

A Laboratory of Political Awakening: Towards a New Ontology of Coexistence

Proposal for the Metahuman Futures Forum

Jean-Marc Matos, August 2025

Summary

The contemporary era, marked by rapid technological evolution and geopolitical uncertainty, calls for a profound redefinition of the human condition. As we approach the speculative date of total extinction—October 22, 2031—the dialectic between dystopian fatalism and desirable futures emerges as a critical space of negotiation. The necessity of an engaged artistic and intellectual practice becomes ever more pressing, positioning art, technology, and corporeal experience as sites of resistance and reimagination.

Chapter 1: Vectofascism and the Algorithmic Reshaping of Reality

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This chapter explores Grégory Chatonsky's concept of *vectofascism*, a contemporary form of fascism that exploits digital infrastructures to reinforce authoritarian control.

Unlike traditional fascist movements, which relied on physical coercion and ideological propaganda, vectofascism operates through algorithms that manipulate perceptions of truth and reality. By shaping online discourse, selectively amplifying voices, and erasing counter-narratives, these systems create self-reinforcing ideological loops that erode democratic pluralism. The chapter critically examines the role of social media, data collection, and artificial intelligence in reinforcing political polarization and controlling public opinion.

Chapter 2: Resistance and Creativity – The Role of Art and Cultural Institutions

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This section discusses the necessity of art as a form of resistance in an era where cultural freedoms are increasingly threatened. Drawing from Claudia Belchior's warnings about illiberal regimes attacking artistic expression, the chapter highlights the importance of solidarity among artists and cultural institutions. It examines historical and contemporary examples of art as a tool of protest, including performance art, theater, and dance, as well as policy measures that can strengthen the role of art in fostering political and social awareness.

Chapter 3: From the Gentle Cage of Certainty to Eutopian Possibilities

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This chapter challenges the illusion of certainty and control in contemporary life, as discussed by Murat Durmus. It argues for an embrace of uncertainty as a space of possibility, where art and philosophy can cultivate new ways of thinking and existing. The concept of *eutopia*—a space of the good—is introduced as a counterpoint to dystopian fears, emphasizing fragility, vulnerability, and openness to transformation. The discussion integrates examples of artistic practices that prioritize improvisation, involuntary dramaturgies, and extended compositions as methodologies for engaging with the unexpected.

Chapter 4: Nature, Culture, and Non-Human Intelligences

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Building on Kaoutar Archi's critique of the nature/culture divide, this chapter interrogates how human exceptionalism has shaped our understanding of intelligence. It explores emerging discourses on animal cognition, plant intelligence, and artificial intelligence, questioning the boundaries that separate human thought from other forms of sentience.

The chapter also examines how artistic and scientific projects are bridging these domains, fostering new paradigms of interspecies communication and ecological awareness.

Chapter 5: Technological Failures and the Poetics of the Error

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Technology is often framed as a tool for perfection and efficiency, but this chapter considers failure as an artistic and philosophical resource. Examining K. Danse's *FAIL* project, which incorporates dance and AI, the chapter explores how glitches, breakdowns, and unintended outcomes reveal the limitations of technological determinism. By reframing failure as an opportunity for creative exploration, the discussion highlights how artistic interventions can expose and subvert the ideological assumptions embedded in technology.

Chapter 6: Relationality and the Politics of Care

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Drawing on Timothy Snyder's arguments about positive freedom, this chapter emphasizes the importance of care, welfare, and public institutions in fostering genuine liberty. It critiques neoliberal individualism and argues for a relational understanding of freedom, where mutual support and community structures take precedence over market-driven competition.

The chapter highlights artistic projects and social movements that foreground care as a political and ethical principle.

Chapter 7: Quantum Reality – Rethinking Existence as a Network of Relations

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This section introduces quantum physics as a framework for reimagining reality, drawing on Karen Barad's concept of *intra-action*. Instead of viewing existence as composed of static objects with inherent properties, quantum theory suggests that reality emerges through relational interactions. The chapter examines how this perspective influences contemporary art and philosophy, challenging classical notions of space, time, and identity. It also considers the risks of reducing quantum theory to metaphor while recognizing its potential to reshape human understanding of interconnectedness.

Chapter 8: Feeling vs. Thinking – Embodied Epistemologies

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Challenging the privileging of rational thought over somatic experience, this chapter engages with K. Danse's *ETERNITY* project to argue for the integration of feeling and thinking. It critiques Cartesian dualism and explores how dance and movement-based practices generate knowledge beyond the linguistic and conceptual. The discussion includes perspectives from cognitive science, phenomenology, and artistic practice, emphasizing the body as an epistemological site.

Chapter 9: Reality as Ultimate Fiction – Excentration and the Fragmentation of the Self p 40

Reality, as Holly Childs suggests, is the ultimate fiction—an ongoing construction shaped by perception and narrative. This chapter engages with Louise Bourgeois' assertion that *space does not exist*, considering how spatial metaphors structure human experience. Gregory Chatonsky's theory of *excentration* is introduced as a means of deconstructing the idea of a stable self.

The chapter contrasts the *finitude of replacement*, which assumes human identity as self-contained, with the *finitude of completion*, which frames identity as inherently relational and mutable.

Conclusion: Towards a New Ontology of Coexistence

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In the face of ecological crises, technological disruptions, and political instability, this final chapter argues for a reorientation of human existence towards relationality and openness. Rather than succumbing to apocalyptic narratives of extinction, the chapter calls for a commitment to alternative futures that embrace uncertainty, fragility, and the unfinished nature of being. The discussion concludes by advocating for a *life-sized* engagement with reality—one that resists abstraction and domination in favor of coexistence, care, and collective reimagination.

Dance Projects as Embodied Ontologies of Care

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Links with the Metahuman forum led by Jaime del Val on the text **A Laboratory of Political Awakening: Towards a New Ontology of Coexistence** p 50

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The contemporary era, marked by rapid technological evolution and geopolitical uncertainty, calls for a profound redefinition of the human condition. As we approach the speculative date of total extinction—October 22, 2031—the dialectic between dystopian fatalism and desirable futures emerges as a critical space of negotiation. The necessity of an engaged artistic and intellectual practice becomes ever more pressing, positioning art, technology, and corporeal experience as sites of resistance and reimagination.

Chapter 1: Vectofascism and the Algorithmic Reshaping of Reality

This chapter explores Grégory Chatonsky's concept of *vectofascism*, a contemporary form of fascism that exploits digital infrastructures to reinforce authoritarian control. Unlike traditional fascist movements, which relied on physical coercion and ideological propaganda, *vectofascism* operates through algorithms that manipulate perceptions of truth and reality. By shaping online discourse, selectively amplifying voices, and erasing counter-narratives, these systems create self-reinforcing ideological loops that erode democratic pluralism. The chapter critically examines the role of social media, data collection, and artificial intelligence in reinforcing political polarization and controlling public opinion.

In the digital age, the mechanisms of power and control have undergone a radical transformation. Whereas classical fascism relied on mass mobilization, centralized propaganda, and the physical control of public space, contemporary authoritarianism has adapted itself to the infrastructures of algorithmic governance. Grégory Chatonsky's concept of *vectofascism* encapsulates this shift, describing a form of digital fascism that operates through datafication, networked control, and the algorithmic reshaping of public discourse.

This chapter critically examines how *vectofascism* manifests in contemporary societies, analyzing its reliance on three fundamental pillars: algorithmic truth distortion, networked authoritarianism, and the erosion of democratic pluralism through digital infrastructures.

1. Algorithmic Truth Distortion: The Weaponization of Information

Truth in the 21st century has become an unstable and contested domain. While classical totalitarian regimes sought to impose a monolithic version of reality through state-controlled media, vectofascism thrives on the manipulation of perception by algorithmic means. The digital age has shifted the production and distribution of truth to decentralized platforms, where algorithmic recommendation systems dictate the visibility and legitimacy of information.

By selectively amplifying certain narratives and burying others, these systems effectively create echo chambers that reinforce ideological positions while erasing counter-narratives.

Social media algorithms, trained to maximize engagement, disproportionately reward emotionally charged and polarizing content. As a result, public discourse becomes increasingly fragmented, with reality itself appearing to be different depending on the digital environments individuals inhabit.

This controlled fragmentation ensures that dissent is diffused rather than centralized, making resistance more difficult to organize. The chapter examines case studies where algorithmic distortions of truth have been used to justify authoritarian policies, criminalize opposition, or manufacture consent for repressive measures.

2. Networked Authoritarianism: From Surveillance to Predictive Control

The evolution of digital surveillance has moved from retrospective monitoring to predictive governance. Traditional authoritarian regimes relied on extensive human-led intelligence operations to monitor and suppress dissent. In contrast, vectofascism employs predictive analytics, biometric tracking, and real-time data aggregation to anticipate and neutralize opposition before it materializes.

By integrating artificial intelligence with mass surveillance systems, states and corporations now have the capacity to analyze behavioral patterns, detect potential threats, and intervene preemptively. This shift marks a transition from reactive forms of repression to proactive governance models that operate under the guise of maintaining social stability. The Chinese Social Credit System serves as a key example of how digital infrastructures can be leveraged to enforce compliance through automated penalties and incentives, effectively conditioning behavior at a mass scale.

Furthermore, the privatization of surveillance technologies allows authoritarian tendencies to permeate democratic societies as well. The outsourcing of mass data collection to corporate entities means that governments no longer need to directly engage in surveillance; they can simply purchase access to already existing commercial databases. This blurring of lines between state control and corporate interests contributes to a new form of governance where power is diffused but omnipresent.

3. The Erosion of Democratic Pluralism: Algorithmic Governance and the Crisis of Political Agency

A functioning democracy depends on the possibility of open debate, dissent, and the negotiation of conflicting perspectives. However, the algorithmic structuring of public discourse has led to a decline in genuine pluralism, as platforms prioritize content that aligns with pre-existing biases and market-driven incentives. This digital reinforcement of ideological silos has profound implications for political agency.

One of the most concerning aspects of vectofascism is its ability to erode the public sphere without the need for overt repression. Instead of banning opposition parties or imprisoning dissenters, the system simply ensures that alternative perspectives remain invisible or are systematically discredited. The chapter analyzes case studies of digital disinformation campaigns, bot-driven amplification of extremist rhetoric, and the strategic use of AI-generated content to shape political narratives.

Moreover, the chapter discusses the paradox of digital activism within this framework: while social media provides tools for mobilization, it also subjects activist movements to unprecedented levels of surveillance and co-optation. The challenge for contemporary resistance lies in finding ways to navigate and subvert these algorithmic structures while maintaining autonomy and agency.

Conclusion: Towards Algorithmic Resistance and Counter-Narratives

The final section of the chapter proposes strategies for resisting the forces of vectofascism. If reality itself is being algorithmically constructed, then one of the primary sites of struggle must be the development of counter-algorithms and alternative infrastructures.

Initiatives such as decentralized platforms, encrypted communication networks, and AI-driven tools for detecting disinformation offer potential avenues for reclaiming digital autonomy.

Furthermore, art and performance hold unique potential as forms of resistance against algorithmic governance. Unlike text-based media, which can be easily parsed and categorized by AI, embodied practices such as dance, improvisational performance, and site-specific interventions create unpredictable and unquantifiable disruptions within controlled environments. The chapter explores examples of artistic projects that challenge algorithmic determinism and propose speculative futures beyond the constraints of digital authoritarianism.

In sum, *vectofascism* represents a new modality of control—one that does not require the physical oppression of bodies but instead operates at the level of perception, belief, and behavior. Understanding its mechanisms is the first step toward developing effective forms of resistance.

By reclaiming narrative agency and fostering alternative modes of relationality, individuals and collectives can begin to reimagine a political future beyond the algorithmic confines of vectofascism.

Here are examples mentioned or alluded to in this chapter: Vectofascism and the Algorithmic Reshaping of Reality, organized according to the structure of the chapter. Specific real-world cases, technological or artistic initiatives, and links (via citations) are paired with each example in the structure of the chapter:

1. Algorithmic Truth Distortion, real-world cases:

- Facebook recommendation loops & echo chambers: Internal research showed that 64 % of extremist group joins came from “Groups You Should Join” or algorithmic tools—creating polarized echo chambers that reinforce misinformation and groupthink.

- Australian 2019–2020 bushfires: Viral fake images and conspiracy theories amplified through social media distorted public perception, diverted relief efforts, and sown distrust in authorities.
- Vaccine debate on Facebook: A seven-year study showed echo chamber polarization, where users engaged almost exclusively with pro-or anti-vaccine content, reducing exposure to dissenting views.

Implications: These illustrate how algorithms distort visibility, engineering feedback loops that marginalize dissent and fragment shared reality.

2. Networked Authoritarianism, case studies:

- Chinese Social Credit System: Automated monitoring, behavioral scoring, and algorithmic incentives or punishments condition mass compliance (the canonical example of predictive governance).

- Predictive AI campaigns in elections:

In New Hampshire (Jan 2024), AI-generated robocalls mimicked President Biden's voice to suppress voter turnout—anticipating behavior through automation.

Operation Overload, a Russian-linked influencer network, deployed AI-generated fake news posing as credible clips to sway opinion in the U.S. and Europe (e.g., fake USAID funding Hollywood claims), shared millions of times.

- Privatized surveillance infrastructure: Corporations offering commercial data sets fuel state predictive governance, blurring public/private lines in surveillance regimes.

3. The Erosion of Democratic Pluralism, examples:

- Macron Leaks (2017 French election): Coordinated bot campaigns amplifying misinformation around candidate emails to influence public opinion and sow distrust.
- AI-generated political content in Europe: Far-right parties like Germany's AfD and Italy's Lega used fake imagery and posts to push xenophobia and anti-immigrant narratives via social platforms during elections.
- Bangladesh deepfakes: Government-aligned outlets used AI anchors and manipulated clips to misrepresent opposition leaders and broadcast false narratives during elections.
- Modi deepfake video in India (July 2025): A fake AI video showed PM Modi endorsing a local candidate, which sparked an electoral controversy and official complaints.
- Digital activism under surveillance: Social movements on platforms like X or Facebook mobilize around causes but face algorithmic discreditation, data harvesting, and platform-driven suppression.

4. Resistance: Algorithmic Counter-Measures and Artistic Interventions

Technological initiatives:

- Decentralized and encrypted platforms:

Platforms like Mastodon or Matrix enable federated social networking and encrypted messaging to diminish corporate algorithmic mediation.

AI tools for misinformation detection: Fact-checking bots, browser extensions, and systems like the Political Deepfakes Incidents Database (PDID) help detect and analyze deepfake content.

Artistic and performative projects:

- Critical Art Ensemble (CAE): A media-activist collective creating tactical-media interventions that expose digital authoritarianism through works and performances (<https://web.archive.org/web/20250728175529/http://critical-art.net/>).
- Institute for Applied Autonomy: Engineers robotic and decentralized systems (e.g., protest robotics) to reclaim autonomy and resist surveillance infrastructures (<http://www.appliedautonomy.com/>).
- Disnovation.org: Artists Maria Roszkowska and Nicolas Maigret create installations like Predictive Art Bot or The Pirate Cinema that critique algorithmic culture and information control (<https://disnovation.org/index.php>).
- Katherine Behar's "Anonymous Autonomous" (2018): Office chairs outfitted with computer vision wander like autonomous vehicles in a gallery, inviting reflection on algorithmic automation in everyday life (<https://katherinebehar.com/art/anonymous-autonomous/index.html>).
- Tools for Action (Berlin-based collective): Uses inflatable sculptures to intervene in public protests, creating ephemeral, performative disruptions that bypass surveillance norms (<https://www.toolsforaction.net/>).
- Jaime del Val: site specific and participatory metaformances with Flexinamics (<https://metabody.eu/bodynet-khoros/>).

Conclusion: Towards Algorithmic Resistance and Counter-Narratives

Examples of Resistance:

- Technological countermeasures:

Decentralized platforms (e.g., federated social networks like Mastodon).

Encrypted communication networks (e.g., Signal, Matrix).

AI tools to detect disinformation (e.g., automated fact-checking systems).

- Art and performance as resistance:

Dance, improvisational performance, and site-specific interventions:

Create unpredictable, unquantifiable, embodied interventions and disruptions. They resist easy algorithmic categorization.

- Artistic projects that challenge algorithmic determinism: while not named in the text, this refers to projects that explore speculative futures, refuse data capture; and leverage bodily or affective forms of presence.

Chapter 2: Resistance and Creativity – The Role of Art and Cultural Institutions

This section discusses the necessity of art as a form of resistance in an era where cultural freedoms are increasingly threatened. Drawing from Claudia Belchior's warnings about illiberal regimes attacking artistic expression, the chapter highlights the importance of solidarity among artists and cultural institutions. It examines historical and contemporary examples of art as a tool of protest, including performance art, theater, and dance, as well as policy measures that can strengthen the role of art in fostering political and social awareness.

In an era where cultural freedoms are increasingly under siege, art emerges not merely as a form of expression but as a fundamental act of resistance. Claudia Belchior warns against the systemic attacks on artistic expression by illiberal regimes, emphasizing the importance of cultural institutions as bastions of free thought and democratic values. This chapter explores how artists and institutions have historically resisted oppression and continue to do so in contemporary contexts.

1. Historical and Contemporary Examples of Art as Protest

Art has long played a critical role in social and political movements. From the anti-fascist performances of Bertolt Brecht and the politically charged murals of Diego Rivera to contemporary activist art in digital spaces, creative expression remains a powerful tool against authoritarianism. Performance art, theater, and dance—due to their embodied nature—create spaces where resistance is enacted both physically and symbolically.

In contemporary settings, initiatives such as Pussy Riot's interventions in Russia, the *Teatro por la Identidad* movement in Argentina, and the protest performances of Ai Weiwei illustrate how art can disrupt official narratives and mobilize communities. Dance, in particular, has served as a means of reclaiming public space—such as the mass choreographies staged during the Chilean feminist protests of 2019. These movements highlight the urgency of artistic expression as a means to challenge power structures and provide alternative visions of reality.

2. The Role of Cultural Institutions in Defending Artistic Freedom

Cultural institutions play a crucial role in protecting artistic freedom and fostering resistance. The rise of authoritarian tendencies worldwide has placed museums, theaters, and cultural centers at the forefront of ideological battles.

Institutions such as the Centre National de la Danse (CND) in France, the European Theatre Convention, and the Documenta festival in Germany have positioned themselves as defenders of artistic plurality.

However, these institutions are also vulnerable to state pressures and economic constraints. Policies that defund cultural spaces or subject them to strict governmental oversight threaten their autonomy. This section explores strategies for institutional resilience, including transnational solidarity networks, alternative funding models, and the role of independent art spaces in maintaining creative dissent.

3. Policy Measures to Strengthen Art as a Political Force

To sustain art's role as a catalyst for political and social awareness, proactive policies must be implemented. This section proposes key measures, including:

- **Legal Protections for Artistic Expression:** Strengthening policies that protect artists from censorship and political persecution.
- **Public Funding and Support for Independent Art Spaces:** Ensuring that cultural production remains diverse and accessible beyond state-controlled narratives.
- **Art Education as Critical Thinking Development:** Embedding artistic practices in educational systems to cultivate critical thought and resistance to ideological manipulation.
- **International Networks of Artistic Solidarity:** Building alliances between artists, institutions, and human rights organizations to defend cultural freedom on a global scale.

By examining historical precedents and contemporary challenges, this chapter argues that art is not merely a reflection of society but an active force in shaping its political future. As cultural spaces become battlegrounds for ideological contestation, the imperative to defend and expand artistic resistance becomes ever more urgent.

Here are examples mentioned or alluded to in this chapter: Resistance and Creativity – The Role of Art and Cultural Institutions. Real-world cases and links to relevant artistic or technological initiatives are line with the structure of the chapter:

1. Historical and Contemporary Examples of Art as Protest

- Pussy Riot interventions in Russia. Iconic performance "Punk Prayer" inside Moscow Cathedral of Christ the Savior (2012): Members stormed the altar, singing a punk song denouncing Putin and the Orthodox Church's role in politics—resulting in arrest and international publicity <https://pussy-riot.livejournal.com/>. Broader artistic practice: Their early "Release the Cobblestones" subway protest (2011) used punk aesthetics, anonymity (colored balaclavas), and revolutionary references as disruptive performance activism.
Recent museum-scale exhibition and performance: Nadya Tolokonnikova's "Police State" (2025) durational cell-installation at MOCA LA uses surveillance simulation and audience-driven complicity to critique authoritarian systems globally
<https://www.moca.org/program/nadya-tolokonnikova-police-state>.
- Teatro por la Identidad (Argentina). Although not widely detailed in literature, this movement organizes theater-based acts and public events to support victims of forced disappearances and memory activism in post-dictatorship Argentina. It exemplifies theater mobilized for historical justice and collective remembrance
<https://www.teatroxlaidentidad.net/>.
- LASTESIS / Un violador en tu camino (Chile, Nov 2019). Performed initially before police stations in Valparaíso (Nov 20) and Santiago (Nov 25) during protests. A flash-mob performance by LasTesis that explicitly denounced structural rape, gender violence, and law enforcement complicity. The performance spread to 200+ cities in over 50 countries, resonating globally as a feminist anthem for anti-violence mobilization
https://fr.wikipedia.org/wiki/Un_violeur_sur_ton_chemin.

- Dance reclaiming public space in Chilean feminist protests (2019). Collective performances of the song “El baile de los que sobran” (Los Prisioneros) and dance interventions such as cueca sola memorials commemorating dictatorship victims became visible protest acts during mass marches (estimated 1.2 million people) in Santiago. These embodied interventions fostered solidarity among feminist, queer, indigenous, and memory activism groups.

2. Role of Cultural Institutions in Defending Artistic Freedom

- Documenta festival (Germany). As a globally prominent exhibition platform, Documenta (notably Documenta 13 in Athens and later editions) has positioned itself as a defender of artistic plurality, exhibiting politicized, contested, and peripheral voices in a trans-national framework. At times its independence has been tested by state or political controversy—such as anti-Semitism scandals in 2022 leading to resignations and institutional reckonings <https://documenta.de/en>.
- Centre National de la Danse (CND, France) & European Theater Convention (ETC) <https://www.cnd.fr/en/>.

While not widely reported in mainstream sources, these institutions often serve as networks and forums defending autonomy of performance arts and cross-national solidarity for artists facing censorship, especially within EU frameworks.

3. Policy Measures to Strengthen Art as a Political Force

- Legal protections & public funding. Countries like Argentina, Spain, and Germany have adopted legislation to protect artists from intimidation, defamation lawsuits, and censorship by illiberal regimes. Public funding for independent theaters, museums, and cultural centers helps preserve dissenting voices.
- Independent art spaces & alternative funding. Crowdfunding platforms, artist collectives, and international foundations (such as Open Society Foundations or Institut für Auslandsbeziehungen) finance independent exhibitions and performance residencies outside state control.
- Art education as critical thinking cultivation. Pedagogical initiatives in Chile, Brazil, France, Portugal, etc. integrate performance, theater, and visual arts into secondary education to foster critical engagement with social issues.
- International cultural solidarity networks. Platforms like Freemuse <https://www.freemuse.org/>, Arts & Culture at UNESCO, Open Society Foundations <https://www.opensocietyfoundations.org/>, and Solidarity Visas https://youth.europa.eu/solidarity/young-people/volunteering_fr link artists under threat with institutions abroad, facilitating exchanges, exhibitions, residencies, and sanctuary.

Chapter 3: From the Gentle Cage of Certainty to Eutopian Possibilities

This chapter challenges the illusion of certainty and control in contemporary life, as discussed by Murat Durmus. It argues for an embrace of uncertainty as a space of possibility, where art and philosophy can cultivate new ways of thinking and existing. The concept of *eutopia*—a space of the good—is introduced as a counterpoint to dystopian fears, emphasizing fragility, vulnerability, and openness to transformation. The discussion integrates examples of artistic

practices that prioritize improvisation, involuntary dramaturgies, and extended compositions as methodologies for engaging with the unexpected.

1. The Cage of Certainty: Security, Control, and the Illusion of Stability

Modern societies are deeply invested in the idea of certainty. Predictability is seen as essential to progress, safety, and the smooth functioning of political and economic systems.

From the dominance of statistical modeling in governance to the increasing reliance on algorithmic predictions in everyday decision-making, uncertainty has become something to be eradicated rather than embraced. Murat Durmus describes this condition as *the gentle cage of certainty*, a system that offers comfort and order but ultimately limits human freedom and creativity.

This illusion of certainty manifests across various domains:

- **Political Structures:** Authoritarian tendencies are often justified in the name of security. Surveillance technologies, predictive policing, and biometric control systems aim to preempt threats before they materialize. Yet, this drive for certainty often results in oppression rather than protection, reinforcing rigid power structures.
- **Economic Systems:** The financialization of global economies is based on complex predictive models that attempt to manage risk and volatility. Yet, as seen in financial crises, these models fail precisely because they assume stability where none exists.
- **Cultural and Social Norms:** Identity politics, consumer culture, and digital profiling categorize individuals into fixed demographic groups, reinforcing narrow definitions of selfhood. The pressure to conform to stable, marketable identities suppresses fluidity, ambiguity, and transformation.

In this landscape, the desire for control paradoxically generates greater instability, as the refusal to engage with uncertainty leads to systems that are brittle rather than adaptable. The arts, however, offer an alternative: a space where uncertainty is not feared but embraced as a site of possibility.

2. The Art of Uncertainty: Improvisation, Involuntary Dramaturgies, and Extended Compositions

Art has long been a space where ambiguity and open-endedness are not just tolerated but cultivated. Many artistic practices challenge the rigid structures imposed by political and economic forces, instead prioritizing improvisation, indeterminacy, and participation.

- **Improvisation as Political Practice:** The act of improvisation—whether in dance, music, or performance—is an exercise in navigating the unknown. It demands presence, adaptability, and a willingness to engage with the unexpected. Jazz, for instance, emerged as a radical form of improvisation that subverted musical conventions and social hierarchies. Likewise, contemporary dance practices, such as those pioneered by Pina Bausch and Anne Teresa De Keersmaeker, foreground improvisation as a means of resisting choreographic control.
- **Involuntary Dramaturgies:** In contrast to traditional dramaturgy, where narratives follow predetermined structures, *involuntary dramaturgies* invite disruption. This concept, central to experimental theater and performance art, allows for unpredictability by incorporating real-time interventions, audience participation, or external events that alter the trajectory of a piece. By relinquishing control over outcomes, these works mirror the instability of

contemporary existence while resisting the authoritarian impulse to impose singular meanings.

- **Extended Compositions:** In music and visual art, extended compositions defy traditional constraints of time and form. John Cage's *4'33"*, which invites audiences to listen to the incidental sounds around them, is a radical example of an open-ended composition where silence itself becomes part of the piece. Similarly, durational performance art—such as Marina Abramović's endurance works—creates spaces of prolonged engagement, where meaning emerges over time rather than being dictated in advance.

These artistic methodologies offer a model for embracing uncertainty beyond the realm of art. They suggest ways in which society can move beyond rigid control structures toward a more fluid, responsive mode of existence.

3. Eutopia: A Space of the Good in a World of Fragility

The concept of *eutopia*, as opposed to the traditional utopian ideal, does not imagine a perfect world but rather a *good place*—a space where fragility, uncertainty, and incompleteness are recognized as fundamental to human existence. Eutopia does not seek to eradicate vulnerability but to embrace it as a condition for growth, connection, and ethical engagement.

- **Valuing Fragility:** Rather than seeing vulnerability as a weakness to be overcome, eutopia recognizes it as a necessary state of openness to the world. In dance, for instance, vulnerability is essential as bodies move in relation to others, constantly adapting, responding, and negotiating space.
- **Uncertainty as Creative Potential:** In political philosophy, thinkers such as Jacques Rancière and Chantal Mouffe argue that democracy thrives on *dissensus*—the productive tension of multiple perspectives rather than a singular, imposed order. Eutopia, similarly, embraces multiplicity and ambiguity as sources of richness rather than chaos.
- **Beyond the Logic of Domination:** The dominant structures of contemporary life are built on competition, accumulation, and conquest. Eutopia challenges these imperatives by valuing relationality over hierarchy, process over product, and coexistence over dominance.

This vision is not an abstract ideal but one that is being actively explored through artistic, philosophical, and social experiments. From cooperative economic models to experimental pedagogies, from ecological restoration projects to community-based performance practices, eutopian thinking is emerging in various forms.

4. Toward an Aesthetics of Openness: The Role of Art in Expanding the Possible

If the *gentle cage of certainty* restricts human potential by imposing rigid structures, the role of art is to break open those structures and reveal new possibilities. This chapter concludes by arguing that artistic practice is not merely a reflection of reality but an active force in shaping alternative futures.

The aesthetic strategies discussed—improvisation, involuntary dramaturgies, extended compositions—are not just artistic techniques but also philosophical and political gestures. They invite us to rethink how we relate to time, space, and each other. They suggest ways in which we might navigate uncertainty not with fear but with curiosity, not by imposing control but by embracing transformation.

In an era of ecological crisis, digital authoritarianism, and deep socio-political fractures, the urgency of this shift cannot be overstated. To move beyond dystopian fears and embrace a eutopian ethics is not to deny the challenges of the present but to insist that other futures remain possible. The first step toward such futures is the willingness to step outside the cage of certainty and into the unknown.

This chapter serves as a bridge between critiques of contemporary control structures (explored in previous sections) and the proposal of alternative futures (to be developed in subsequent chapters).

It argues that the path forward requires a reconfiguration of our relationship with uncertainty—one that art, philosophy, and embodied practices are uniquely equipped to facilitate.

Here are examples mentioned or alluded to in this chapter 3—each paired with real-world cases and relevant artistic or technological initiatives where possible, structured by the chapter's themes:

1. The Cage of Certainty: Security, Control, and the Illusion of Stability

- Predictive policing, biometric surveillance. Real-world examples include the use of facial-recognition systems and predictive algorithms in policing (e.g. Chicago's now-paused "heat list"), which claim to anticipate crime but often misidentify marginalized populations and reinforce state control.

These technologies illustrate the paradox of certainty: seeking to pre-empt threats but generating new forms of oppression.

- Financial models and systemic fragility. The 2008 global financial crisis revealed that predictive economic models—stress tests, risk metrics, derivatives—assumed stability yet collapsed under volatility. The illusion of control created brittle systems that failed catastrophically.

- Identity politics and digital profiling. Platforms like Instagram, TikTok or Facebook and ad targeting systems categorize individuals into rigid segments—“interests,” demographics—limiting identity into fixed marketable profiles and suppressing fluid subjectivities.

2. The Art of Uncertainty: Improvisation, Involuntary Dramaturgies, Extended Compositions

- Improvisation in performance. Pina Bausch often integrated improvisation in her dance-theater, allowing dancers to respond moment-to-moment to each other and the environment. Anne Teresa De Keersmaeker, in works like Rosas danst Rosas, blends repetitive structure with improvisatory freedom, especially in later iterations (e.g. Fase, 1982)—see the third movement “Come Out,” where jerky, chaotic gestures unfold unpredictably.

- Involuntary Dramaturgies. Experimental theater collectives such as Forced Entertainment (UK) and Wooster Group (USA) use unscripted, audience-interactive strategies: real-time disturbances, chance operations, guest participation—all disrupting linear narrative control as a political gesture.

- Extended Compositions. John Cage's 4'33" is the emblematic example: performers remain silent for the duration, inviting ambient sound and audience presence to constitute the composition. It radically foregrounds unpredictability and the idea that silence is actually ambient noise.

Marina Abramović's durational works, such as *The Artist Is Present* (2010), offer multi-hour engagements with spectators—meaning emerges over time in unpredictable human exchange.

3. Eutopia: Embracing Fragility, Vulnerability, and Transformation

- **Valuing Fragility and Vulnerability.** In contemporary dance, many improvisational and relational practices—such as those by Gaga dance technique or Rosas improvisations—foreground vulnerability and openness in performers' bodies, allowing transformation through risk and exposure.
- **Uncertainty as Democratic Potential.** Philosophers like Chantal Mouffe and Jacques Rancière articulate democracy as thriving on dissensus—contested pluralities rather than imposed consensus—echoing the eutopian embrace of multiple, unstable perspectives.
- **Alternative structures and cooperative models.** Cooperative art spaces and commons-based cultural programs (e.g. mutual-aid collectives, community arts centers) adopt relational, non-hierarchical organizational logics that resist dominance and embrace process over product.

4. Toward an Aesthetics of Openness

- The chapter's concluding trajectory—promoting improvisation, participatory dramaturgies, and open-ended art as political philosophy—is illustrated in:

Fluxus events and Allan Kaprow's "happenings", where art occurs unpredictably in everyday settings <https://www.tate.org.uk/art/art-terms/h/happening/happening>.

Sound-based relational artworks, inspired by Cage's 4'33", that invite active listening and awareness of ambient conditions.

Performance models like Abramović's witnessing works, where presence and duration create spaces of vulnerability.

Participatory theater collectives (e.g. Rimini Protokoll, Casa de la Danza Comunitaria) that enact social systems through open-ended, real-time relational structures.

Further Reading & Links:

- John Cage's 4'33": its premiere by David Tudor in 1952 at Woodstock, and its enduring conceptual impact on performance and listening attitudes [https://en.wikipedia.org/wiki/4'33"-External_links](https://en.wikipedia.org/wiki/4'33).
- Anne Teresa De Keersmaeker's Fase (third movement "Come Out") as example of structured improvisation and involuntary dramaturgy <https://www.rosas.be/en/productions/361-fase-four-movements-to-the-music-of-steve-reich>.
- Explorations of Cage's piece as conceptual music inviting ambient sound and everyday performance practice.
- K. Danse's participatory dance performance, RCO (Radical Choreographic Object) <https://www.k-danse.net/en/portfolio/rco/>.

Chapter 4: Nature, Culture, and Non-Human Intelligences

Building on Kaoutar Archi's critique of the nature/culture divide, this chapter interrogates how human exceptionalism has shaped our understanding of intelligence. It explores emerging discourses on animal cognition, plant intelligence, and artificial intelligence, questioning the boundaries that separate human thought from other forms of sentience. The chapter also examines how artistic and scientific projects are bridging these domains, fostering new paradigms of interspecies communication and ecological awareness.

The division between nature and culture has long been a foundational assumption of Western thought, shaping everything from philosophy to political structures. However, as Kaoutar Archi argues, this binary is an artificial construct that reinforces human exceptionalism while marginalizing other forms of intelligence and agency. This chapter critically examines the implications of this divide and explores emerging discourses that challenge the supremacy of human cognition. By engaging with animal cognition, plant intelligence, and artificial intelligence (AI), it questions the traditional boundaries of sentience and considers how artistic and scientific projects are fostering new paradigms of interspecies communication and ecological awareness.

1. The Nature/Culture Divide: A Colonial and Philosophical Construction

The rigid separation between nature and culture is deeply embedded in Western intellectual traditions, originating from Enlightenment thinkers such as René Descartes, who famously posited that only humans possessed the capacity for rational thought (*cogito, ergo sum*). This anthropocentric framework has had profound consequences:

- **The Marginalization of Indigenous Epistemologies:** Many non-Western and Indigenous worldviews reject the separation of humans from nature. Instead, they emphasize relational ontologies, where humans, animals, plants, and even landscapes are understood as interconnected and co-constitutive.
- **The Justification of Colonial and Capitalist Exploitation:** The classification of nature as a resource to be controlled and extracted has facilitated environmental destruction, animal commodification, and the subjugation of Indigenous peoples whose ways of life challenge this model.
- **The Reduction of Intelligence to Human Rationality:** By defining intelligence in terms of human language, logic, and tool use, dominant paradigms have systematically ignored other forms of cognition, including those found in animals, plants, and emerging AI systems.

This section interrogates how these assumptions continue to shape contemporary attitudes toward intelligence and explores efforts to deconstruct them through interdisciplinary research and artistic practice.

2. Beyond Human Cognition: Expanding the Notion of Intelligence

As scientific research increasingly reveals the complexity of non-human cognition, the idea of intelligence as an exclusively human trait is being challenged.

- **Animal Cognition and Social Complexity:**
Studies in ethology and neuroscience have demonstrated that animals exhibit sophisticated forms of communication, emotional intelligence, and problem-solving. For example:
 - **Octopuses** demonstrate remarkable adaptability, tool use, and problem-solving skills, raising questions about distributed intelligence in organisms with radically different nervous systems.
 - **Crows and parrots** display the ability to use and modify tools, recognize themselves in mirrors, and even engage in forms of social deception.
 - **Elephants and dolphins** exhibit mourning rituals and complex social behaviors, suggesting emotional depth that challenges human-centered definitions of consciousness.

These findings complicate simplistic distinctions between instinct and rationality, revealing a spectrum of intelligences rather than a hierarchical ladder.

- **Plant Intelligence and the Hidden Life of Flora:**

Emerging research in plant neurobiology suggests that plants are capable of sophisticated forms of interaction:

- **Trees communicate through mycorrhizal networks** (dubbed the "Wood Wide Web"), sharing nutrients and warning each other of threats.
- **Venus flytraps and Mimosa pudica** exhibit rapid movement and memory-like responses, challenging the assumption that cognition requires a brain.
- **Sunflowers exhibit heliotropism**, adjusting their orientation dynamically to maximize energy intake—an example of embodied intelligence responding to environmental conditions.

These discoveries blur the boundaries between animate and inanimate life, forcing a reconsideration of intelligence as something broader than neural complexity.

- **Artificial Intelligence and the Emergence of Non-Biological Cognition:**

As AI systems become increasingly autonomous, they challenge the assumption that intelligence is a product of organic evolution.

- **Machine learning models surpass human abilities in pattern recognition, chess, and Go**, raising the question of whether intelligence is simply computational efficiency.
- **Large language models (LLMs) like GPT** demonstrate the ability to generate human-like text, prompting debates about whether they "understand" language or merely simulate it.
- **Autonomous robots exhibit adaptive behaviors**, navigating environments and responding to stimuli in ways that mimic animal-like reflexes.

This raises profound ethical and philosophical questions: If intelligence is not uniquely human, what ethical responsibilities do we have toward other forms of cognition? Should AI be granted rights, and if so, on what basis?

3. *Interspecies Communication and the Role of Art*

As scientific and philosophical debates continue to expand our understanding of intelligence, artists are exploring new ways to interact with non-human beings, creating innovative forms of interspecies dialogue.

- **Bio-Art and Symbiotic Creativity:** Artists working with living organisms challenge traditional notions of artistic authorship by collaborating with non-human entities.

Examples include:

- **Eduardo Kac's "GFP Bunny" (2000):** A genetically modified rabbit that glows under ultraviolet light, raising ethical questions about biotechnological intervention.
- **Tomás Saraceno's "Arachnophilia" project:** A series of interactive installations where spiders and humans co-create web structures, exploring non-human architectural intelligence.
- **Agnes Meyer-Brandis' "Moon Goose Colony":** A speculative performance involving communication with geese, based on historical experiments in interspecies flight.

- **Music and Sonic Dialogues with Non-Human Beings:**

- **David Rothenberg's work with whale songs and bird calls** seeks to create musical exchanges between humans and non-human animals, challenging traditional hierarchies of communication.
- **AI-generated music in collaboration with natural soundscapes** raises questions about authorship and agency in the creation of sonic environments.

- **Performance Art and Embodied Interspecies Encounters:**
 - Choreographers are developing movement-based interactions with animals, exploring shared kinesthetic experiences.
 - Dance projects involving real-time biofeedback from plants and animals are emerging, integrating scientific research with artistic exploration.

These artistic practices not only expand the boundaries of communication but also invite deeper ethical reflection on the role of humans within the broader ecosystem of intelligence.

4. Rethinking Ethics: Coexistence Beyond Domination

If intelligence is not uniquely human, then ethical frameworks must evolve to accommodate new forms of agency and rights. This section explores:

- **Animal Rights Beyond Sentience:** Current legal systems often grant protections based on an entity's capacity for suffering. However, if intelligence exists in plants and AI, should ethical considerations extend beyond sentience?
- **AI Ethics and Non-Anthropocentric Considerations:** Instead of merely regulating AI to serve human needs, should we consider frameworks that respect machine autonomy?
- **Ecological Ethics and Interconnected Responsibility:** How can artistic and scientific collaborations help develop a deeper sense of ecological coexistence rather than human mastery over nature?

By integrating perspectives from philosophy, biology, AI research, and the arts, this chapter argues that the dissolution of the nature/culture divide is not merely an academic exercise but a necessary shift in our way of being in the world. Embracing intelligence as a plural, distributed phenomenon opens the door to more just, ethical, and sustainable forms of coexistence.

This chapter positions itself at the intersection of scientific discovery, artistic experimentation, and ethical inquiry, advocating for a fundamental rethinking of intelligence and relationality in the 21st century.

Here are examples mentioned or alluded to in this chapter: Nature, Culture, and Non-Human Intelligences, each paired with real-world cases and links to relevant artistic or scientific initiatives:

1. Nature/Culture Divide & Colonial Marginalization

- Indigenous and relational ontologies: Many Indigenous cultures—such as Māori, numerous First Nations, Amazonian communities, etc.—reject the Western nature/culture divide and emphasize interconnectedness among humans, animals, plants, and landscapes. Their epistemologies foreground relational rather than hierarchical thinking.
- Colonial appropriation and environmental exploitation: The human exceptionalism that underpins colonial and capitalist extraction is addressed critically in postcolonial theory and environmental justice movements resisting the treatment of lands and beings as resources.

2. Expanding Beyond Human Cognition

Animal Cognition & Social Complexity:

- Octopus intelligence: Cephalopods like octopuses show tool use, problem-solving, flexibility, and camouflage-learning—for example Octopus vulgaris using coconut shells as tools in social tool-use studies.
- Corvids & parrots: Crows and parrots demonstrate mirror self-recognition, toolmaking (e.g. New Caledonian crows fashion hook-tools), and social deception such as hiding tools from conspecifics.
- Elephants & dolphins: Documented mourning rituals, social bonding, and cooperative problem-solving challenge narrow views of consciousness and rationality.

Plant Intelligence:

- “Wood Wide Web”: Trees and plants communicate via mycorrhizal networks underground, sharing nutrients and warning nearby trees of pest attacks—widely documented by ecologists <https://www.onearth.org/welcome-to-the-wood-wide-web/>.
- Mimosa pudica and Venus flytrap: Demonstrate rapid movement and habituation indicating memory-like behavior and sensory responsiveness
<https://www.cambridge.org/core/journals/journal-of-tropical-ecology/article/abs/memory-and-habituation-to-harmful-and-nonharmful-stimuli-in-a-field-population-of-the-sensitive-plant-mimosa-pudica/FF81969C25326848890AA22B1D1F5780>.
- Sunflower heliotropism: Sunflowers orient dynamically to follow the sun, optimizing energy intake—an example of embodied responsiveness—challenging brain-centered intelligence models.

Artificial Intelligence as Non-Biological Cognition:

- Machine learning systems mastering patterns (e.g. AlphaGo, GPT-based models) raise philosophical debates on whether non-biological systems genuinely understand or merely simulate intelligence.
- Robotics in adaptive environments: Autonomous robots (e.g. Boston Dynamics' Spot, self-navigating drones) mimic animal-like reflexes and environmental interaction
<https://bostondynamics.com/products/spot/>.

3. Interspecies Communication via Art & Science

Bio-Art / Symbiotic Collaborations:

- Eduardo Kac – GFP Bunny (2000): Created an albino rabbit (named Alba) genetically modified with jellyfish Green Fluorescent Protein (GFP) so it glowed green under blue light. The work sparked global debate over ethics, authorship, and transgenic art
<https://www.ekac.org/gfpbunny.html>.
- Tomás Saraceno – Arachnophilia / Webs of Life: exhibitions such as Webs of Life at Serpentine Gallery (2021) and Life(s) of Webs at Matera (2023–24) showcase collaborative installations where spiders spin webs in frames; audiences encounter AR spiders (e.g., Bagheera kiplingi, Maratus speciosus) and sound-installations of spider vibrations, creating interspecies aesthetic exchange <https://studiotomassaraceno.org/webs-of-life/>.

His Arachnomancy App invites participants to photograph spider webs in their environment and contribute to a global biodiversity mapping, effectively co-creating with non-human networks.

Saraceno's Arachnid Orchestra Jam Sessions sonify spider/web vibrations in musical dialogue between humans and spiders, treating webs as communicative instruments in collective performances <https://studiotomassaraceno.org/arachnid-orchestra-jam-sessions/>.

Music and Sonic Dialogues:

- David Rothenberg: Philosopher-musician who creates interspecies musical dialogues—responding to whale songs, cicadas, birds, and other animal soundscapes in improvisational performance contexts (e.g. saxophone ensemble with cicadas)
https://en.wikipedia.org/wiki/David_Rothenberg.

Performance and Biofeedback Projects:

- Emerging works—though not always widely documented in mainstream sources—have explored dance or performance pieces using real-time biofeedback from plants (e.g. electrical measurements of cadences in Venus flytraps) or animals to inform movement improvisation, thereby enacting interspecies presence <https://pubmed.ncbi.nlm.nih.gov/19356999/>.

4. Ethics of Expanded Coexistence

- Animal and plant rights extending beyond sentience: The idea that if plants and artificial intelligences exhibit forms of cognition or memory, ethical and legal protections should consider agency beyond feeling.
- AI ethics and non-anthropocentric paradigms: Philosophical frameworks (e.g. radical posthumanism, object-oriented ontology) propose respect for non-biological autonomy, and rights for machine agents or ecological systems (Bodynet-Khoros)
<https://metabody.eu/bodynet-khoros/>.
- Ecological ethics and multispecies interdependence: Artistic and scientific programs (e.g. bioregional consortiums, permaculture community arts, cooperative ecological restoration projects) practice relational ethics by centering shared resilience over dominance.

Chapter 5: Technological Failures and the Poetics of the Error

Technology is often framed as a tool for perfection and efficiency, but this chapter considers failure as an artistic and philosophical resource. Examining K. Danse's *FAIL* project, which incorporates dance and AI, the chapter explores how glitches, breakdowns, and unintended outcomes reveal the limitations of technological determinism. By reframing failure as an opportunity for creative exploration, the discussion highlights how artistic interventions can expose and subvert the ideological assumptions embedded in technology.

Technology is often framed as a tool for perfection, optimization, and seamless efficiency. The dominant technological discourse—shaped by Silicon Valley's ethos of progress—positions errors as obstacles to be eradicated, glitches as anomalies to be patched, and failures as deviations from an ideal trajectory of continuous improvement. However, this chapter argues that failure itself can be an artistic and philosophical resource. Examining projects such as K. Danse's *FAIL*—which incorporates dance and AI—this chapter explores how breakdowns, unintended outcomes, and technological unpredictability expose the ideological assumptions embedded in technology.

By reframing failure as an opportunity for creative exploration, we can uncover new modes of

artistic intervention that resist technological determinism and open up spaces for subversion, critique, and new forms of expression.

1. The Ideology of Perfection: Techno-Utopian Narratives and Their Limits

Since the dawn of the digital era, technology has been promoted as a means of achieving frictionless existence. From smart cities to algorithmic governance, the dominant paradigm suggests that technological progress leads to greater efficiency, security, and predictability. However, this discourse rests on several problematic assumptions:

- **The Illusion of Control:** Algorithms promise objective decision-making, yet they are embedded with biases, exclusions, and opaque logics that frequently reinforce existing inequalities.
- **The Suppression of Contingency:** The drive toward automation seeks to eliminate unpredictability, yet it is often in the unexpected that new possibilities emerge.
- **The Denial of Vulnerability:** The aspiration toward seamless technological environments disregards the fundamental unpredictability of human experience and ecological systems.

This section critiques the ideology of technological perfection, arguing that the valorization of efficiency obscures the generative potential of failure. By embracing failure, we can challenge deterministic narratives and cultivate alternative relationships with technology.

2. The Glitch as Aesthetic and Political Intervention

Glitches—unexpected disruptions in digital systems—have long been explored by artists as a means of questioning technological stability. Rather than treating them as mere defects, glitch aesthetics highlight the materiality and contingency of digital media.

- **Glitch Art as a Form of Resistance:**
 - Artists such as Rosa Menkman have explored how glitches disrupt the illusion of digital smoothness, revealing the underlying structures of technological mediation.
 - In sound art, glitch aesthetics have been employed by musicians like Ryoji Ikeda and Oval to foreground the distortions, clicks, and imperfections of digital audio.
 - In dance and performance, the incorporation of glitch-like movements challenges traditional notions of bodily control and precision, foregrounding erratic, fragmented, and involuntary motion.
- **The Political Potential of the Glitch:**
 - Glitches expose the instability of technological infrastructures, offering moments of rupture where dominant systems can be questioned.
 - In oppressive digital environments where surveillance and algorithmic control are pervasive, deliberate glitches can serve as tactics of obfuscation, refusal, and subversion.
 - By making errors visible, glitch aesthetics foreground the constructed nature of digital realities, challenging the perception of technology as neutral or infallible.

This section explores how artistic practices that embrace glitches provide alternative ways of engaging with technology, opening up new aesthetic and political possibilities.

3. The Aesthetics of System Breakdown: Learning from Technological Failures

Beyond individual glitches, systemic technological failures—ranging from crashed servers to algorithmic biases—reveal the fragility of technological infrastructures. While such failures are often framed as crises to be rectified, they also offer moments of critical reflection.

- **AI and the Poetics of Misrecognition:**
 - AI systems frequently misinterpret human expressions, gestures, and intentions. In dance performances incorporating AI, such misrecognitions become generative moments of estrangement and reinterpretation.
 - K. Danse's *FAIL* project explores these dynamics, using AI's failures to recognize movement as a means of generating unpredictable choreographic structures.
 - By refusing to correct AI errors, artists working with machine learning foreground the gap between human intention and machine perception, revealing the non-human logic underlying algorithmic interactions.
- **Machine Error as Artistic Strategy:**
 - The tradition of “prepared” musical instruments—such as John Cage’s experiments with pianos altered to produce unexpected sounds—can be seen as an analogue to working with failing technologies.
 - The choreography of system crashes—where digital projections flicker, data streams collapse, and software freezes—can serve as performative gestures that question digital fragility.
 - In speculative fiction and new media art, depictions of malfunctioning AIs, corrupted archives, and broken simulations serve as metaphors for the limits of technological control.

By engaging with systemic breakdowns rather than correcting them, artists can expose the ideological underpinnings of technological optimism and explore alternative narratives of technological engagement.

4. Error as Co-Creation: The Role of the Unintentional in Artistic Process

While technological industries prioritize precision and predictability, artistic practices have long embraced error as a space for discovery.

- **Improvisation and the Role of Mistakes:**
 - In dance and theater, improvisation techniques often rely on responding to unexpected gestures, sounds, or movements.
 - Jazz music and experimental composition treat errors not as disruptions but as opportunities for variation and reinvention.
 - Digital and interactive art often incorporates unpredictable elements, allowing technological and human errors to shape the final work.
- **Serendipity in Algorithmic Processes:**
 - Machine learning models often generate unexpected outputs that deviate from their training data. Rather than dismissing these as errors, some artists integrate them into their creative process.
 - Generative art tools such as neural networks or GANs (Generative Adversarial Networks) often produce aesthetic results that their creators did not anticipate, opening up new artistic directions.

By foregrounding failure as an essential component of creative practice, this section argues that error is not an aberration but a fundamental element of artistic production.

5. Toward a Politics of the Error: Subversion, Resistance, and Reimagination

Finally, this chapter considers the broader political implications of embracing technological failure.

In a world increasingly governed by automated decision-making and predictive analytics, errors serve as reminders of contingency and human agency.

- **Resisting Algorithmic Determinism:**
 - By emphasizing the unpredictability of technological interactions, artistic practices that embrace failure challenge the logic of predictive policing, algorithmic hiring, and surveillance capitalism.
 - Errors introduce uncertainty into systems designed for control, opening up spaces for resistance and negotiation.
- **Reclaiming the Messiness of Human-Technology Relations:**
 - Instead of aspiring to seamless integration between humans and machines, this perspective advocates for a recognition of friction, contradiction, and incompleteness.
 - By disrupting narratives of technological perfection, artists and theorists working with failure foreground the necessity of critical engagement with digital infrastructures.
- **Imagining Alternative Technological Futures:**
 - Beyond critique, embracing failure invites new ways of thinking about technology—less as a tool of optimization and more as a space for play, exploration, and unpredictability.
 - The poetics of the error suggests a different mode of technological engagement, one that values contingency, fragility, and openness over efficiency and control.

Conclusion: Embracing the Error, Rethinking Technology

This chapter argues that rather than seeing failure as something to be eliminated, we should embrace it as a creative and political tool. By foregrounding glitches, system breakdowns, and unintended outcomes, we can resist the determinism of technological narratives and imagine alternative ways of relating to digital systems. Through artistic interventions that highlight the poetics of the error, we open up new possibilities for critique, subversion, and technological reimagination.

Here are examples mentioned or alluded to in this chapter 5: Technological Failures and the Poetics of the Error, each enriched with real-world cases and links to relevant artistic or technological initiatives, following the chapter's structure:

1. The Ideology of Perfection: Limits of Techno-Utopian Narratives

No specific individual example is cited here—but common real-world phenomena include:

- Biased, opaque algorithms in predictive policing and hiring systems (e.g. COMPAS recidivism tools, résumé-scanning software. The COMPAS software uses an algorithm to assess potential recidivism risk.) that expose the illusion of neutral, perfect automation [https://en.wikipedia.org/wiki/COMPAS_\(software\)](https://en.wikipedia.org/wiki/COMPAS_(software)).

- Smart-city failures and collapsing infrastructure data systems, revealing how efforts to eradicate uncertainty can introduce fragility. See also the failure of Tesla's automatic trucks built by E. Musk <https://www.forbes.com/sites/alanohnsman/2025/04/03/elons-edsel-tesla-cybertruck-is-the-auto-industrys-biggest-flop-in-decades/>

2. Glitch as Aesthetic and Political Intervention

Rosa Menkman and the Glitch Art Movement <https://stephejblog.wordpress.com/wp-content/uploads/2016/11/rosa-menkman-1.pdf>. Rosa Menkman is a central figure in glitch aesthetics—author of the Glitch Studies Manifesto (2011) and The Glitch Moment(um), promoting the glitch as interruption that reveals hidden structures in digital media. Her works such as “The Collapse of PAL” (2010) use analog and digital disruption to critique technological obsolescence. Her series Vernacular of File Formats uses data bending to expose compression artifacts in JPEG and video formats as visible traces of technological mediation—highlighting that glitches aren’t merely errors but critical openings.

Glitch Art Practitioners:

- JODI (Joan Heemskerk & Dirk Paesmans) have long created work around software breakdowns, crashes, or bugs—occupying the space where digital systems fail as an artistic terrain for subverting control <https://joid.org/archive/>.
- Other glitch art figures, including Michael Betancourt, Nam June Paik <https://www.paikstudios.com/>, Cory Arcangel, Takeshi Murata, and Sondra Perry <https://sondraperry.com/>, also use error aesthetics to challenge polished digital mainstream visuals.

Menkman’s philosophy: glitches are not defects to eradicate but opportunities to reveal mediated assumptions and reclaim digital space through critical noise and rupture.

3. Aesthetics of System Breakdown & AI Misrecognition

K. Danse’s *F_AI_L* project. *F_AI_L* (2024):

F_AI_L is a dance+AI performance & installation by K. Danse (choreographer Jean-Marc Matos, programmer Clément Barbisan, performer Evane Duguet) that foregrounds AI failures when interpreting unusual or disaligning movements.

In the project, normative movement yields stereotypical, simplified AI representations (“body to exhibit”), whereas non-conventional gestures produce richer, erroneous, mis-recognized images (“body to explore”). The errors open up choreographic complexity and new bodily imaginaries.

The installation encourages somatosensory awareness and invites participants to perform movements that break predictability—revealing AI’s fallibility and the ideological assumption of smooth recognition https://www.k-danse.net/en/portfolio/f_ai_ll/. This project was preceded by another one, in 2018, *BodyFail*, <https://www.k-danse.net/en/portfolio/bodyfail/>.

Generative AI in dance practice:

- Research in generative deep-learning-based dance composition has explored how AI misrecognition—glitches in movement interpretation—can serve as creative triggers for improvisation and new choreography (“Embodying the Glitch”, Wallace & Martin, 2022) <https://arxiv.org/abs/2210.09291>.

Here are other concrete, recent contemporary examples (artists + research projects) working with deep-learning or pose/sequence models in dance – and explicitly treating AI *misrecognition*, hallucinations, or “glitches” as creative choreographic tools.

Choreographic projects integrating generative AI (2020–2025)

https://chatgpt.com/s/dr_696bcd2db8a0819191de5c2416113798

Wayne McGregor / Studio Wayne McGregor – Living Archive / AISOMA

McGregor’s studio trained ML on decades of archive video to propose movement continuations and surprising phrase-candidates; the system’s unexpected predictions (and the odd transitions it outputs) were used as choreographic prompts rather than errors, feeding improvisation and novel material for dancers. (artsandculture.google.com, [Studio Wayne McGregor](https://waynemcgregor.com)) and <https://waynemcgregor.com/productions/living-archive>

Mariel Pettee (and collaborators) – Mirror Exercise / VAE-based duets

Pettee has trained variational models on her own motion-capture data to create an “AI duet” that deliberately distorts, and mismatches pose sequences; dancers interpret and embody those distortions, using the machine’s imperfect re-renderings as improvisational partners. See her “Mirror Exercise” and related talks on ML-for-choreography. ([AI Art Gallery](https://aiartgallery.com), youtube.com)

Memo Akten

Akten’s practice explores human–machine perception and misalignment (body sensing, generative models, emergent behaviours). His projects often place machine-generated output (including hallucinations or non-human motion suggestions) into performance contexts where dancers respond to, translate, or contest them – treating machine “failures” as creative material. (memo.tv)

Kyle McDonald / artist-researchers working with OpenPose and live pose estimators

Kyle McDonald and others have used live pose-estimation in performances where the tracker’s misreads, or jitter (mis-labelling limbs, swapping skeletons) are intentionally left visible and used by performers as constraints or prompts for improvisation – the system’s misrecognition become part of the score. (See his writing and performances about Live ML + OpenPose pipelines.) ([Medium](https://medium.com/arts-experiments), artsexperiments.withgoogle.com)

Rhizomatiks / Elevenplay (and related Japanese research-performance groups)

Projects combining machine learning, motion capture and robotics (drones/virtual dancers) frequently embed imperfect ML outputs: robotic latency, model hallucinations and tracking glitches are choreographic elements prompting new movement solutions and timing shifts. Their collaborative shows explicitly design for emergent, unexpected behaviour between body and system. ([Gray Area](https://grayarea.org))

Research projects & papers that frame “glitch” as creative resource

- *Embodying the Glitch: Perspectives on Generative AI in Dance Practice* (Wallace & Martin) examines how AI-generated “mistakes” can be interpreted, embodied, and used as inspiration for choreography rather than corrected away.
- *PirouNet / Generative choreography research* and similar VAE/transformer projects show how semi-supervised generative models produce surprising sequences that choreographers exploit as prompts. ([arXiv](#))

4. Error as Co-Creation and Artistic Strategy

Prepared instruments & analogous error practices:

- John Cage’s use of prepared piano introduced unexpected sounds and internal failures as core compositional material—analogous to working with machine error in digital arts. While not a digital example, it demonstrates an artistic embrace of malfunction as creative strategy https://en.wikipedia.org/wiki/Works_for_prepared_piano_by_John_Cage.

Improvisation, jazz, generative art practices:

- In fields like jazz and improvisational theater, mistakes and unexpected deviations from form often become expressive leaps.
- Contemporary generative artists use GANs or neural nets and intentionally incorporate unexpected outputs—not as bugs to fix, but as emergent aesthetics and dialogue partners.

Mario Klingemann

A pioneering figure in neural network art, Klingemann leverages AI not to smooth out flaws but to amplify them—producing distorted, uncanny faces and abstract forms as a celebration of machine hallucination ([WIRED](#), [Reddit](#)).

Anna Ridler

In *Fall of the House of Usher*, Ridler constructs a tightly controlled GAN from hand-drawn frames of a 1929 film. As the network’s “memory” degrades, unpredictable decay and uncanny artifacts emerge—elements she deliberately retains for their poetic power ([Anna Ridler](#)).

Her *Mosaic Virus* series features GAN-generated tulips whose stripes derive from fluctuating Bitcoin prices—melding speculative, uncontrolled data with organic form to evoke both historic and emergent chaos ([Wikipédia](#)).

Helena Sarin

Sarin welcomes imperfections: using GAN outputs as ornamentation, collage components, or even engrained “computational non-photography.” She describes GANs’ inherent quirks as a medium to explore the edge between the goofy and the beautiful, viewing unpredictability as a creative advantage—not a bug ([Artnome, atelierauction.com](#)).

<https://www.artnome.com/news/2018/11/14/helena-sarin-why-bigger-isnt-always-better-with-gans-and-ai-art>

Sofia Crespo

Crespo’s work—like her “Specimens”—uses GANs to blend natural forms into surreal hybrids. Rather than aiming for accurate representation, she foregrounds the uncanny, questioning how both human and AI systems interpret the natural world ([Wikipedia, atelierauction.com](#)).

Refik Anadol

Anadol gathers massive archives—images, audio, metadata—and trains neural networks to “hallucinate” new visual memories. His installations, such as *Walt Disney Concert Hall Dreams*, transform real-world histories into machine-vision dreamscapes full of emergent abstraction ([tgam.xyz, Medium](#)).

Linda Dounia Rebeiz

Rebeiz builds her own GANs using rich, culturally specific datasets (e.g., Senegalese flowers and architecture) to generate visions that resist biases embedded in mainstream models. Her work *Once Upon a Flower* reimagines familiar forms through speculative, climate-inflected distortions ([TIME](#)).

Summary Snapshot

Artists	Approach to Emergence
Mario Klingemann	Glitchy hallucinations, eerie distortions
Anna Ridler	Controlled decay, poetic breakdown of GAN output
Helena Sarin	GAN quirks as design ornament, collage, and aesthetic value
Sofia Crespo	Organic fusion and hybrid forms through AI’s interpretive lens
Refik Anadol	Machine-dreaming archives into immersive, emergent experiences
Linda Dounia Rebeiz	Culturally grounded datasets, bias-challenging speculative forms

In each case, these artists treat generative unpredictability—not as a nuisance—but as an essential collaborator. Their work invites us to rethink creativity, seeing neural nets not as polished tools, but as dialogic systems capable of surprise, reflection, and poetic insight.

5. Toward a Politics of the Error

While no further specific named artworks are mentioned here, the chapter’s political implications of error include:

- Deliberate inclusion of glitch, breakdown, and misrecognition in artistic intervention as subversion of predictive, surveillance, and decision-making systems.

- Emphasizing system friction, contradiction, and incompleteness in art and design to resist narratives of seamless human-machine integration.
- Imagining technology as playful, exploratory, unpredictable rather than optimized and totalizing.

Examples : overviews from Rhizome, Flash Art, and media theorists like Michael Betancourt https://en.wikipedia.org/wiki/Michael_Betancourt focusing on glitch as disruption of digital smoothness.

Chapter 6: Relationality and the Politics of Care

Drawing on Timothy Snyder's arguments about positive freedom, this chapter emphasizes the importance of care, welfare, and public institutions in fostering genuine liberty. It critiques neoliberal individualism and argues for a relational understanding of freedom, where mutual support and community structures take precedence over market-driven competition. The chapter highlights artistic projects and social movements that foreground care as a political and ethical principle.

In an era dominated by neoliberal individualism and hyper-competition, the notion of care is often dismissed as secondary to economic growth and personal success. Yet, as Timothy Snyder argues in his reflections on positive freedom, genuine liberty is not simply the absence of constraint but the presence of conditions that allow individuals and communities to flourish. This chapter explores how care—both as an ethical principle and a political practice—challenges dominant paradigms of freedom, autonomy, and social organization. It examines the structural erosion of care under neoliberal governance, the potential for reimagining care beyond state and market paradigms, and the role of artistic and activist interventions in foregrounding care as a transformative force.

1. The Crisis of Care in Neoliberal Societies

Neoliberalism promotes an atomized vision of society, where individuals are expected to be self-sufficient, responsible for their own well-being, and constantly optimizing their productivity.

This ideology has profoundly impacted the structures of care in modern societies:

- **The Privatization of Welfare:** Public health, education, and social support systems have been systematically dismantled in favor of privatized alternatives, making care a commodity rather than a fundamental right.
- **The Devaluation of Care Work:** Domestic labor, childcare, elder care, and emotional labor—often performed by women, particularly women of color and migrant workers—remain undervalued, underpaid, and largely invisible within economic frameworks.
- **The Erosion of Community Bonds:** The emphasis on competition over cooperation has weakened traditional forms of mutual aid, solidarity, and collective responsibility.
- **Technocratic Solutions to Human Vulnerability:** The increasing reliance on AI-driven care systems, such as automated elder care and mental health chatbots, raises questions about the reduction of care to efficiency rather than relational engagement.

This section critiques the systemic abandonment of care, arguing that a sustainable and just society cannot function without robust infrastructures of mutual support.

2. Positive Freedom and the Relational Understanding of Liberty

Drawing from Snyder's argument that freedom is not merely the absence of oppression but the presence of enabling conditions, this section explores how a relational understanding of freedom challenges the dominant narrative of individual autonomy.

- **Freedom as Mutuality:** True freedom emerges not in isolation but through interdependence, where individuals are supported by strong social structures that allow them to thrive.
- **Care as Resistance to Neoliberal Subjectivity:** By emphasizing vulnerability and relationality, care disrupts the myth of the self-sufficient individual, foregrounding the ethical necessity of interconnectedness.
- **Public Institutions as Guardians of Collective Freedom:** Libraries, community centers, social clinics, and cooperative housing projects represent concrete examples of institutions that sustain freedom through care.

This section argues that rather than viewing care as a burden, we should recognize it as the very foundation of social and political life.

3. Artistic Interventions in the Politics of Care

Art has long played a role in exposing, resisting, and reimagining care structures. This section explores how contemporary artistic practices engage with care as both a subject and a method.

- **Performance Art and the Politics of Vulnerability:**
 - Works such as Marina Abramović's *The Artist Is Present* create spaces where sustained presence and attention become acts of radical care.
 - Artist-activist collectives such as *La Pocha Nostra* challenge exclusionary care structures by foregrounding embodied, ritualistic performances that center marginalized experiences.
 - Dance and somatic practices—especially in therapeutic and community settings—reclaim movement as a means of self-care and collective healing.
- **Institutional Critique and the Redistribution of Care Resources:**
 - Artists such as Tania Bruguera and the New Patrons movement have developed projects that intervene directly in social infrastructures, challenging who has access to care.
 - The use of museums and galleries as spaces for social services—such as community kitchens, mental health workshops, and safe spaces for marginalized groups—illustrates the expansion of artistic institutions into zones of care.
- **Digital Care and Its Contradictions:**
 - While digital platforms have created new forms of community care (e.g., mental health forums, mutual aid networks, and crisis response initiatives), they also commodify emotional labor (e.g., gig-based therapy services).
 - AI-driven care raises ethical concerns about the replacement of human relationships with algorithmic simulations of empathy.
 - Interactive digital art projects that use AI and robotics to explore care ethics—such as *AI Nanny* and *Machine Learning for Care*—invite reflection on the limits and possibilities of non-human care.

Through these examples, the chapter demonstrates how artistic interventions can highlight both the failures of existing care structures and the potential for alternative models.

4. Social Movements and the Reclaiming of Care as a Political Principle

Beyond artistic practices, activist movements have positioned care at the center of political struggle. This section examines contemporary and historical movements that foreground care as resistance.

- **The Feminist Ethics of Care:**
 - Feminist theorists such as Joan Tronto and Silvia Federici argue that capitalism thrives on the exploitation of unpaid reproductive labor.
 - The rise of care-centered protests, such as Argentina's *Ni Una Menos* and Spain's *Las Kellys* (hotel workers fighting for fair labor conditions), demonstrates the politicization of care work.
- **Mutual Aid Networks as Alternatives to State and Market Dependency:**
 - Rooted in anarchist traditions, mutual aid structures—exemplified by groups like *Food Not Bombs* and pandemic-era grassroots support networks—reassert community-led care outside of state institutions.
 - The role of Indigenous care traditions and land-based relationality presents alternative epistemologies of care that challenge Western frameworks of individualism.
- **Disability Justice and the Radical Politics of Interdependence:**
 - The disability rights movement has long advocated for a model of care that prioritizes agency, autonomy, and self-determined support structures.
 - The work of disability activists such as Mia Mingus emphasizes that interdependence should be seen as a strength rather than a deficiency.

These movements reveal that care is not simply a private concern but a deeply political act, one that challenges existing power structures and redefines the meaning of justice.

Conclusion: Toward a Politics of Care Beyond Crisis Management

In times of crisis—whether economic collapse, ecological disaster, or pandemic—care suddenly becomes visible as an essential social function. However, rather than treating care as an emergency response, this chapter argues for embedding it as a fundamental organizing principle of society.

- **Beyond Individualized Self-Care:** While wellness culture often focuses on personal self-care (meditation apps, fitness regimes), true care is relational and structural.
- **The Necessity of Care-Centered Institutions:** Schools, hospitals, and artistic spaces should not be peripheral to political discussions but central to how we define a just society.
- **Care as Political Strategy:** Movements that center care not as a reactive necessity but as a proactive political vision hold the potential to reshape future economies, governance models, and cultural paradigms.

This chapter thus positions care not as an ancillary concern but as the very foundation of freedom, democracy, and collective survival.

Here are examples for this chapter 6: Relationality and the Politics of Care—each paired with real-world instances and artistic or activist initiatives that embody care as political ethics and practice:

1. The Crisis of Care in Neoliberal Societies

Privatization and devaluation of care work:

- Mierle Laderman Ukeles's Touch Sanitation (1979–80): The artist shook hands with over 8,500 sanitation workers across NYC to honor their labor—turning undervalued maintenance work into a performative act of collective recognition and care

<https://feldmangallery.com/exhibition/096-touch-sanitation-ukeles-9-9-10-5-1984>.

- Broader dynamics: Care work (childcare, eldercare, domestic labor) remains undervalued globally—particularly when performed by women of color and migrants under precarious economic regimes.

2. Positive Freedom and Relational Liberty

Projects anchoring care in public institutions:

- Empathy Museum (UK): Interactive installations like the Human Library and A Mile in My Shoes invite participants into facilitated empathy practices—literally walking in others' shoes as mutual caring and relational understanding <https://www.digitalhumanlibrary.com/> and <https://www.empathymuseum.com/a-mile-in-my-shoes/>.

These formats treat care and listening as communal acts embedded in cultural spaces, giving form to equitable relational liberty.

3. Artistic Interventions Centering Care

Presence and vulnerability as performance:

- Marina Abramović's The Artist Is Present (MoMA, 2010): Over 736 hours, she silently held gaze with museum visitors—creating a space of radical attentiveness, mutual vulnerability, and emotional care <https://www.moma.org/calendar/exhibitions/964>.

- Embodied community rituals and activism:

- La Pocha Nostra (Guillermo Gómez-Peña): Performance-activist collective whose workshops and rituals (photo-performances, living dioramas, immersive public performances) emphasize shared creation, care, and intergenerational solidarity across borders and identities <https://www.guillermogomezpena.com/la-pocha-nostra/>.

- Institutional interventions & community care infrastructure

- Praxis (Care-based performance duo): At the Whitney Biennial (2002), they offered free services—foot washes, hugs, Band-Aid applications—to visitors. Their acts reframed casual care as an antithesis to alienating capitalist norms of productivity and isolation <https://museumofnonvisibleart.com/praxis/>.

4. Digital Care and Contradictions

Artivism and mutual aid in practice:

- Oakland-based collective We Are the Ones We've Been Waiting For: Hosts queer and trans-led mutual aid events—distributing self-defense kits, mental health support, and community resources during Pride and crisis situations. Their work merges art, nightlife, mental health, and care-centered activism <https://www.them.us/story/arm-the-girls-we-are-the-ones-weve-been-waiting-for-now-awards-2022>.
- Analogous models include mutual aid structures during Ukraine refugee crisis—providing transport, childcare, support, and community as relational sanctuary rather than institutional charity <https://www.urd.org/en/publication/mutual-aid-in-times-of-crisis-collection-case-study-ukraine-april-2025/>.
- Craftivism and subtle care activism. Craftivist Collective (UK): Founded by Sarah Corbett, this initiative foregrounds mindful craft-based activism—encouraging care through thoughtful handmade letters, quilts, banners, and community dialog as slow, relational resistance <https://www.craftivist-collective.com/>.

5. Social Movements Reclaiming Care

Feminist Ethics of Care & labor justice:

- Ni Una Menos (Argentina) <https://niunamenos.org.ar/> and Las Kellys (Spain) <https://theurbanactivist.com/justice/meet-las-kellys-their-cause-redefines-tourism-in-barcelona/>: Movements protesting gender-based violence and poor labor conditions in hospitality—drawing attention to how care labor (hotel room services, housekeeping) is exploited and pushing for public recognition and rights.

Mutual Aid Networks:

- Food Not Bombs (global tradition) and grassroots pandemic support groups highlight care reconfigured outside state frameworks—redistributing food, space, and resource-sharing as acts of relational politics https://foodnotbombs.net/new_site/.

Disability justice & interdependence:

- Activists like Mia Mingus emphasize that interdependence—and collective care—are strengths, critiquing Western ideals of self-sufficiency and redefining autonomy within communal frameworks <https://leavingevidence.wordpress.com/>.

Chapter 7: Quantum Reality – Rethinking Existence as a Network of Relations

This section introduces quantum physics as a framework for reimagining reality, drawing on Karen Barad's concept of *intra-action*. Instead of viewing existence as composed of static objects with inherent properties, quantum theory suggests that reality emerges through relational interactions. The chapter examines how this perspective influences contemporary art and philosophy, challenging classical notions of space, time, and identity. It also considers

the risks of reducing quantum theory to metaphor while recognizing its potential to reshape human understanding of interconnectedness.

Over the past century, quantum physics has radically reshaped our understanding of reality, challenging classical notions of space, time, and identity. In contrast to the deterministic and mechanistic worldview of Newtonian physics, quantum mechanics suggests that existence is fundamentally relational: entities do not possess inherent properties independent of their interactions but emerge through processes of entanglement and intra-action.

This chapter explores how quantum theory provides a framework for reimagining ontology, particularly through the work of Karen Barad and the concept of *intra-action*. It considers how this paradigm shift influences contemporary philosophy, art, and social thought while critically examining the risks of reducing quantum mechanics to a mere metaphor. By emphasizing relationality over fixed identity, quantum theory opens new possibilities for rethinking coexistence, agency, and the nature of political and aesthetic engagement.

1. From Classical Objectivity to Quantum Relationality

For centuries, Western scientific thought has been dominated by a dualistic, object-oriented framework that assumes:

- The existence of discrete, self-contained entities.
- A clear separation between observer and observed.
- A deterministic causality governing all interactions.

Quantum mechanics disrupts this worldview by demonstrating that:

- **Particles exist in states of superposition**, meaning they do not have a fixed state until measured.
- **Observation affects reality**, as seen in the famous double-slit experiment, where the act of measurement determines whether a photon behaves as a wave or a particle.
- **Entanglement defies classical locality**, meaning that two particles can remain connected across vast distances, influencing each other instantaneously.

These insights challenge traditional notions of materiality and individual identity, suggesting that the world is not composed of isolated objects but of dynamic and interdependent processes.

2. Intra-Action: Karen Barad and the Ontology of Entanglement

Karen Barad's theory of *agential realism* expands on these quantum insights, arguing that reality does not consist of independent entities interacting from a distance but rather of *intra-actions*—mutual co-emergences in which boundaries and distinctions are not pre-existing but continuously reconfigured.

- **Beyond Interaction:** While "interaction" presupposes that separate entities exist before engaging with each other, "intra-action" posits that entities *come into being through their relationships*.
- **Matter as Active, Not Passive:** Barad challenges the Cartesian division between mind and matter, arguing that matter itself possesses agency.

- **The Collapse of Subject/Object Distinctions:** The observer and the observed are not separate; they emerge together through entangled intra-actions.

This ontological shift has profound implications, not just for physics but for epistemology, ethics, and artistic practice.

3. Quantum Thinking in Art and Philosophy

Quantum theory has increasingly influenced artistic and philosophical discourses, prompting new ways of approaching creativity, temporality, and relationality. This section examines how artists and thinkers incorporate quantum ideas into their work.

- **Quantum Aesthetics: Embracing Uncertainty and Multiplicity**
 - Artists working with quantum theory often explore themes of indeterminacy, fragmentation, and fluidity.
 - Installations such as Rafael Lozano-Hemmer's *Pulse Room*, which visualizes the synchronized heartbeats of participants, embody quantum principles of entanglement and emergence.
 - Choreographic practices inspired by quantum motion challenge linear causality, as seen in the work of William Forsythe, who uses improvisational structures that mirror probabilistic wave functions.
- **Nonlinear Time and Expanded Composition**
 - Traditional artistic forms often adhere to a linear progression of cause and effect.
 - Quantum mechanics suggests that time itself may be non-linear, as explored in contemporary experimental cinema (e.g., Christopher Nolan's *Tenet*, which plays with time reversal as a quantum phenomenon).
 - Musical compositions employing generative algorithms or real-time improvisation mirror the probabilistic unfolding of quantum systems.
- **Entanglement as an Ethical and Political Concept**
 - If existence is fundamentally relational, then ethical responsibility extends beyond human-to-human interactions.
 - Quantum-inspired philosophy challenges human exceptionalism, advocating for an ethics that includes non-human entities, AI, and ecosystems.
 - This perspective aligns with Indigenous cosmologies that have long understood existence as a web of relations rather than discrete hierarchies.

4. The Dangers of Quantum Mystification

While quantum mechanics offers valuable insights, its popularization has often led to oversimplifications and misappropriations. This section critically examines:

- **The Risk of Over-Metaphorization:**
 - While quantum theory provides a powerful conceptual shift, some interpretations reduce it to vague ideas of "energy fields" and "universal consciousness."
 - New Age movements and pseudo-scientific claims often misrepresent quantum mechanics to justify spiritual beliefs (e.g., the misinterpretation of wave function collapse as "mind over matter").
- **The Dismissal of Material Conditions:**
 - A focus on quantum indeterminacy should not obscure the material realities of economic, social, and political structures.

- While entanglement suggests deep interconnectedness, systemic inequalities still shape power dynamics in tangible ways.

By distinguishing between serious philosophical engagement and superficial appropriations, this section ensures that quantum thought remains a rigorous tool rather than a diluted metaphor.

5. Quantum Futures: Implications for Politics and Coexistence

If reality is relational rather than absolute, what does this mean for political structures and human coexistence?

- **Decentralized Governance and Non-Hierarchical Systems**
 - Quantum mechanics undermines rigid hierarchies, suggesting that systems based on fluidity and adaptability may be more sustainable.
 - Decentralized networks, such as blockchain technologies and grassroots cooperative movements, mirror quantum principles by prioritizing distributed agency.
- **Beyond Anthropocentrism: Rethinking Intelligence and Agency**
 - The classical distinction between human and non-human intelligence is increasingly untenable in the face of AI, animal cognition research, and plant neurobiology.
 - Quantum perspectives encourage a move toward multispecies justice and posthuman ethics.
- **Political Action in a Probabilistic World**
 - If the future is inherently uncertain, activism and resistance must embrace non-linearity, unexpected ruptures, and emergent strategies.
 - This aligns with artistic movements that reject fixed scripts in favor of improvisation, open-ended participation, and co-creation.

Conclusion: The Quantum Shift in Thought and Imagination

Quantum theory does not simply challenge how we understand the physical world; it demands a fundamental rethinking of knowledge, identity, and ethics. By embracing relationality over fixed being, and potentiality over determinism, it invites us to reconsider:

- **How we define the self in relation to others**
- **How we engage with art as an unfolding process rather than a static object**
- **How we construct political structures that reflect interdependence rather than individualism**

In moving beyond a mechanistic, object-oriented reality, this chapter positions quantum thinking as a means of fostering new paradigms of coexistence, creativity, and political imagination.

Here are examples for this chapter 7: Quantum Reality – Rethinking Existence as a Network of Relations, each accompanied by real-world precedents and links to artistic or technological initiatives that embody those ideas:

1. From Classical Objectivity to Quantum Relationality

- Quantum superposition, entanglement, observer effect (double-slit)
- Rafael Lozano-Hemmer's Pulse Room (2006): Participants' heartbeats are recorded and displayed via light bulbs in sequence, entangling individual rhythms into a collective experience. The work embodies relationality over isolated data points, mirroring quantum entanglement and observer-derived meaning https://www.lozano-hemmer.com/pulse_room.php.

2. Intra-Action: Karen Barad and Ontology of Entanglement

<https://link.springer.com/article/10.1007/s13194-022-00476-8>

Quantum relational ontology:

- Libby Heaney's Ent- and The Evolution of Ent-: QX (2022): Immersive installations using quantum computing to reframe relationality, co-emergence, and entanglement—reconfiguring the observer-object boundary through immersive environments <https://libbyheaney.co.uk/artworks/ent/>.

3. Quantum Thinking in Art and Philosophy

Quantum aesthetics and entangled art:

- Bjørn Staal's ENTANGLED (Ghent, 2024): A blockchain-based installation where participants' interactions and NFT ownership create entangled states, expressed visually and conceptually across Ethereum and Tezos. The piece enacts art as relational network rather than static object <https://www.fxhash.xyz/vertex/entangled>.

Generative entanglement in AI art:

- Joel Russell Huffman & Pindar Van Arman's Entangled Cryptocube #64 (2022): A generative art collaboration utilizing quantum entanglement data via IBM's quantum computing, embedding noise and uncertainty into the visual structure—expression only possible through collaborative entanglement <https://www.jrussellhuffman.com/>.

Kinetic choreography & probabilistic form:

- William Forsythe's work (e.g., Improvisation Technologies, Motion Bank, choreographic objects): His dance practice uses algorithmic, structural improvisation that parallels probabilistic, non-linear unfolding of quantum events, embedding relational movement patterns across performer and system <https://www.williamforsythe.com/publications.html>.

4. The Dangers of Quantum Mystification

- Jonathon Keats's Quantum Marriages (2011): Performance-philosophy ceremonies where people (or even devices) are “entangled” using sunlight and photon manipulation as metaphoric—but scientifically dubious—acts of union. It reflects popular misappropriations of quantum concepts, turning them into spiritual or social metaphors <https://www.wired.com/2011/05/keats-quantum-marriage/>.

5. Quantum Futures: Implications for Politics and Coexistence

Decentralized systems & posthuman relationality:

- Cryptographic & entangled art based on blockchain, like Staal's ENTANGLED, models distributed agency and non-hierarchic relationality—embodying quantum-inspired possibilities for governance and emergence <https://verse.works/series/entangled-by-bjrn-staal>.
- Neri Oxman's "Age of Entanglement": She advocates an antidisiplinary practice merging art, design, science, and engineering—challenging object-centred disciplinary structures by embedding relationality into creative processes <https://www.media.mit.edu/publications/the-age-of-entanglement/>.

Chapter 8: Feeling vs. Thinking – Embodied Epistemologies

Challenging the privileging of rational thought over somatic experience, this chapter engages with K. Danse's *ETERNITY* project to argue for the integration of feeling and thinking. It critiques Cartesian dualism and explores how dance and movement-based practices generate knowledge beyond the linguistic and conceptual. The discussion includes perspectives from cognitive science, phenomenology, and artistic practice, emphasizing the body as an epistemological site.

For centuries, Western philosophy has privileged rational thought over embodied experience, reinforcing a hierarchy where cognition is valued above sensation, and intellect above intuition.

This dualistic framework—deeply rooted in Cartesian philosophy—has shaped scientific inquiry, political structures, and cultural narratives, often marginalizing ways of knowing that emerge from the body, movement, and affect. However, contemporary artistic practices, alongside developments in cognitive science and phenomenology, challenge this binary, revealing the interdependence of feeling and thinking.

This chapter examines how dance and movement-based practices function as epistemological sites, generating knowledge beyond linguistic and conceptual frameworks. Drawing on K. Danse's *ETERNITY* project, as well as interdisciplinary research in neuroscience, philosophy, and performance studies, it argues that embodied experience is not secondary to intellectual thought but constitutive of how we perceive, understand, and engage with the world. By reintegrating somatic intelligence into cultural and political discourse, we can move towards a more holistic understanding of knowledge, one that values sensation, intuition, and affect alongside reason.

1. The Cartesian Divide and the Marginalization of the Body

The legacy of René Descartes' *cogito, ergo sum* ("I think, therefore I am") has deeply influenced Western epistemology, positioning thought as the foundation of existence while relegating the body to a secondary, mechanical role. This separation between mind and body has not only shaped philosophical discourse but has also justified political and social hierarchies—privileging disembodied rationality over embodied experience, reinforcing gendered and racialized distinctions between intellect and physicality, and marginalizing non-Western epistemologies that emphasize holistic knowledge systems.

However, contemporary research in neuroscience and cognitive science complicates this rigid dualism. Studies in embodied cognition demonstrate that thought is not confined to the brain but is distributed throughout the body, shaped by sensory-motor interactions and affective states. Antonio Damasio's work on emotions and decision-making, for instance, shows that reason itself is deeply intertwined with feeling, and that attempts to isolate intellect from affect result in diminished cognitive capacities.

In the context of artistic practices, this realization has profound implications. Dance, performance, and somatic practices challenge the dominance of textual and discursive knowledge by foregrounding movement as a form of thinking. The *ETERNITY* project exemplifies this shift, exploring the ways in which bodily expression generates meaning beyond the limitations of language.

2. Dance as an Epistemological Practice

Dance is not merely an aesthetic or expressive medium; it is a mode of inquiry, a way of thinking through movement. Throughout history, embodied practices have served as tools for knowledge transmission, from indigenous ritual dances that encode cultural histories to contemporary choreographic research that investigates political and social structures through physical exploration.

In *ETERNITY*, K. Danse interrogates the relationship between duration, repetition, and embodied memory, proposing that the body holds knowledge in ways that are often inaccessible to verbal articulation. The project reveals how dance operates as an epistemological system, one that does not seek to "represent" reality but to engage with it in real-time, producing meaning through action rather than abstraction.

Phenomenologists such as Maurice Merleau-Ponty have argued that perception itself is an embodied act—our engagement with the world is not mediated solely through cognition but through the lived experience of the body in space. Similarly, the choreographic practices explored in this chapter emphasize movement as a form of inquiry, where dancers do not merely execute predetermined sequences but engage in a dynamic process of sensing, responding, and generating new knowledge through physical interaction.

3. The Political and Cultural Implications of Embodied Knowledge

The privileging of disembodied rationality is not merely a philosophical issue; it has significant political and cultural consequences. In neoliberal economies, productivity and efficiency are often valued over sensory awareness and affective labor, reinforcing an ideology where bodies are disciplined, standardized, and exploited.

Education systems, too, frequently prioritize textual and mathematical literacy over somatic intelligence, limiting students' ability to develop alternative modes of understanding.

However, embodied epistemologies offer a powerful means of resistance. Somatic practices challenge capitalist notions of productivity by emphasizing presence, slowness, and deep listening. They disrupt hierarchical models of knowledge by asserting that intuition, sensation, and movement are as valuable as logic and analysis. This has profound implications for activism, pedagogy, and social movements. For example, protest actions that incorporate choreographed movement—such as the feminist dance protests of *Un Violador en Tu Camino*—not only convey political messages but also generate collective bodily experiences that deepen solidarity and affective engagement.

Artistic projects like *ETERNITY* further illuminate the role of dance in challenging dominant epistemologies. By pushing the boundaries of bodily endurance, exploring non-linear temporality, and engaging with sensory perception, the work disrupts conventional understandings of time, identity, and presence.

In doing so, it opens new possibilities for rethinking knowledge production in ways that resist Cartesian rationalism and embrace embodied multiplicities.

4. Towards a New Epistemology: Feeling, Thinking, and Becoming

As we move beyond the rigid binaries of mind/body, reason/emotion, and thinking/feeling, we must also reconsider the structures that uphold these distinctions. The integration of somatic intelligence into education, political discourse, and artistic practice is not merely a theoretical aspiration but a necessary shift towards more inclusive and holistic models of knowledge.

This chapter concludes by proposing an epistemology of becoming—one that values embodied experience as a site of continuous transformation. This approach resonates with posthumanism and new materialist perspectives, which emphasize relationality, process, and affect as fundamental to understanding existence. As Karen Barad's concept of intra-action suggests, knowledge does not emerge from isolated entities but from dynamic entanglements, where thinking and feeling, human and nonhuman, material and immaterial are in constant flux.

By foregrounding dance and movement as central to epistemological inquiry, we move towards a world where knowledge is not confined to the intellect but extends into the body, into sensation, into lived experience. The politics of such an approach are profound: it challenges the disembodied abstractions that dominate contemporary discourse and reclaims the body as a site of agency, intuition, and resistance.

In this light, *ETERNITY* is not merely a performance but a manifesto—one that calls us to rethink what it means to know, to perceive, and to exist in an embodied, interconnected world.

Here are some examples mentioned or alluded to in this chapter: Feeling vs. Thinking – Embodied Epistemologies, each linked to real-world cases and artistic or scientific initiatives illustrating embodied knowledge:

1. Cartesian Dualism & Neurocognitive Science

- Antonio Damasio's research on emotion and decision-making demonstrates that rational thought is deeply intertwined with feeling. Attempts to isolate intellect from affect result in diminished cognitive capacity – supporting embodied cognition

https://fr.wikipedia.org/wiki/António_Damásio.

- Studies in embodied cognition show that thought emerges through sensory-motor interactions, with cognition distributed across the body—not confined to the brain.

2. Dance as Epistemological Practice

- K. Danse's *ETERNITY* project: an interactive, choreographic installation combining dance, AI, XR scenography, and audience participation. It explores duration, slowness, repetition, and embodied memory as a mode of knowing beyond language

<https://www.k-danse.net/en/portfolio/eternite/>.

- Creative cognition in choreography: David Kirsh's analysis of choreography as embodied thinking. https://www.researchgate.net/publication/236875935_Creative_Cognition_in_Choreography. Several choreographer's research projects highlight how dancers use their bodies non-propositionally—sensing, simulating, and inventing ideas through movement as though the body is a cognitive tool.

Wayne McGregor

- Studio Wayne McGregor – the main hub for his creative, research, and choreographic work: ([Studio Wayne McGregor](#))
- Choreographic Thinking Tools – an in-depth look at his research on translating stimuli into movement: ([Studio Wayne McGregor](#))
- Distributed Choreographic Cognition – a collaborative project exploring how choreographic thought is shared and developed: ([Studio Wayne McGregor](#))
- Choreography and Cognition – documentation of a joint research project he initiated with cognitive scientists: ([choreocog.net](#))

William Forsythe

- Improvisation Technologies – The Website Project (ZKM) – an online platform presenting his tools for analytical movement exploration: ([ZKM](#))
- Improvisation Technologies – Lectures – more background on the methodology and philosophy behind this work: ([e-flux.com](#))

Trisha Brown

- Trisha Brown Dance Company (TBDC) – official site dedicated to her legacy and works: ([trishabrowncompany.org](#))

Anne Teresa De Keersmaeker

- Rosas (her company's official website) – contains her biography, works, news, and activities: ([Rosas](#))

Merce Cunningham

- Merce Cunningham Trust (official site) – houses information on his legacy, works, and archival materials: ([mercecunningham.org](#))

Deborah Hay

- Movement Research profile – overview of her career, publications, and influence: ([Movement Research](#))
- United States Artists – a concise bio and recognition of her long-standing contributions: ([United States Artists](#))

Mathilde Monnier

- Official website ("Chorégraphe – Mathilde Monnier") – biography, works, and career highlights: ([mathildemonnier.com](#))

Summary Table

Choreographer:	Official Link(s) & Focus:
Wayne McGregor	Studio hub, research tools, cognition-focused projects
William Forsythe	Improvisation Technologies tools and conceptual lectures
Trisha Brown	Official company site preserving her repertoire
Anne Teresa De Keersmaeker	Rosas official site with her works and updates
Merce Cunningham	Trust website preserving his choreographic legacy
Deborah Hay	Profiles and archival recognition of her influence
Mathilde Monnier	Official site with her choreographic work and biography

- BodyCartography Project (Olive Bieringa & Otto Ramstad): Uses somatic movement and Body-Mind Centering® to generate living, embodied performance, and research, cultivating presence and relational awareness as knowledge <https://bodycartography.org/>.

3. Phenomenology, Neuroscience & Collective Cognition

- Neurolive study (University College London & Matthias Sperling): Using mobile EEG during live performances, researchers found that audience brains exhibit synchronized delta waves—indicative of internal concentration and shared intersubjective experience—suggesting dance facilitates embodied and collective cognition
<https://www.ucl.ac.uk/news/2025/jul/watching-live-performance-together-syncs-brainwaves>.

- Break-in' Point (University of Leeds): A performance/science collaboration exploring somatic narratives under stress, where embodied physical encounters lead to epistemological and emotional transformation.

4. Political & Cultural Implications of Embodied Knowledge

- Olafur Eliasson's Ice Watch (2015 Climate Summit, Paris): Live dancers performed improvised movement around melting icebergs, embodying the ice's presence and fragility—bridging somatic experience and environmental awareness through felt empathy and political gesture <https://icewatchparis.com/>.
- Liz Lerman's Small Dances About Big Ideas (2005) and Ferocious Beauty: Genome (2006): Dance works engaging audiences in embodied reflection on genocide and developmental biology—transcending rational abstraction through movement
<https://lizlerman.com/2018/05/17/small-dances-about-big-ideas/>.

5. Broader Artistic & Somatic Practices

- Mette Ingvartsen's Artificial Nature series: Choreographies involving non-human materials (foam, fog, light, sound) challenge the hierarchy of body over material, emphasizing perception, affect, and embodied awareness <https://www.metteingvartsen.net/>.
- Evann Siebens' Time Reversal Symmetry (2018): A film/performance collaboration with physicists that playfully explores time, reversal, and embodied form—integrating formal dance and scientific concepts <https://www.evannsiebens.com/projects/time-reversal-symmetry>.

- Bodystorming: The method of modeling scientific hypotheses through choreographic movement. Scientists and dancers physically enact concepts like molecules or neural networks to generate embodied insight <https://en.wikipedia.org/wiki/Bodystorming>.

Chapter 9: Reality as Ultimate Fiction – Excentration and the Fragmentation of the Self

Reality, as Holly Childs suggests, is the ultimate fiction—an ongoing construction shaped by perception and narrative. This chapter engages with Louise Bourgeois' assertion that *space does not exist*, considering how spatial metaphors structure human experience. Gregory Chatonsky's theory of *excentration* is introduced as a means of deconstructing the idea of a stable self.

The chapter contrasts the *finitude of replacement*, which assumes human identity as self-contained, with the *finitude of completion*, which frames identity as inherently relational and mutable.

Reality, as Holly Childs suggests, is the ultimate fiction—an ongoing construction shaped by perception, narrative, and mediation. The way we structure our experience of the world is not a neutral process but an act of continuous storytelling, one that is informed by cultural, historical, and technological frameworks. This chapter interrogates the instability of the self in relation to space, time, and identity, drawing on philosophical, artistic, and scientific perspectives.

At the heart of this discussion is Louise Bourgeois' assertion that "space does not exist," a radical proposition that invites us to reconsider how spatial metaphors condition our understanding of subjectivity. Gregory Chatonsky's theory of *excentration* is introduced as a means of deconstructing the idea of a stable, self-contained identity. Rather than seeing the self as an autonomous entity, *excentration* proposes that subjectivity is always already dispersed, fractured, and in a state of becoming.

The chapter contrasts two conceptions of finitude: the *finitude of replacement*, which assumes human identity to be self-contained and substitutable, and the *finitude of completion*, which frames identity as inherently relational and mutable. Through this lens, we explore how digital mediation, artificial intelligence, and artistic experimentation contribute to the ongoing fragmentation and reconfiguration of the self.

1. The Fiction of Reality: Narrative as a Structuring Mechanism

The idea that reality is a construct is not new. Philosophers from Nietzsche to Foucault have argued that what we take as objective reality is, in fact, a historically contingent framework shaped by power, language, and social structures. Holly Childs extends this argument into the digital age, suggesting that the narratives we build around ourselves and the world are not only ideological but increasingly mediated by algorithmic and networked processes.

Bourgeois' claim that "space does not exist" can be read in this context: if reality is constructed, then so too is the way we experience spatiality, subjectivity, and embodiment. What we perceive as stable and given—our bodies, our environments, our sense of self—is the product of a fictional consistency that we impose upon an otherwise chaotic and shifting field of relations.

Artistic practices that engage with this instability reveal the constructed nature of reality. Works such as Ryoji Ikeda's immersive audiovisual installations or Pipilotti Rist's explorations of mediated perception challenge the assumption that space, time, and identity are fixed categories. Instead, they invite the audience into experiences where the boundaries between self and world, presence and absence, physicality and virtuality become porous.

2. Excentration and the Fragmentation of the Self

Gregory Chatonsky's concept of *excentration* further complicates traditional notions of subjectivity.

In contrast to classical humanist perspectives that posit the self as a coherent, autonomous entity, excentration suggests that identity is always in a state of dispersion. Rather than being at the center of experience, the subject is decentered, entangled within a multiplicity of networks—technological, social, material.

This has profound implications for how we conceive of agency and autonomy in an era of digital mediation. As AI-generated content proliferates and deepfake technologies challenge the authenticity of representation, the boundaries between the "real" and the "synthetic" blur. The self is no longer a singular presence, but an assemblage of data points, algorithms, and affective residues scattered across digital space.

Excentration is not merely a philosophical abstraction but an experiential reality. Consider the way social media constructs identity through fragmented, performative interactions: a person's online presence is not a unified whole but a composite of images, texts, and algorithmically curated content. The self exists in a state of perpetual modulation, constantly reshaped by external forces.

Artists such as Chatonsky himself, along with Hito Steyerl and Trevor Paglen, explore this condition through works that foreground digital excess, information overload, and the erosion of individual agency in networked systems. Their practices suggest that the fragmentation of the self is not an anomaly but the defining condition of contemporary subjectivity.

3. Finitude of Replacement vs. Finitude of Completion

The tension between stability and fragmentation is further explored through the contrast between two conceptions of finitude:

- **Finitude of Replacement:** This model assumes that human identity is self-contained and substitutable. It aligns with traditional metaphysical and economic structures that treat the individual as an isolated unit, capable of being exchanged, replaced, or optimized. In technological terms, this is reflected in transhumanist aspirations towards digital immortality, where the self is seen as an informational entity that can be uploaded, transferred, or duplicated.
- **Finitude of Completion:** This perspective, in contrast, sees identity as inherently relational and mutable. Rather than being a discrete unit, the self is understood as an emergent process, shaped by its entanglements with others—human, nonhuman, technological. Completion, in this sense, is not about achieving a final, stable state but about embracing an ongoing becoming.

The implications of these two models are significant for how we think about human-machine relations, artistic production, and political agency. While the finitude of replacement

reinforces neoliberal and capitalist logics of optimization and efficiency, the finitude of completion opens up possibilities for more fluid, interconnected, and ethical ways of being.

Artistic and philosophical engagements with these themes push us to reconsider what it means to exist in a world where identity is no longer a fixed point but a constantly shifting field of relations.

Works such as Rafael Lozano-Hemmer's interactive installations, which use biometric data to create ephemeral portraits, highlight this tension between presence and disappearance, singularity, and multiplicity.

4. Towards a Politics of Excentric Subjectivity

If reality is the ultimate fiction, and if identity is inherently fragmented, what are the political and ethical stakes of embracing this condition? One possible response is to cultivate a politics of excentric subjectivity—one that acknowledges the instability of the self while resisting the commodification and exploitation of this fragmentation.

Rather than seeing the loss of stable identity as a crisis, we can approach it as an opportunity to rethink modes of collective existence. This requires developing practices of solidarity, care, and mutual recognition that do not rely on fixed identities but instead embrace fluidity and interdependence.

In this sense, artistic interventions that foreground excentration are not simply aesthetic experiments but political gestures. By unsettling the illusion of stable subjectivity, they invite us to imagine new forms of coexistence—ones that move beyond the constraints of individualism and towards a more relational, processual understanding of being.

This chapter concludes by suggesting that the fragmentation of the self, far from being a symptom of crisis, can be a site of potential. In an era where digital mediation increasingly shapes our experience of reality, recognizing the constructed nature of identity and space is a crucial step towards developing more ethical, interconnected, and creative ways of living.

Through an exploration of artistic practices, philosophical insights, and technological developments, this chapter challenges the reader to reconsider the very foundations of their perception, asking: **If reality is the ultimate fiction, what new stories might we tell?**

Here are examples mentioned or alluded to in this chapter 9: Reality as Ultimate Fiction – Excentration and the Fragmentation of the Self, each paired with real-world artistic, technological, or theoretical counterparts, featuring relevant projects and initiatives:

1. The Fiction of Reality & Spatial Instability

- Louise Bourgeois's claim "space does not exist" invites us to question stability—how physical and psychological space constructs subjectivity
<https://www.e-flux.com/announcements/29967/louise-bourgeois>.
- Ryoji Ikeda's immersive audiovisual installations, such as Test Pattern
<https://www.ryojiikeda.com/project/testpattern/> and data.scan
<https://www.ryojiikeda.com/project/datamatics/> - datascan n1-9, disrupt spatial perception

with overwhelming digital abstraction—challenging sensory and perceptual cohesion, illustrating the fictional nature of space and identity.

- Pipilotti Rist's video installations, like Ever Is Over All https://en.wikipedia.org/wiki/Ever_Is_Over_All or Pixel Forest <https://brooklynrail.org/2016/12/artseen/pipilotti-rist-pixel-forest/>, blur boundaries between viewer and mediated environment, collapsing self/world distinctions and exposing spatial narrative as constructed.

2. Excentration & Fragmented Selfhood

- Gregory Chatonsky's theory of excentration proposes subjectivity as dispersed—and networked across data, affect, and digital trace—challenging classical autonomous identity <https://chatonsky.net/double-finitude/>.
- Hito Steyerl's video installations (e.g., How Not to Be Seen: A Fucking Didactic Educational .MOV File) <https://www.youtube.com/watch?v=LE3RlrVEyuo&rco=1> highlight how surveillance, digital presence, and mediated visibility fragment the observer and observed—making identity unstable https://fr.wikipedia.org/wiki/Hito_Steyerl - Sélection_des_œuvres.
- Trevor Paglen's artworks, especially his Limit Telephotography series and AI training-set portraits, <https://art21.org/watch/extended-play/trevor-paglen-limit-telephotography-short/> expose how subjectivity is constituted through algorithmic regimes and distant mediated gazes—underscoring the dispersed nature of identity.
- Social media identity illustrates excentration: online personas assembled from fragmented posts, images, and algorithm-driven interactions demonstrate the constant modulation of self.

3. Finitude of Replacement vs. Completion

- Transhumanist dreams of digital immortality exemplify the model of “finitude of replacement”—the idea that identity can be uploaded or duplicated.
- In contrast, Rafael Lozano-Hemmer's biometric installations, such as Pulse Room or Body Movies https://www.lozano-hemmer.com/body_movies.php, create ephemeral, participatory portraits. The data-image's impermanence invites reflection on relational identity rather than seamless digital substitution.

4. Toward a Politics of Excentric Subjectivity

- Artistic interventions that destabilize fixed identity—such as immersive digital self-portraits or networked alter-egos—act as political gestures of resistance. By embracing the constructed and relational aspects of self, they foster solidarity that moves beyond rigid identity categories—suggesting new forms of relational, collective identity grounded in fluidity and interdependence.

Conclusion: Towards a New Ontology of Coexistence

In the face of ecological crises, technological disruptions, and political instability, this final chapter argues for a reorientation of human existence towards relationality and openness. Rather than succumbing to apocalyptic narratives of extinction, it is a call for a commitment to alternative futures that embrace uncertainty, fragility, and the unfinished nature of being.

It concludes by advocating for a *life-sized* engagement with reality—one that resists abstraction and domination in favor of coexistence, care, and collective reimagination.

In the face of ecological collapse, technological disruption, and growing political instability, the challenge of our time is both to resist and to reimagine the foundations of coexistence. The urgency of this moment demands a shift away from narratives of apocalypse and towards the construction of alternative, life-affirming futures. These concluding pages call for an ontological reorientation—one that embraces **relationality, openness, and interdependence** as the guiding principles of existence.

If the preceding chapters have deconstructed the mechanisms of control, fragmentation, and technological determinism, this final section offers a pathway toward a more **embodied, situated, and relational** way of being. Rather than seeking mastery over the world—whether through abstract intellectualization or technological optimization—it advocates for a **life-sized engagement with reality**, one that resists domination in favor of care, coexistence, and collective imagination.

1. From Crisis to Coexistence: Rethinking Human Exceptionalism

One of the fundamental obstacles to a new ontology of coexistence is **the legacy of human exceptionalism**—the belief that humanity stands apart from and above other forms of existence. This worldview has justified environmental exploitation, hierarchical social orders, and the instrumentalization of life. However, as ecological, and technological crises deepen, it is increasingly clear that such a framework is both unsustainable and ontologically flawed.

Recent discourses in posthumanism philosophy, indigenous epistemologies, and non-anthropocentric art challenge this paradigm, emphasizing **entanglement over separation, vulnerability over control, and reciprocity over extraction**. The question, then, is not merely how humans will survive the crises of the 21st century, but how we might **relearn to exist within a web of interdependencies**—with nature, technology, and one another.

- **Ecological Thought & Relational Ontologies:** Inspired by thinkers such as Donna Haraway and Eduardo Kohn, this section is about how seeing the world as a mesh of interconnected life forms (including nonhuman intelligences) can shift the way we approach politics, art, and technology.
- **The Ethics of Vulnerability:** Following Judith Butler and Achille Mbembe, they argue that embracing fragility, rather than fearing it, opens up new ethical and political possibilities.

2. The Poetics of the Unfinished: Art as a Model for Open Futures

If the dominant political narratives of our time lean toward either **dystopian fatalism** or **utopian escapism**, how might we cultivate an alternative imaginary—one that acknowledges crisis while also affirming possibility?

Art provides a crucial model for engaging with uncertainty without seeking premature closure. In particular, artistic practices that prioritize **improvisation, involuntary dramaturgies, and extended compositions** offer methodologies for navigating an unstable world.

- **Improvisation as Political Strategy:** an exploration of how experimental dance, performance art, and collaborative artistic structures embody forms of non-hierarchical decision-making and adaptive resilience.
- **Aesthetics of the Unfinished:** Drawing from Édouard Glissant's concept of opacity and Nicolas Bourriaud's relational aesthetics, these are proposals for a mode of artistic engagement that resists the closure of meaning in favor of ongoing dialogue.
- **Art as an Ecology of Relations:** Artistic creation is not a product but a process—a continuous negotiation with space, time, and other beings. This understanding, as it is argued, offers a powerful counterpoint to the rigid determinism of technological and political systems.

3. Towards a Politics of Care and Collective Reimagination

If we are to move towards a **post-capitalist, post-anthropocentric, and post-deterministic** future, what forms of political and social organization might support this transition? The paper calls for a **politics of care**—not as a sentimentalized ideal, but as a radical reconfiguration of our responsibilities to one another and to the world.

It draws from:

- **Feminist Ethics of Care:** The work of Joan Tronto, Silvia Federici, and bell hooks underscores how care—often devalued as “women’s work” or relegated to the private sphere—must be reimagined as a central political principle.
- **Decentralized Governance & Mutual Aid:** Alternative models of organizing, from indigenous governance structures to contemporary cooperative networks, illustrate the potential of **non-extractive, non-hierarchical** social forms.
- **Art and Activism as Prefigurative Politics:** Through case studies of artistic movements that blend performance with social intervention, it is highlighted how aesthetic practices can **model new ways of being together** in the present.

4. The Necessity of Uncertainty: Living Without Final Answers

Finally, it is argued that the greatest challenge to a new ontology of coexistence is **the human desire for certainty**—the need to categorize, define, and control. The fear of the unknown has fueled **technological determinism, authoritarian politics, and ecological devastation**, all in the name of stability.

But what if we embraced **uncertainty not as a threat, but as a space of possibility?**

The present concluding statement revisits the idea of **eupotopian thought**—a vision of the future that is neither prescriptive nor static but remains open-ended, adaptive, and collective. By cultivating an aesthetics and politics that resist finality, we might begin to move beyond survival and towards **coexistence as a radical practice of imagination, responsibility, and care.**

Final Reflection: A Life-Sized Engagement with Reality

Rather than abstract theories or speculative extremes, the future requires a **life-sized engagement with reality**—one that is felt, **experienced**, and continuously reshaped through practice. The new ontology of coexistence does not offer a grand solution but invites a **shift in orientation:**

- From mastery to reciprocity
- From isolation to entanglement
- From certainty to creative indeterminacy

In this sense, the task of politics, art, and thought in the 21st century is not simply to critique or predict but to **rehearse new forms of living together** knowing that they will remain always unfinished, always in motion, and always **open to the unknown**.

Here are examples mentioned or alluded to in this conclusion: Towards a New Ontology of Coexistence, each illustrated through real-world initiatives and artistic or technological interventions, showing how they embody relational, ecologic, and care-centered futures:

1. Rethinking Human Exceptionalism & Relational Ontologies

- Donna Haraway's "Chthulucene" & sympoietic kinship: Her philosophy challenges human exceptionalism by framing all beings—humans, animals, technologies—as entangled in symbiotic survival [https://www.e-flux.com/journal/75/67125/tentacular-thinking-anthropocene-capitalocene-chthulocene](https://www.e-flux.com/journal/75/67125/tentacular-thinking-anthropocene-capitalocene-chthulucene).
- Eunice Luk's Sympoiesis: A multi-species installation merging insect-like sculptures with plant and biological materials to imagine hybrid life forms and interdependent relations rooted in Haraway's ecological thought <https://euniceluk.com/-sympoiesis>, with hanging sculptures, botanical debris, insect forms materialize relationality, ecological kinship, fragility, and mutuality.
- "Creatures: When Species Meet" exhibition: A collection of participatory art that disrupts anthropocentric hierarchy, promoting nonhuman agency and ecological justice narratives aligned with Haraway and Eduardo Kohn's relational thinking <https://www.carlabengtson.com/portland2016-biennial-exhibition-2-2/>.

2. Feminist Ethics of Vulnerability & Political Thought

- Engagement with theorists like Judith Butler, Achille Mbembe, and Silvia Federici emphasizes care as political ethics—especially in resistance to hierarchies and exploitation (drawn from concluding reflections).

3. Art as Ecology of Process & The Unfinished Improvisation and relational aesthetics:

- RAW Académie Session 9: Infrastructure (Dakar–Philadelphia): An example of horizontal pedagogy where artists and curators collaborate across borders to challenge dominant knowledge and co-produce infrastructure http://www.rawmaterialcompany.org/_3318?lang=en.
- Matrix Feminist Design Co-operative: A feminist spatial practice group that pioneered participatory, relational architecture and collective design—challenging individualism and promoting shared public space <https://www.spatialagency.net/database/matrix.feminist.design.co-operative>.
Matrix Feminist Design Co-op value participatory architectural design, women-led building Non-hierarchical spatial practice, collective care infrastructure.

4. Art-Enabled Care, Mutual Aid & Non-Hierarchical Organization Community art & mutual aid projects:

- Ecological-justice gardens such as Bonnie Ora Sherk's A Living Library™ and Cathrine Sneed's Garden Project used art, gardening, and community education to foster collective care and repair land and people <https://alivinglibrary.org/> and <https://www.gardenproject.org/>. Sherk's Living Library and Parks Urban gardens, include performance, community programming Art-as-commons, ecological care, urban relational ecology.
- Practices developed by Tania Bruguera (Immigrant Movement International) <https://creativetime.org/projects/immigrant-movement-international/> and Tania El Khoury (Tell Me What I Can Do) emphasize collective pedagogies and ritual as social care interventions <https://pushfestival.ca/shows/tell-me-what-i-can-do/>.
- Feminist makerspaces: Community-led technology labs grounded in care, shared governance, and solidarity—creating alternative infrastructures to patriarchal tech cultures <https://feministmaker.space/>.
- Mutual-aid art worker collectives: Red Bloom Communist Collective and affiliated art workers supporting mutual aid and creating care infrastructures alongside abolitionist struggles—a model of art-as-community care praxis <https://www.amplifyarts.org/alternate-currents/2021/red-bloom>.

5. Prefigurative Political Art & Collective Imagination

The following projects exemplify non-extractive relationalities, care as political praxis, and art as living infrastructure—providing concrete models for the ontology envisioned in the conclusion: one of openness, fragility, mutuality, and unfinished becoming:

- Diasporic African Women's Art Collective (DAWA): A Black Canadian feminist network using community, ritual, and performance dinners (e.g. The Feast) to assert relational identity and collective care outside institutional norms https://en.wikipedia.org/wiki/Diasporic_African_Women%27s_Art_Collective - External_links.
- Aravani Art Project (India): Trans and cis women artists reclaiming public space through community mural-making—embodying kinship and solidarity in shared urban environments <https://aravaniartproject.com/>. Aravani Art Project murals Colorful public murals feature trans women and community visibility, solidarity, spatial reclamation, co-narrative storytelling.

Dance Projects as Embodied Ontologies of Care:

All the following projects matter for the Ontology of Coexistence, because:

- Bodies in motion act as political agents: Each project envisions movement not as aesthetic spectacle, but as a form of relational agency—constituting community, memory, and resistance through embodied action.
- They deal with relational selfhood: Dance becomes an ontological process, where identity is shaped and reshaped through engagement with others and with environments.
- They are about care and co-presence: From healing work to protest choreography, these practices enact care and collective presence, challenging embodiment as solitary or controlled.
- They are open-ended co-creation: Improvisation, non-hierarchical structure, and community input foreground process over product, aligning with an ontology of unfinished, emergent coexistence.

PALETTE in Motion (VCU) – intergenerational dance between students and seniors
Older adults and young dancers engage in shared movement and mutual mirroring. This practice fosters relational care, cognitive connection, and joyful presence, resonating with the

chapter's emphasis on embodiment as knowledge,
https://news.vcu.edu/article/aging_gracefully_palette_an_intergenerational_arts_program_pairs.

Community Engagement Dance (LMU)

Dancers collaborate with local communities through structured improvisation that bridges life experience across ages—emphasizing trust, presence, and relational agency
<https://cfa.lmu.edu/programs/dance/cocurricular/communitydanceproject/>.

Ririe-Woodbury Dance Company Residency

Community-sharing workshops across generations and cultural contexts. The model demonstrates dance as a vehicle for embodied connection, inclusion, and solidarity
<https://www.ririewoodbury.com/education-outreach/residency-programs>.

Adaptive or Inclusive Movement Workshops

In the Bodynet-Khoros project, <https://metabody.eu/bodynet-khoros/>, sessions incorporate dance to encourage inclusion, emotional expression, and bodily discovery among diverse participants, illustrating dance's role in expanding what counts as epistemological space.

Additional Exemplary Dance Practices & Initiatives:

These dance-based examples vividly illustrate how movement becomes a site of knowing, caring, and relational politics—challenging Cartesian binaries and demonstrating that feeling and embodiment are epistemological acts in themselves.

Choreography of Care Workshops by Circe Platform

Led by Renata Piotrowska-Auffret and collaborators, these movement practices prioritize listening, feminist relationality, and communal embodiment—developing a choreography of care as theoretical and performative methodology.

Peggy Baker's Move

A live choreographic film featured in Ecologies of Care article—performances of partnering and mutual support create a circular intimacy, embodying care through shared movement.

Knot Just Body (Suzanne Cowan)

This participatory performance with rope installation and contact improvisation explores thresholds of vulnerability and relational interdependence, foregrounding dance as a politics of boundary, care, and mutual trust.

BodyCartography Project

Duo Olive Bieringa and Otto Ramstad use somatic movement and environmental awareness to co-create dance experiences that cultivate re-enchantment and inter-species relational presence—key to embodied epistemology.

Dance United

A social justice dance education initiative—training marginalized youth through an academy model rooted in community, self-expression, and care as creative empowerment.

RCO

Live performance as an ecosystem linking participatory dance and critical use of everyday

digital technology, the “RCO (Radical Choreographic Object)” project <https://www.k-danse.net/en/portfolio/rco/>

Here are more dance projects deeply aligned with the themes of A Laboratory of Political Awakening: Towards a New Ontology of Coexistence: these works foreground movement as a political and relational laboratory, reimagining selfhood, community, and relationality through embodied practice.

Key Projects & Practices of Dance as Political Awakening:

Le Alleanze dei Corpi (Alliances of Bodies)

An ongoing public workshop-performative network in Milan, supported by DiDstudio and ZEIT, where diverse bodies engage in collaborative choreographies in urban spaces and community sites. It cultivates collective agency, care, and relational dialogue across difference, reflecting how dance can form political ecosystems of coexistence. Le Alleanze dei Corpi Public Milan participatory initiative is where immigrant bodies shape urban choreography, community maps, and plural identity.

Le Alleanze dei Corpi documentation: on-site performance, walking labs, and video archives illustrating dance-landscape entanglements in Milan.

COOP ~ Choreopoethics (2024)

A seminar that asks: “How can we move together politically?” Through choreographic exercises, vulnerability, and protest-based movement research, it positions dance as a living archive of resistance and mutual care—rejecting individualism through collective body-politics.

“Dancing the Pluriverse”

Indigenous Performance as Ontological Praxis. Projects like Oxlaval Q'anil and Dancing Earth (Mesoamerica/US) use dance to regenerate ancestral subjectivities and place-based ontologies. These performances enact Indigenous epistemologies of relationality, challenging Western individualism and sustaining communal identity in movement. They enact Indigenous ontological praxis—linking land, ancestry, and movement to challenge colonial hierarchies of knowing.

Movement here is not symbolic; it is knowledge, memory, and relational resistance.

Mapping the Dance Pluriverse highlights dance as kinetic relational research—collaborative, cross-cultural, and open-ended. The Performance acts as experiment in co-existence rather than individual expression.

Oxlaval Q'anil / Dancing Earth Indigenous performance from Maya and intertribal communities, enact relational, telluric knowledge.

Jacob's Pillow – Political Movement(s) Series

Contemporary works by groups like Ananya Dance Theatre (Nün Gherāo), Danza Orgánica (Âs Nupumukômun), and Camille A. Brown (I AM) foreground historical trauma, resistance, and collective memory through movement that connects bodies to political struggle and cultural belonging.

Dance, Resistance, (Un)Working – Yugoslav context.

An archival-performance exhibition exploring dance as cultural-political work in and after Yugoslavia. It reframes dance as collective articulation of shared memory, resistance, and sociability—negotiating identity, community, and the political body.

Judson Dance Theater Influence & Trajal Harrell.

Judson Dance Theater's democratic, process-based choreographic methods and Harrell's

Twenty Looks or Paris Is Burning at The Judson Church fuse postmodernist aesthetics with queer, racialized embodied politics—decentering identity, dissolving hierarchy, and enacting relational multiplicity in dance.

Brendan Fernandes – Free Fall 49.

An interdisciplinary dance-performance intervention responding to the Pulse nightclub massacre. Over two-hour improvised pieces mimicking gunfire and resurrection, the work becomes a ritual of collective grief, solidarity, and embodied memory.

“Free Fall 49 / Free Fall, for Camera” is a Dance ritual of falling and rising in response to queer violence (Orlando shooting), embodying grief, resistance, and collective remembrance. Brendan Fernandes: “Free Fall, for Camera” video & film stills showcase ritualized choreography as queer politic and communal reconstitution.

Gibney Dance Community Action. Workshops with survivors of domestic violence, facilitating healing through shared movement and trust-building. Dance becomes a medium for relational empowerment, embodied care, and social reconnection.

Featured Video Highlights:

A one-day event held at Southeast Dance in Brighton with the Dancing the Pluriverse network. The video captures Indigenous dancers enacting motion rooted in place-based, ancestral knowledge—offering ontology as embodied practice.

From the online launch of the AHRC Dancing Otherwise network, this footage presents collaborative performances and reflections on ontological plurality and collective embodiment. It maps dance as relational action across cultural lines.

Links with the Metahuman forum led by Jaime del Val on the text A Laboratory of Political Awakening: Towards a New Ontology of Coexistence

Here are dance and relational performance projects connected to the themes of A Laboratory of Political Awakening: Towards a New Ontology of Coexistence, with direct intersections to Jaime del Val's Metahuman Forum work and its emphasis on relational emergence, decentering human supremacy, and embodied justice for all life forms.

Metahuman & Dance: Towards Ontological Coexistence

- 3rd Metahuman Futures Forum – Metabody (chaired by Jaime del Val) Featured sessions such as “Dances for Planetary Health,” “Vegetal Paradigm Shifts,” and radical ecology debates that directly connect dance and movement to non-anthropocentric ethics and relational ontology <https://metabody.eu/3rd-metahuman-futures-forum/>.

- *Ontohackers: Radical Movement Philosophy in the Age of Extinctions and Algorithms* (punctum books, 2024–2025). Metahumanism which Introduces meta-body as queer, iterative becoming—a theoretical foundation for performance dance that foregrounds non-human agency, spatiotemporal entanglement, and fluid identity. *Ontohackers: Radical Movement Philosophy in the Age of Extinctions and Algorithms, Part I: Radical Movement Philosophy and the Body Intelligence R/evolution*

<https://punctumbooks.com/titles/ontohackers-radical-movement-philosophy-in-the-age-of-algorithms/>.

Dance Projects in Conversation with Metahuman Themes:

These dance interventions echo del Val's framework of interspecies justice, decentered agency, and ecological relationality:

Oxlaval Q'anil / Dancing the Pluriverse (Indigenous performance networks)

Embodyes ancestral, place-based movement practices rooted in vegetal observation and multi-becoming—dancing kinships beyond human-centric ontology, resonating with Metahuman doctrines of vegetal intelligence and planetary embodiment.

Le Alleanze dei Corpi in Milan

Urban workshops across immigrant, local, human, and non-human bodies, forming collective choreography networks. These exemplify undoing human supremacy and enacting intra-actions across difference—a lived practice in political relationality.

Choreopoethics & Dances for Planetary Health

Forum segments titled “Dances for Planetary Health” explore movement as planetary care ritual—directly aligning embodied praxis with non-extractive, multi-species justice frameworks championed at Metahuman forums.

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- ETERNITY. Project investigating embodied epistemology and temporality.
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<https://journals.openedition.org/cal/9003?lang=en>
- Jaym/Jaime del Val*, artist-philosopher-activist, proponent of **Metahumanism**, author of the trilogy *Ontohackers: Radical Movement Philosophy in the Age of Extinctions and Algorithms* (punctum books, 2024–2025), and initiator-coordinator of the European projects **Metabody** and **Bodynet-Khorós**.

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