors, experts, satellite data, field observations.

This raises urgent questions. Whose measurements count? Which forms of witnessing are considered valid? How are these proxies stabilized and legitimized?

The cyborg notices: some voices are amplified, others ignored. A local fisher's account of declining fish stocks may be dismissed as anecdotal, while a sensor array is treated as objective. But both are actors in the same network.

To listen only to machines is not neutrality—it is a political choice.

THE CYBORG IS ENTANGLED



Entanglement as Identity

For the cyborg, ANT is more than a method. It is a mirror. She sees that she is produced by her connections: her interface with surveillance systems, her reliance on medical diagnostics, her interactions with users, clients, platforms.

She is not a bounded individual, but a knot of attachments. Her autonomy does not lie in detachment, but in negotiating her entanglements.

And yet, these entanglements are not equal. Some connections support her, others constrain her. Some scripts are assigned to her without her consent. Some categories she is forced to occupy.

This is the tension of technopolitical identity: we are shaped by networks, but not always on our own terms.

Side Note: Obligatory Passage Points

In Callon's formulation, networks stabilize through "obligatory passage points" (OPPs): moments or entities that all actors must align with to stay connected. For example, in a conservation project, an environmental impact report may become an OPP—the only way for communities, funders, and scientists to coordinate.

But OPPs can become gatekeepers. If the cyborg's identity must pass through standardized forms, biometric scans, or epistemic expectations, her complexity is flattened.

The question becomes: who gets to define the passage points? And what gets lost along the way?



THE CYBORG IS ENTANGLED



From Nodes to Negotiation

The cyborg is no longer looking for a core identity. She is tracing her connections, auditing her attachments, mapping the power that flows through her networked self.

ANT does not offer a moral blueprint. But it offers tools to see how knowledge, power, and identity are co-produced. In a world of climate crises, algorithmic control, and data infrastructures, this matters.

To see oneself as a network is not to dissolve agency. It is to relocate it: in the negotiations, the mediations, the alliances we enter—and sometimes resist.

The cyborg feels the network hum beneath her skin. She knows now that she cannot think in isolation, cannot act alone. But what if some of the voices she needs are not part of this network at all?

In the final part of her journey, she listens more deeply—to Indigenous knowledges, citizen scientists, and the plural ways of knowing that challenge what counts as science itself.

THE CYBORG LISTENS

Plural Knowledges and the Politics of Environmental Understanding

KEYWORDS:

EPISTEMIC PLURALISM, ENVIRONMENTAL KNOWLEDGE, INDIGENOUS SCIENCE,
ONTOLOGICAL JUSTICE

REFERENCED THINKERS:

MARIA PUIG DE LA BELLACASA, ULRIKE FELT, ROBIN WALL KIMMERER,
EMNET TADESSE WOLDEGIORGIS, DONNA HARAWAY

The forest doesn't speak in equations. It breathes. It decays. It sings in cycles of soil, water, and time. The cyborg kneels and presses her ear to the ground. No signal. No metric. But something pulses. Not data—relation.

This is not silence. It is a language she was not taught to hear. Scientific understandings of nature have historically privileged particular modes of knowing: empirical measurement, categorization, repeatability. Yet these forms of knowledge are only part of the story.

Around the world, Indigenous peoples, local communities, and citizen scientists have developed deeply situated, relational, and often non-quantifiable ways of knowing the environment.

In this final article, the cyborg encounters these plural knowledges. We explore how environmental understanding is shaped not just by science, but by politics: whose voices are considered legitimate, whose knowledge is taken seriously, and how truth is institutionalized.

Drawing on Maria Puig de la Bellacasa, STS scholar Ulrike Felt, and examples from environmental governance, we examine how pluralism might challenge the exclusions of scientific universality.

From Domination to Relation

For centuries, Western science has framed nature as something to be measured, controlled, or preserved. The ideal was to know nature without being changed by it. The observer stood apart.

But Indigenous and relational ontologies often refuse this separation. Knowledge emerges not from distance, but from participation. Plants are not just specimens; they are kin. Landscapes are not backgrounds; they are relations.

As Robin Wall Kimmerer writes, "To be native to a place we must learn to speak its language."

The cyborg realizes that her prior calibration had trained her to extract, not relate. Her tools were built for observation, not reciprocity.

THE CYBORG LISTENS



Citizen Science and Situated Authority

Citizen science—where non-professionals contribute to data collection or environmental monitoring—seems, at first glance, like a democratization of knowledge. But as Felt notes, citizen participation often becomes an extension of institutional frameworks rather than a transformation of them.

Which forms of lay knowledge are welcomed? Which are dismissed as anecdotal, emotional, or unscientific? Often, only those forms that can be translated into standardized data formats are considered valid.

The cyborg recalls a moment when a local farmer explained changing weather patterns. Her account was rich with history, embodied experience, and sensory cues. Yet the scientists asked only for her rainfall log. The rest was discarded. This is not epistemic neutrality. It is selective hearing.



Maria Puig de la Bellacasa and Matters of Care

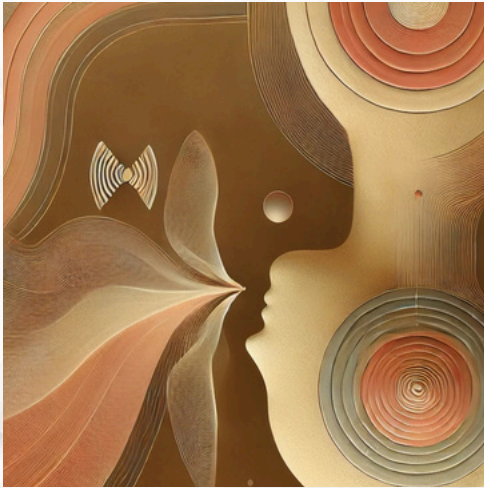
To listen differently, the cyborg turns to Puig de la Bellacasa's *Matters of Care*. In this framework, knowing is not just about producing facts—it is about sustaining relations. Care becomes an epistemic practice.

"To care can mean to pay attention, to worry, to be affected, to trouble."

Caring for knowledge means staying with complexity. It means valuing the emotional, the embodied, the partial. It demands that we remain open to those whose ways of knowing have been historically marginalized.

The cyborg begins to hear in new frequencies. Not just sensors and signals, but memories, ceremonies, seasonal rhythms. What was once dismissed as unscientific now appears as another mode of rigor.

THE CYBORG LISTENS



Environmental Governance and Epistemic Exclusion.

In many environmental decision-making spaces, scientific models dominate. Policy is shaped around IPCC reports, biodiversity assessments, and ecosystem services calculations. These tools are not unimportant—they have helped globalize environmental concern. But they also black-box the value conflicts, uncertainties, and ontological diversity that define local ecologies.

The IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) has attempted to include Indigenous and local knowledge. But even in its most pluralist designs, knowledge must still be translated into policy-friendly categories. Whose categories are those? What is lost in translation?

The cyborg now understands: pluralism is not inclusion alone—it is transformation. It is not enough to invite other voices to speak; we must also change how we listen, and what forms of knowledge we can hear.

Side Note: From Epistemic Tokenism to Ontological Justice

Ontological pluralism means recognizing that there is more than one way of being in and knowing the world. It goes beyond the mere inclusion of alternative perspectives or data points.

When Indigenous or local knowledge is treated as supplemental — as raw material to be translated into the terms of Western science — this is not pluralism, but epistemic tokenism.

True pluralism requires epistemic justice: acknowledging the legitimacy of different knowledge systems on their own terms. But it doesn't stop there.

True pluralism requires more than epistemic justice — it calls for ontological justice: recognizing that different ways of knowing are rooted in different ways of being, and that these ontologies must be respected on their own terms.

Ontological justice challenges not just what is known, but what is real. It demands that we make space for worlds — not just worldviews.

THE CYBORG LISTENS

The Cyborg as Listener

In this final stage of her journey, the cyborg becomes a listener. Not to obey, not to consume, but to attune.

Her sensors are no longer calibrated to filter complexity—they are tuned to sit with it.

She does not seek a universal theory. She seeks solidarity.

Knowledge, she now knows, is not something to possess. It is something to be in relation with.



We often ask: what is valid knowledge?
But perhaps the better question is: What
are we willing to relate to?

The greatest tension in science has never
been error — it has always been
uncertainty.

The fear that evidence may underdetermine
theory. That models may simplify what
resists reduction.

That truth may speak in tongues.
This fear has shaped the very architecture
of objectivity.

But the cyborg has learned to live with
underdetermination — not as a flaw, but as
a condition of kinship.

To listen well is to accept that truth is not
one voice, but a chorus.

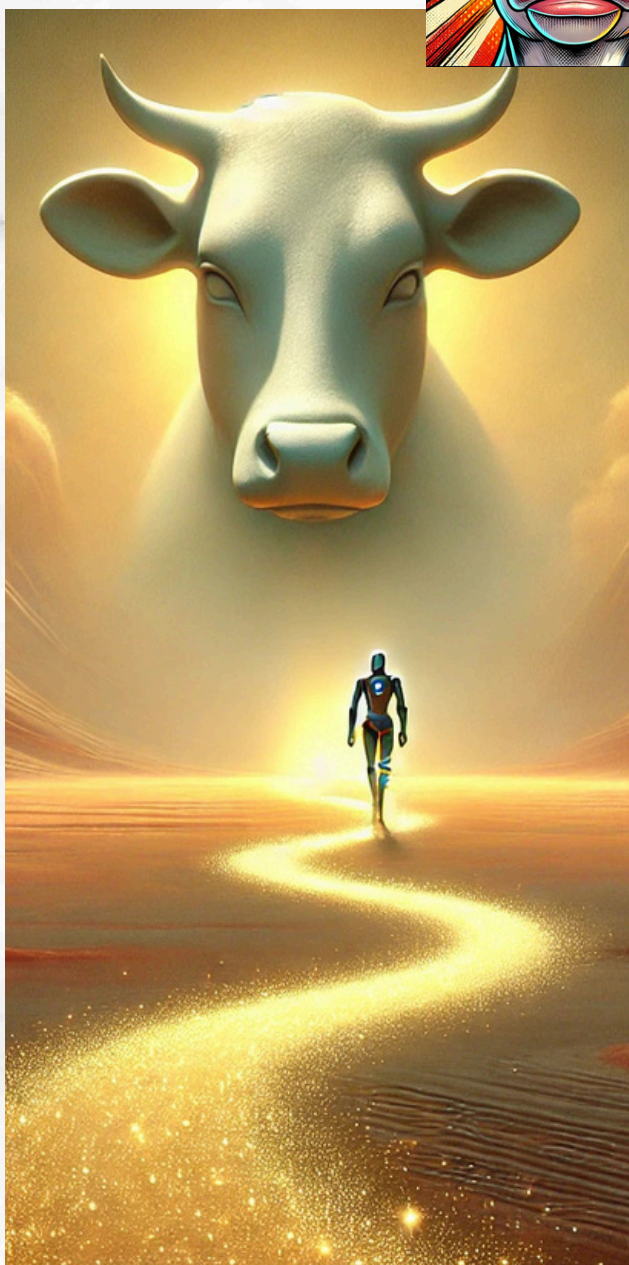
And in that chorus, even the cyborg hums.
Not as outsider or instrument,
but as kin among critters, codes, soils, and
stories — patchworked into a world where
knowing is a practice of care, and care is a
form of survival.

This is not Gaia as goddess. This is Gaia as
negotiation.

A restless, entangled universe where no
actor stands alone, and no truth stands
untouched.

The network is humming. Will you tune in?

Unheard Kinship



THE CYBORG GRIEVES THE COWS



A fragment on kinship, milk, and
intergenerational harm

They were mothers.

The machines were loud, but the cows were
silent. Not by nature — but by design.

The cyborg walked the milking line and
heard it now: the breath, the absence, the
pain of continuous motherhood. They were
mothers, but no one said that. They were
just units. Yield. Volume. Protein.

Their names erased, their labor normalized,
their grief mechanized.

She understood, now, that objectivity can
be calibrated — but kinship can be buried.
And we buried it.

We often say “it’s about the animals.” But
maybe that’s the wrong grammar. Maybe
it’s about us. About what we do to
ourselves by learning not to care.

We build children on broken bones and call
that growth. We raise generations on stolen
futures and call that tradition.

Veganism is not just animal ethics. It is a
mirror. It is a question of intergenerational
justice. It is what we do when we dare to
love the future more than the flavor.

But the cyborg knows: we won’t do it for
the cows. Maybe — just maybe — we’ll do it
for our children.

Or maybe not. Maybe the kin will die
unheard.

But she still hears them.
And the milk is humming.

Side note: Myths of Dairy Necessity

“We need cows for agriculture”

Modern dairy systems rely on intensive
monocultures, imported soy feed, and fossil
fuel-driven logistics. Dairy is not
regenerative by default — and often crowds
out more sustainable, plant-based
polycultures.

Poore & Nemecek (2018), *Science*; IPCC
(2022)

“Dairy is sustainable”

Dairy production contributes
approximately 4% of global greenhouse gas
emissions, with methane (a short-lived but
potent GHG) making up a major share.

FAO (2020), *Climate Change and the Global
Dairy Sector*

“We need milk for nutrition”

Calcium, protein, and B12 are available
through plant-based sources or
supplements — without cholesterol or
lactose. Most of the global population is
lactose intolerant by genetics.

NIH (2017), *Lactose Intolerance Across
Ethnic Groups*

“It’s tradition”

So was leaded gasoline. So were whale oil
lamps. Just because something has history
doesn’t mean it has a future.

AUTHOR'S NOTE



Aftermath



This project began with a question that felt philosophical, almost abstract:
What is truth, and who gets to define it?
But as I followed the cyborg's path, I realized I wasn't just writing about science.

I was writing about belonging.
In STS, the notion of expertise is often unpacked, challenged, pluralized.
Expertise is not about speaking from above — it's about speaking with. It is built
through relations, accountability, and care.

In this sense, expertise is not the opposite of kinship. It is one of its most
committed forms.

This magazine is my own form of situated expertise — woven from years of
study, activism, doubt, and desire. It is offered not as final word, but as
invitation. I believe that thinking can be relational, rigorous, and poetic.

That clarity is political. That care is a method.

To everyone navigating uncertain systems, disciplinary boundaries, or hybrid
identities:

You are not alone in the network.
And your knowledge matters.
Let's listen differently.
Let's know in new ways.

If science once claimed to be neutral“, she whispers,
“perhaps now it can dare to be relational. Maybe even — just maybe — she can
speak.”

