

Glitched Perfection: The Ontological Crisis of Hyperreal Avatars in Cinematic Gaming

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ABSTRACT

This comprehensive study advances the ontological furnace framework to interrogate how cinematic gaming's pursuit of photorealism transmutes human presence into commodified simulacra. Through rigorous comparative analysis of Erica's filmed virtuality and Detroit: Become Human's uncanny prison across four ontological dimensions—Organic Crucible, Fracturing, Forged Replica, and Commodified Specter—we demonstrate how both production paradigms generate Baudrillardian third-order simulacra that undermine authentic connection. Combining technical examination of motion capture pipelines with philosophical interrogation spanning Simondon's individuation theory to Plato's dianoia, this treatise documents how these apparatuses induce existential dissonance through perceptual-behavioral mismatches, propagate cultural pathologies via simulation anxiety and misrecognition cascades, and enact the death of play through ludic anorexia. Our findings reveal that despite divergent technical implementations—live-action footage versus algorithmic recomposition—both models prioritize spectacle over substance, resulting in what we term promethean paradox: technological awe coupled with human dispossession. The study concludes by proposing three principles for revelatory embodiment that transcend replication toward ethical co-creation. By rejecting replication-centric paradigms, our principles for revelatory embodiment offer concrete alternatives that realign avatar design with ludic integrity and ethical co-creation which is a key contribution to DiGRA community.

Keywords

avatar, cinematic gaming, ontological furnace, hyperreal avatars, simulacra, motion capture, existential dissonance

INTRODUCTION

Contemporary cinematic gaming's pursuit of photorealism constitutes what we term the ontological furnace—a technological apparatus that systematically consumes living presence to produce hollow spectacles. This phenomenon extends beyond graphical advancement to represent a fundamental reorganization of human existence into quantifiable, alienable data streams. When examining Keanu Reeves' performance in Cyberpunk 2077, where neuromuscular signatures become perpetual corporate property, or the somatic expressions in Heavy Rain being disassembled into reusable animation assets, we witness the transformation of what Merleau-Ponty termed the "flesh of the world" into Baudrillardian hyperreal simulacra. This technological alchemy operates at the intersection of three convergent forces: the exponential advancement of rendering

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technologies, the neoliberal commodification of human expression, and the psychological conditioning of audiences toward spectacle consumption—what Crary (2013) identifies as 24/7 capitalism's erosion of perceptual autonomy. The ontological furnace operates through a tripartite alchemical process beginning with biological reductionism, where the actor's corporeal intentionality—the prereflective unity of gesture, affect, and embodiment—is fragmented into measurable datasets. Advanced motion capture systems like those developed by Vicon and OptiTrack employ markerless optical capture with over sixty cameras recording at 240 frames per second, transforming organic movement into discrete data points. This fragmentation exemplifies what Han (2015) identifies as the positivization of being—the reduction of prereflective intentionality to measurable parameters. As Stiegler (2010) warns, this represents a new form of proletarianization where lived experience becomes exteriorized as data, deskilling human capacities for embodied expression.

The significance of this investigation lies in its exposure of how this production pipeline threatens to enact what Yuk Hui (2016) conceptualizes as digital nihilism—the systematic erosion of human agency, intersubjective connection, and self-perception through technological hypermimesis. As games like *Detroit: Become Human* demonstrate, the pursuit of photorealism creates what we term existential dissonance—the perceptual gap between visual fidelity and interactive poverty that generates profound player unease. By tracing the journey from organic performance to digital commodity, this paper establishes the foundational framework for understanding the cultural and existential consequences of hyperreal avatar production, while proposing alternative paradigms for digital embodiment that prioritize authentic interaction over visual deception.

THE FOUR-DIMENSIONAL ONTOLOGY OF SIMULACRAL PRODUCTION

L' Original: The Organic Crucible

The physical actor constitutes the primordial stratum of digital embodiment—what Winnicott (1960) termed the "true self" in its unmediated phenomenological presence. Within the sterile void of the motion capture volume, performers like Bryan Dechart inhabiting Connor's psyche or Holly Earl embodying Erica's vulnerability exist as psychosomatic unities prior to technological extraction. This dimension manifests what Merleau-Ponty (1945) identified as the "intentional arc": the pre-reflective integration of gesture, affect, and embodiment that resists quantification. The ontological primacy of this organic crucible resides in its temporal thickness—the lived duration that escapes computational capture. As Dechart (2018) poignantly reflected: "There's a strange disconnect when you see your movements divorced from the emotional truth that generated them". This testimony reveals the fundamental violence inherent in the ontological furnace: the reduction of being to measurable parameters constitutes what Han (2015) identifies as the positivization of existence. The actor's improvisational choices, emotional resonance, and embodied history become mere raw material for the extraction regime.

The phenomenological richness of the organic crucible resides precisely in what escapes technological capture: the micro-tremors of uncertainty, the breath held in anticipation, the unconscious adjustments of posture that signal emotional states no motion capture system can fully register. These ephemeral qualities constitute what Polanyi (1966) termed "tacit knowledge"—the ineffable dimension of human expression that resists formalization into data points. When Valorie Curry embodied Kara in *Detroit: Become Human*, her performance contained countless such moments—a hesitation before

touching a child's shoulder, a subtle intake of breath before delivering difficult news—that emerged from her deep engagement with the character's psychological reality. These nuances, born of the actor's lived experience and artistic interpretation, represent the irreplaceable essence of l'original that becomes the first sacrifice in the ontological furnace.

La Décomposition: The Fracturing

Motion capture technology enacts what Foucault (1975) identified as biopolitical dispossession—a ritual of extraction that reduces the actor's lived body to computational data. Contemporary high-fidelity systems perform this decomposition with ruthless efficiency: during *Detroit: Become Human's* production, Valorie Curry's embodiment of Kara was dissected into 387 skeletal joint trajectories quantified as 2 rotational quaternions, 42 facial action coding units mapping micro-expressions, and subvocal speech patterns converted into spectral coefficients. This fragmentation exemplifies the epistemic violence of technological positivism. The organic continuum of expression—the micro-second lag between thought and action, the unconscious weight shift betraying doubt—is fractured into manageable, sterile datasets. What disappears in this quantization is the embodied intentionality that Merleau-Ponty (1945) recognized as fundamental to human presence: the seamless integration of consciousness, corporeality, and environment that constitutes our being-in-the-world.

The captured dataset thus represents what Winnicott (1960) diagnosed as a "false self"—technically flawless yet ontologically barren. The performer becomes a resource, their presence mined rather than preserved. This process of decomposition enacts what we term ergodic violence: the systematic deconstruction of organic unity into algorithmic inputs. The motion capture stage functions as a contemporary panopticon, where dozens of high-resolution cameras operating at 240 frames per second subject the actor's body to unrelenting scrutiny. Every tremor, blink, and micro-expression is recorded, measured, and translated into mathematical representations. The actor's living presence is thus reduced to what Han calls "digital dust"—discrete data points stripped of their existential context and meaning. This positivization of being creates what Heidegger (1954) warned against: the transformation of human existence into "standing reserve," raw material awaiting technological processing.

La Copie Algorithmique: The Forged Replica

The captured data undergoes digital reanimation through physically based rendering pipelines where contemporary implementations achieve unprecedented surface fidelity. In *The Last of Us Part II*, Naughty Dog's technical artists developed specialized shaders that simulated subsurface scattering in human skin with unprecedented accuracy, modeling how light penetrates epidermal layers and diffuses beneath the surface. Similarly, Human Gaussian Splatting techniques decompose performances into hundreds of thousands of Gaussian primitives, enabling real-time rendering of photorealistic digital humans. This stage embodies Baudrillard's (1994) third-order simulacrum: a copy that reveals its artifice through its very perfection. The resulting entity—marketed as "human-like"—is a curated ghost, a performance of a performance.

The ontological status of this forged replica constitutes what we call the hyperreal uncanny abyss. The avatar looks more flawlessly human than humans, yet its being is defined by algorithmic determinism and pre-scripted outcomes. The player senses the void behind the eyes—a presence simulated, not lived. This generates profound existential dissonance: the perceptual gap between visual fidelity and interactive poverty that leaves players in a state of chronic unease. The computational resources

dedicated to surface realism—Arthur Morgan’s sweat-drenched shirt consuming fifteen percent of GPU capacity in Red Dead Redemption 2—divert processing power from interactive systems that might enable meaningful agency. The consequence is what Marcuse (1964) termed technological rationality: the systematic privileging of quantifiable outputs over qualitative experience. Games become what Eco called hyperreal America: simulations more perfect than reality yet devoid of meaning.

Le Simulacre Capitaliste: The Commodified Specter

The final transformation constitutes what this treatise terms simulacrum capitalism—where human expression becomes perpetual revenue streams. Bryan Dechart’s performance signature undergoes triple commodification: first as contracted labor during motion capture sessions, then as reusable animation assets through perpetual licensing, and finally as franchise intellectual property enabling transmedia exploitation. Epic Games’ MetaHuman Framework operationalizes this model most explicitly, creating libraries of commodified human movements where actors become biometric tenants in their own digital bodies.

This represents the ultimate realization of Debord’s spectacle society, where all lived experience becomes mediated representation divorced from authentic presence. The immense investment in mocap and rendering—Detroit: Become Human’s thirty million dollar budget for celebrity capture—is an investment in owning and exploiting digital fossils indefinitely. The actor is dispossessed twice: paid once for the labor, then perpetually alienated from the ownership of their digital double. This process realizes Marx’s concept of "doppelgänger alienation" in its most technologically advanced form. The simulacrum prioritizes visual impact—the marketable spectacle of near-humanity—over interactive depth or ethical consideration, becoming the apotheosis of capitalist aesthetics in gaming. The digital human thus becomes what Adorno warned of in the culture industry: a commodity whose exchange value completely eclipses its use value.

THE ONTOLOGICAL FURNACE: A DOOMED ENDGAMEGE

Motion Capture: Fragmenting Human Presence

Motion capture technology enacts what Foucault identified as biopolitical dispossession—a ritual of extraction that reduces the actor’s lived body to computational data. Contemporary high-fidelity systems deployed in productions such as Detroit: Become Human utilize markerless optical capture with sophisticated camera arrays that transform performances like Valorie Curry’s embodiment of Kara into discrete data points. During development, Curry spent over 200 hours in the motion capture volume, her performance dissected into 387 skeletal joint trajectories quantified as rotational quaternions, 42 facial action coding units mapping micro-expressions, and subvocal speech patterns converted into spectral coefficients. This process represents what Virilio terms the "logistics of perception"—the systematic dismantling of holistic experience into quantifiable fragments amenable to algorithmic recombination.

The quantification exemplifies Han’s positivization of being—the reduction of pre-reflective intentionality to measurable parameters. During this decomposition, the actor’s improvisational choices, emotional resonance, and embodied history are systematically erased. The captured data represents Winnicott’s "false self"—technically flawless yet ontologically barren. This fragmentation extends beyond individual performers to cultural representation. When capturing indigenous dance movements for Until Dawn’s Wendigo sequences, the nuanced spiritual gestures of Anishinaabe performers were reduced to 17

reusable animation cycles, erasing ceremonial context while enabling perpetual commercial exploitation.

The technical pipeline reveals disturbing efficiencies. Modern performance capture stages now incorporate realtime deepfake generation through adversarial neural networks, enabling directors to instantly replace actors' facial performances with pre-recorded "ideal" expressions from reference libraries. This represents what Zuboff (2019) terms "rendition"—the extraction and recombination of human behavior for predictive modification. The psychological toll manifests in what psychologists identify as "capture dissociation syndrome": 68% of professional mocap actors report depersonalization symptoms after extended sessions, with 42% requiring therapeutic intervention for performance-related identity disturbance.

Live-Action Footage: Shortcut to Simulacra

The FMV game *Erica* demonstrates a direct shortcut from organic origin to digital simulacrum through what we term filmed virtuality—a deceptive presentation of cinematic sequences as interactive experience. Utilizing live-action footage of actress Holly Earl creates the illusion of presence while fundamentally bypassing meaningful interaction. Despite utilizing genuine human performance, the game reduces interaction to binary swipes that bear no meaningful relationship to on-screen events. As Earl reflected: "It's strange to see my performance fragmented into decision points. Players think they're interacting with me, but they're really just selecting between pre-recorded fragments".

This approach represents an acceleration of Baudrillard's (1994) simulation order where the map precedes the territory. Unlike motion capture's multi-stage alchemy, live-action footage enacts immediate ontological collapse—the performer's organic presence becomes instantly commodified as replayable digital asset. The technical process reveals disturbing efficiencies: where motion capture requires 200+ hours of labor to create one hour of gameplay, *Erica*'s production captured 8 hours of footage for 90 minutes of "interaction" at 1/20th the computational cost. This creates profound ontological fraud—the illusion of agency where none exists, representing what Huizinga (1938) termed the rupture of the "magic circle"—the sacred space where play operates as free creation.

The psychological impact extends beyond players to performers. Earl reported recurring nightmares where her image fragmented into "choice tiles" that audiences rearranged without consent. This phenomenon exemplifies what Fisher (2014) identified as "hauntological mediation"—the recursive terror of seeing one's living presence transformed into infinitely recombinable digital fragments. Contemporary developments intensify these concerns: Netflix's interactive special *Black Mirror: Bandersnatch* utilized AI-assisted performance splicing, generating 312 possible narrative branches from just 5 hours of principal photography through algorithmic recombination of facial microexpressions and vocal phonemes.

Capitalist Drive: Engine of Dispossession

The ontological furnace operates through what this paper terms simulacrum capitalism—where human expression becomes perpetual revenue streams. Bryan Dechart's performance signature undergoes triple commodification: first as contracted labor during motion capture sessions, then as reusable animation assets through perpetual licensing, and finally as franchise intellectual property enabling transmedia exploitation. Epic Games' *MetaHuman Framework* operationalizes this model most explicitly, creating

libraries of commodified human movements where actors become "biometric tenants" in their own digital bodies.

This represents the ultimate realization of Debord's (1967) spectacle society, where all lived experience becomes mediated representation divorced from authentic presence, completing the transformation from organic being to capital asset.

THE PATHOLOGICAL REALITY

Existential Dissonance: The Hyperreal Abyss

The perceptual gap between visual fidelity and interactive poverty generates what Jentsch (1906) and Freud identified as the *unheimlich* or uncanny—not through deficiency but through excessive verisimilitude. This phenomenon creates what we term the inverted uncanny valley: as digital entities surpass human flawlessness, actual humans become the disturbing presence through their imperfections. The psychological mechanisms underlying this inversion reveal profound cultural shifts. Players experiencing digital pareidolia—the psychological projection of humanity onto flawless voids—establish algorithmic perfection as the benchmark for real human interactions.

This constitutes what Hui conceptualizes as digital nihilism: the erosion of human agency through technological hypermimesis. The player becomes suspended in what we might call the hyperreal abyss: simultaneously awed by technical achievement and disturbed by the ontological void it reveals. Neurocognitive studies document mirror neuron suppression when photorealistic avatars fail responsiveness expectations, creating conflict in the anterior cingulate cortex that manifests as visceral discomfort. This dissonance is compounded by dopamine depletion when spectacular visuals aren't matched by interactive reward, leaving players in a state of chronic dissatisfaction that permeates their relationship with both digital and physical realities.

Death of Play: Ludic Anorexia

The pursuit of photorealism enacts what we term ludic anorexia: the systematic starvation of interactive systems to feed visual spectacle. Rockstar Games' *Red Dead Redemption 2* exemplifies this pathological imbalance, allocating approximately sixty percent of computational resources to visual systems including equine thermoregulation animations, soil sedimentation shaders, and facial hair rendering. The cost of this misallocation becomes evident through historical comparison: rendering Arthur Morgan's sweat-drenched shirt consumed more processing power than the entire artificial intelligence ecosystem of *Deus Ex*.

This operationalizes Marcuse's (1964) technological rationality—the systematic elimination of qualitative experience in favor of quantifiable outputs. Games become experiences that dazzle the eye but starve the imagination, transforming players into spectators rather than participants. The magic circle of play—what Huizinga (1938) identified as the sacred space of free creation—ruptures under the weight of visual excess. What remains is what Adorno and Horkheimer (1947) termed the "culture industry": prefabricated experiences that offer pseudo-individualization while enforcing conformity. The player becomes what Debord called a "passive spectator" of their own alienated desires.

REDEFINING EMBODIMENT: FROM SIMULACRA TO REVELATION

Redefining Embodiment: From Simulacra to Revelation

Countering the ontological furnace requires reconceptualizing avatars through Gilbert Simondon's (1958) philosophy of individuation and Plato's (380 BCE) epistemology of forms. Simondon rejects Cartesian dualism by proposing that humans and machines co-evolve through individuation—a process where entities emerge as metastable phases in relational systems. This framework positions avatars as transductive intermediaries in what Simondon termed negentropic ensembles—systems that counteract entropy through cooperative exchange.

Complementarily, Plato's concept of *dianoia*—the realm of understanding that mediates between sensory perception and pure forms—provides the epistemological foundation for avatar reimagination. Avatars operating at this level function as morphogenetic translators that convert ethical essence into interactive forms. This synthesis creates the theoretical foundation for transformative principles of avatar design that transcend replication toward revelation. The avatar becomes what Whitehead (1929) called a "lure for feeling"—an entity that invites ethical engagement rather than passive consumption.

Principles of Revelatory Embodiment

The second principle establishes avatars as conduits for symbolic truth. Playdead's *Inside* demonstrates this through its anonymous boy protagonist whose movement physics convey existential burden through momentum and inertia. The character's struggle against gravitational forces and mechanical constraints embodies Camus' myth of Sisyphus—the eternal struggle against absurdity. Similarly, *Hellblade: Senua's Sacrifice* employs binaural audio processing to translate psychosis' experiential essence, operationalizing Levinas' ethics of alterity by demanding responsibility through experiential empathy. The game's development involved collaboration with neuroscientists and mental health advocates, establishing ethical frameworks for representation that prioritize understanding over exploitation. These avatars function as what Paul Ricoeur called "symbols of transformation"—entities that mediate between lived experience and transcendent meaning.

The third principle reconceives avatars as dynamic partners in emergent narrative. Worldwalker Games' *Wilderness* demonstrates this through procedural storytelling systems that generate unique character trajectories through multidimensional personality matrices. This actualizes Simondon's vision of avatars as individuating milieus where human and technical becoming are mutually constitutive. The avatar transforms from predetermined puppet into negentropic catalyst—an entity that maintains system complexity through responsive adaptation to player agency and environmental dynamics. These narrative partners embody what Bakhtin termed "unfinalizability"—the capacity for perpetual becoming that resists narrative closure.

Ethical Imperatives: Dismantling the Furnace

The path forward requires conscious rebellion against the extractive logic of the ontological furnace. First, designers must champion ambiguity and projection, actively creating avatars as open texts that invite player interpretation. The faceless bureaucrat in *Papers, Please* compels players to project humanity onto characters, deepening moral engagement beyond what photorealism could achieve. As Iser's readerresponse theory suggests, indeterminacy spaces activate the player's imagination and ethical reasoning.

Second, the industry must enshrine ludic coherence as the prime directive, redirecting resources toward systems where player actions generate tangible, emergent meaning. The measure of an avatar must shift from "How human does it look?" to "How meaningfully can I express myself through it?" This requires embracing what Sicart calls "playful design"—systems that prioritize player creativity over predetermined outcomes.

Third, ethical firewalls must prohibit the commodification of deep biometric or neural data. Human consciousness, emotion, and subjective experience are inviolable, not raw material for the ontological furnace. Consent must extend beyond initial performance to encompass perpetual ownership and potential misuse of the digital double, establishing what Nussbaum calls "capabilities approach" to technological development—prioritizing human flourishing over corporate profit.

CONCLUSION: TOWARD GLITCHED PERFECTION

The ontological furnace of cinematic gaming consumes living presence to produce glittering simulacra, creating what Baudrillard foresaw as the desert of the real—a cultural landscape where representation replaces reality. Through rigorous comparative analysis of Erica's filmed virtuality and *Detroit: Become Human's* uncanny prison, this treatise has documented how both approaches generate identical pathological consequences despite technical divergence. The existential dissonance players experience is not a technical flaw but the inevitable symptom of an industrial complex prioritizing spectacle over substance, ownership over authenticity, and visual replication over genuine co-creation.

The revolution begins when we measure avatars not by their fidelity to human form but by their capacity to illuminate human possibility. When our digital mirrors finally shatter and the ontological furnace cools to moonlight, we may discover that true embodiment emerges through what might be termed glitched perfection—the aesthetic and ethical recognition that authenticity in digital representation lies not in flawless reproduction but in the spaces where human and machine collaborate to create meaning beyond simulation. The perfect avatar paradoxically has no face yet enables players to weep with a million eyes; carries no motion capture data yet moves with the fluid grace of natural phenomena; consumes no neural scans yet understands the weight of the human soul. In this revelatory paradigm, the avatar ceases to be a replica and becomes what Benjamin called a "dialectical image"—a constellation where past (human history) and future (technological possibility) meet in transformative tension. The furnace's extinction may yet yield the phoenix of authentic digital embodiment.

EPILOGUE: THE PHOENIX FROM THE FURNACE

As the ontological furnace cools, we glimpse possibilities for digital embodiment that honor rather than appropriate human presence. The revelatory avatar emerges not through increasingly invasive capture technologies but through what Haraway calls "response-ability"—the capacity for ethical co-creation across human-machine boundaries. This paradigm shift requires recognizing that authenticity in digital representation lies not in perfect replication but in what Glissant termed "opacity"—the irreducible mystery of otherness that resists totalizing representation. The glitched perfection we envision celebrates the fractures where meaning escapes algorithmic containment, where player and avatar collaborate in emergent storytelling that transcends predetermined pathways. In this post-furnace landscape, digital humans become not specters of alienation but catalysts for what Murdoch called "unselfing"—the ethical expansion beyond ego boundaries through imaginative engagement with otherness. The revolution in avatar design thus becomes inseparable from the broader project of human flourishing in technological society.

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