

**Transhumanism and Cyberpunk:
Imagining Human Futures in
Literature and Media**

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Edited by Habib Tekin & Irem Atasoy

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Literature and Media

Irem ATASOY (Ed.) & Habib TEKIN (Ed.)

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Preface

This fourth volume in the *Interdisciplinary Studies on Philology* book series, had its origins in a conviction shared by its editors: that two of the most consequential vocabularies for thinking about the human future, transhumanism and cyberpunk, have too often been studied in isolation from one another, or folded prematurely into a single undifferentiated discourse of “the posthuman.” Transhumanism names a philosophical and cultural movement with its own institutions, journals, and advocates, committed to the deliberate technological enhancement of human capacities and, in its more radical formulations, to the eventual supersession of the biological human altogether. Cyberpunk on the other hand names a genre, a visual idiom, and by now a genuinely global structure of feeling, one that has for four decades staged the same technological ambitions under conditions of corporate domination, ecological exhaustion, and social stratification. To read the two together, as the essays in this collection do, is to recover a conversation that has in fact been ongoing since the early 1980s, when the first wave of cyberpunk fiction and the first stirrings of what would become transhumanist advocacy emerged, by more than one contributor's account, out of a shared cultural moment. It is a conversation this volume aims not to conclude but to reopen, extend, and, where necessary, complicate.

The chapters gathered here range with some deliberateness beyond the Anglo-American core that has traditionally anchored both discourses. Readers will find analyses of Greek myth and French New Wave cinema alongside readings of Chinese digital art, Indian blockbuster cinema, Japanese anime, German-language speculative fiction, Polish science fiction, and an empirical study of financial technology adoption in Nigeria and translation studies. This breadth is a matter of editorial principle rather than mere coverage. Both transhumanism and cyberpunk have historically been narrated as products of a fairly narrow set of national and disciplinary traditions, largely Anglo-American philosophy of technology on the one hand and Anglo-American and Japanese genre fiction on the other.

As editors, we have resisted the temptation to impose a single interpretive framework on the volume, or to adjudicate between the transhumanist and the critical posthumanist positions that recur, sometimes explicitly and sometimes only implicitly, across its chapters. Readers expert in this field will recognise that the relationship between transhumanism and critical posthumanism is itself a matter of ongoing scholarly contention, and we have deliberately allowed our contributors to position themselves along this

spectrum in the manner most appropriate to their material, rather than requiring theoretical uniformity for its own sake. What unites the volume is a shared method: close, historically and philologically informed attention to how specific texts, films, television series, video games, digital artworks, and even ordinary financial applications construct, contest, or quietly naturalise particular visions of the technologically altered human. We take this philological attentiveness, situated between the letter of the text and the wider discursive field in which it circulates, to be the series' distinctive contribution to a field that is more commonly approached through the lens of philosophy, media studies, or the sociology of technology alone.

This volume is dedicated to our contributors, whose research constitutes its true substance. We thank them, first and foremost, for their patience through several rounds of revision, their generosity in engaging with reviewers' comments, and their willingness to bring highly specialised expertise, in philology, film studies, anime and manga studies, translation studies, comparative literature, media theory, and empirical social science alike, into conversation with a set of questions that few of them had previously approached in combination. We are equally grateful to the anonymous peer reviewers who read this volume's chapters with the rigour and generosity that scholarship of this kind requires, and whose interventions materially improved the collection.

It remains only to note that this volume does not pretend to exhaustiveness. Numerous cyberpunk and transhumanist traditions, Latin American, African, Southeast Asian, and others, remain underrepresented here, as do several media forms, video games and tabletop role-playing games chief among them, that have done as much as literature and film to shape contemporary imaginations of the enhanced or obsolete human. We regard this not as a failure but as an invitation: to future volumes in this series, and to the wider scholarly community, to continue the conversation this collection has sought to reopen.

Irem Atasoy & Habib Tekin

Frankfurt am Main

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Introduction: Imagining Human Futures between Transhumanism and Cyberpunk

Irem Atasoy¹

Transhumanism and cyberpunk have become closely interconnected frameworks for imagining and critically examining technologically transformed forms of human existence. Both concepts refer to futures and are preoccupied with the technologically altered body, the destabilised boundary between the organic and the artificial, and the political and existential consequences of a humanity that no longer coincides with itself. However, they do not describe the same future, nor do they share a common evaluative orientation.

Transhumanism, as a philosophical and cultural movement grounded in Enlightenment ideals of rationality and progress, advances a broadly affirmative vision of technological development, advocating the deliberate use of biotechnology, information science, and other advanced technologies to transcend biological limitations, prolong healthy life, enhance cognitive capacities, and, in its most radical forms, move toward a technological singularity in which artificial and augmented forms of intelligence surpass and ultimately supersede human intelligence (Ferrando, 2013, p. 27; Grillmayr, 2020, p. 270-271; Puzio, 2021, p. 23). In this respect, it is closely related to posthumanism, although the two concepts should not be regarded as synonymous. While transhumanism is primarily concerned with transforming the human condition through technological enhancement, posthumanism questions conventional notions of the autonomous, self-governing human subject and challenges the anthropocentric²

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² The term “anthropocene” refers to a proposed geological period characterized by the increasing impact of human activity on the Earth and its ecological systems. It marks a historical condition in which humanity can no longer be

assumption that the human constitutes the central point of existence (cf. Hayles, 1999; Badmington, 2003). From a transhumanist perspective, the posthuman may thus be understood as one possible outcome of this process of technological transformation: a condition in which physical, cognitive, and other human capacities have been altered so extensively that established definitions and boundaries of the human³ are no longer sufficient.

Cyberpunk⁴, in contrast, approaches technological transformation from a predominantly critical perspective. Since the term first appeared in Bruce Bethke's short story *Cyberpunk* (1983), it has developed into a significant mode of speculative fiction concerned with the complex relationship between advanced technology, society, and human existence. In this regard cyberpunk narratives frequently imagine futures shaped by artificial intelligence, cybernetic technologies, virtual environments, and technologically modified bodies⁵, thereby destabilizing conventional distinctions between the human and the machine as well as between the organic and the artificial. Technological advancement in these works, however, does not necessarily correspond to social progress. Highly developed technologies often coexist

regarded merely as inhabiting the natural world but must also be understood as a force capable of transforming it on a planetary scale. It therefore brings the consequences of human intervention, as well as the question of responsibility for them, to the forefront (cf. Baelo-Allué & Calvo-Pascual, 2021, pp. 9-10).

³ From a posthuman perspective, human beings are no longer understood as exclusively biological entities, but as hybrid beings increasingly intertwined with cybernetic systems and artificial intelligence. Within this framework, they may assume hybridized forms in which the boundaries between organic existence and technological augmentation become increasingly blurred (Atasoy, 2025a, p. viii; 2025c, pp. 8-9).

⁴ The “cyber” part in term cyberpunk derives from cybernetics, a field concerned with processes of communication, information, and control in both living organisms and machines, while “punk” refers to the oppositional and anti-establishment attitudes associated with the punk culture of the 1970s and 1980s (cf. Hayles 1999, p 37; Elias, 2009, p 31; Atasoy, 2025b, p. 50).

⁵ Cybernetic bodies can be understood as hybrid configurations in which biological and technological components merge, thereby challenging established boundaries between human and machine and questioning conventional notions of bodily identity (cf. Tekin, 2025, pp. 158–160).

with social inequality, corporate power, ecological degradation, and precarious forms of human existence. The transformation of the human body is therefore closely connected to the social, economic, and political structures within which technology is developed, distributed, and controlled. In this sense, cyberpunk addresses technological transformation not merely in terms of its potential to alter or enhance human capacities, but also in relation to its consequences for human identity, autonomy, and agency. This particular concern with the technological modification of human capacities establishes an important connection between cyberpunk and transhumanism. Both concepts are concerned with the possibility of altering and extending human physical and cognitive capacities through technological means, yet they imagine the implications of this transformation in significantly different ways. Transhumanism generally emphasizes the potential of emerging technologies to overcome biological limitations and expand human capacities, whereas cyberpunk frequently situates comparable forms of technological enhancement within conditions of social inequality, corporate control, and political instability (cf.: More, 2013; Ranisch & Sorgner, 2014). The relationship between them therefore cannot be reduced to a simple opposition between technological optimism and pessimism. Rather, they offer different but interconnected ways of imagining human futures in which the boundaries of the body, identity, and human agency are increasingly subject to technological transformation. The convergence of these perspectives also raises the question of the posthuman.

As technological modification becomes increasingly extensive, however, it also destabilizes the concept of the human itself. Conventional categories of identity, nature, and essence become increasingly difficult to maintain when the boundaries separating biological existence from technological systems are no longer clearly defined (cf. Grillmayr, 2020, p. 273). The technologically enhanced human may eventually approach a condition in which established distinctions between the biological and the technological, the organic and the artificial, and human and machine intelligence are no longer clearly defined. Hayles (1999) identifies cybernetic bodies and cyberpunk as important elements in the development of the posthuman imaginary.

From this perspective, the posthuman does not depend upon a clear separation between embodied human existence and computer simulation, biological organisms and cybernetic systems, or human purposes and intelligent machines. As Hayles (1999, p. 3) states, “the posthuman view configures human being so that it can be seamlessly articulated with intelligent machines.” This dissolution of boundaries constitutes a central point of convergence between transhumanism and cyberpunk, as both imagine forms of human existence that can no longer be understood independently of technological transformation (Bostrom, 2013, pp. 42-44). Literature and media provide a particularly significant space in which these transformations can be imagined, negotiated, and critically examined. Rather than merely representing technological developments, literary and media narratives explore their possible implications for the human body, identity, consciousness, communication, social relations, and the changing position of the human in increasingly technologized environments. They allow possible human futures to be constructed before, alongside, and sometimes beyond their technological realization, while at the same time reflecting the cultural, political, and ethical concerns of the present.

The present volume, the fourth instalment in the *Interdisciplinary Studies on Philology* book series, takes this productive tension as its organising premise. Rather than treating transhumanism and cyberpunk as opposed camps to be adjudicated, the twelve chapters gathered here read them as mutually illuminating discourses: transhumanism supplies cyberpunk fiction with its technological imaginary and its philosophical vocabulary of enhancement, obsolescence, and posthuman succession, while cyberpunk supplies transhumanist thought with a body of cautionary, ironic, and often devastatingly critical case studies. Across cinema, anime, literature, theatre, digital art, and even empirical social-scientific research on financial technology, the contributors examine how narratives of human futurity are constructed, who is authorised to inhabit them, and what is lost, gained, or violently redefined in the passage from the human to whatever comes after it.

Several contributors to this volume explicitly locate cyberpunk within the historical logic of late capitalism, following Fredric Jameson’s influential suggestion that the genre’s paranoid fascination with vast,

illegible communication and corporate networks is itself a distorted figuration of multinational capital. Understood in this way, cyberpunk is not simply a stylistic repertoire of chrome, neon, and rain-soaked megacities, but a sustained meditation on what happens to the ideal of human enhancement once it is subordinated to markets, corporations, and states that have every incentive to make enhancement selective, extractive, and politically weaponised.

The volume opens by insisting that the question of the transhuman is not a peculiarly modern invention but a reformulation of one of the oldest riddles in Western culture. Dimitris Papacharalampous's chapter, "The Riddle of the (Trans)Human: From the Sphinx and Oedipus to Science Fiction Cinema," traces a genealogy from the myth of the Sphinx and Oedipus, by way of Leroi-Gourhan's anthropology of tool use, Bernard Stiegler's account of the co-constitution of the human and the technical, and David Wills's concept of dorsality, into the cinematic trials staged by Jean-Luc Godard's *Alphaville* (1965), Ridley Scott's *Blade Runner* (1982), and Michael Winterbottom's *Code 46* (2003). In each of these films, a male investigator enters a technologically administered city and is drawn into a Sphinx-like trial that tests not merely the identity of a suspect but the very definition of the human: is the human still human when its language, memory, and empathy have been reprogrammed, when its body has been manufactured rather than born, or when its kinship and desire have been subjected to genetic and administrative law? Papacharalampous's argument that the transhuman intensifies rather than replaces an instability that has always characterised the human sets the interpretive tone for much of what follows: the volume as a whole treats the *trans* side of transhumanism less as a clean threshold to be crossed than as a condition of perpetual, often violent, negotiation.

This concern with the body as a site of transformation, dissolution, and reconstitution is developed from a different angle by Julian Knabe in "Uncanny Bodies – Renaissance des Body Horrors," which turns to the recent renaissance of body horror in films such as Alex Garland's *Annihilation* (2018), Julia Ducournau's *Titane* (2021), and Coralie Fargeat's *The Substance* (2024). Drawing on Julia Kristeva's theory of abjection, Sigmund Freud's account of the uncanny, and the

new materialism of Karen Barad, Donna Haraway, and Rosi Braidotti, Knabe argues that where the body horror of the 1970s and 1980s staged the male body's violation by an external, monstrous other, contemporary body horror relocates agency and horror alike within female bodies that are shown to be always already porous, relational, and open to becoming. The shift, the chapter suggests, reflects a broader cultural absorption of posthumanist critiques of bounded, autonomous selfhood, even as films such as *The Substance* insist that the celebration of bodily fluidity can itself be co-opted by the economic and patriarchal structures that commodify the female body in the first place.

Malte Frey's "Love Will (Not) Save the World: Transhumanism after Evangelion in Mecha Anime" turns from cinematic body horror to the changing fortunes of transhumanist transcendence in Japanese mecha anime. Frey shows how the classical mecha genre, from *Mobile Suit Gundam* onward, encoded a transhumanist ideal of masculine empowerment through technological enhancement, before Hideaki Anno's *Neon Genesis Evangelion* (1995) deconstructed that ideal by reframing the piloted robot as a vehicle for psychological vulnerability rather than triumphant transcendence. The chapter then follows this deconstruction into the *sekai-kei* ("world-type") fictions that emerged in *Evangelion*'s wake, such as *Eureka Seven* (2005) and *Darling in the Franxx* (2018), in which technology becomes a conduit for affective, even interspecies, intimacy rather than instrumental control, before arguing that more recent works such as *SSSS.Gridman* (2018) mark the emergence of a "post-*sekai-kei*" sensibility that refuses both transhumanist instrumentalism and the small-scale affective utopianism of its predecessors in favour of a more complex, only partially redemptive, engagement with a larger social reality.

Márk Horváth and Ádám Lovász push transhumanist logic toward its most extreme and unsentimental conclusion in "Singularity, Neoliberalism and the Posthuman Condition: An Unconditional Accelerationist Reading of Charles Stross's *Accelerando*." Their chapter offers an unconditional accelerationist reading of Charles Stross's novel *Accelerando* (2005), in which the technological singularity is understood as the inevitable and, from a certain philosophical vantage, even

desirable dissolution of the human into a Vile Offspring of autonomous, non-biological intelligences and self-aware corporate entities. Drawing on Nick Land's cybergothic theory-fiction, Gilles Deleuze and Félix Guattari's account of deterritorialisation, and Jean Baudrillard's theory of simulacra, Horváth and Lovász read Stross's novel as a literalisation of an economic and technological logic already at work in contemporary capitalism, one in which human labour, human embodiment, and eventually the human species itself become obsolete inputs to an autonomous, self-optimising system of technocapital. Their chapter's uncompromising affirmation of a post-human, post-biological future stands in productive tension with the volume's other contributions, several of which insist, whether through myth, body horror, or affective anime, that something of ethical or existential significance is lost when the human is discarded as mere wetware.

The volume's engagement with the political economy of technological futurism is not confined to speculative fiction. Tina C. Touitou and Benjamin A. N. Touitou's "Influence of Digital Transformation and Artificial Intelligence on Service Quality and User Satisfaction in Mobile Money Service among Babcock University Users" shifts the discussion from speculative representations to contemporary technological practice. Their chapter presents original empirical research into the adoption of artificial intelligence and digital transformation in mobile money services among university students in Nigeria, employing the Technology Acceptance Model and the SERVQUAL framework to test the determinants of user satisfaction and trust. Read alongside the volume's more speculative chapters, this study serves as a sobering reminder that the technological transformations imagined at the far horizon of transhumanist and cyberpunk fiction are already reshaping ordinary financial life in the present, and that questions of trust, access, and infrastructural reliability, far from being resolved by technological sophistication alone, remain stubbornly bound to human perception, habit, and institutional context.

The focus then returns to cyberpunk narrative with Willow Sipling's "The Ladder of Divine Ascent and the Top of Arasaka Tower: *Cyberpunk: Edgerunners* as *Scala* Literature," the first of a group of chapters

examining how cyberpunk conventions are reinterpreted through different literary, cultural, and ideological traditions. Sipling reads the Netflix animated series *Cyberpunk: Edgerunners* through the perspective of *scala* literature, the tradition of “ladder” narratives descended from John Climacus’s seventh-century *Ladder of Divine Ascent* and traceable through the *Lotus Sutra*, the biblical parable of the prodigal son, the gnostic *Hymn of the Pearl*, Dante’s *Divine Comedy*, and John Bunyan’s *Pilgrim’s Progress*. Structuring the protagonist David Martinez’s trajectory of purification, illumination, and unitivity around this ancient tripartite schema, he proposes that *Edgerunners* stages a grimly inverted or false ladder, in which the ascent toward technological and social transcendence, achieved through progressively invasive cyberware, culminates not in perfection but in the erosion of the very self that sought it.

Rajat Sharma’s “Mythologising Cyberpunk: *Kalki 2898 AD* and the Rewriting of Dystopia in Indian Cinema” subsequently relocates the discussion to Indian cinema, demonstrating how cyberpunk’s globally circulating conventions can be appropriated and ideologically reconfigured in a markedly different cultural context. Sharma offers an analysis of the 2024 blockbuster *Kalki 2898 AD* as the first sustained instance of cyberpunk in Hindi-language film. The chapter shows how the film borrows cyberpunk’s familiar apparatus – a stratified megacity, corporate-technological sovereignty, biopolitical control over reproduction, and ecological collapse – only to resolve its dystopian premise not through the marginal, insurgent resistance characteristic of classical cyberpunk protagonists but through the restoration of a sacred, mythologically sanctioned order drawn from the *Mahabharata* and the *Bhagavata* and *Kalki Puranas*. He situates this civilisational futurity within the broader rise of the pan-Indian blockbuster and within the contemporary politics of Hindu majoritarianism, arguing that *Kalki 2898 AD* quietly subordinates the political grammar of global science fiction to an ideological project in which the future is not built through struggle but remembered as the fulfilment of a pre-existing cosmic destiny.

From Indian cinema, the volume moves to German-language speculative fiction in Benedikt Pühretmayr’s “Halth Earth or: neoliberalist

realism David Bröderbauers *Die Halbe Welt* im Wechselspiel zwischen Cyberpunk und Solarpunk.” Pühretmayr situates David Bröderbauer’s novel *Die Halbe Welt* at the interface of cyberpunk and its utopian counter-genre, solarpunk. Following Fredric Jameson’s account of cyberpunk as an expression of late-capitalist anxiety and reading the novel against the neoliberal realism that has come to dominate contemporary economic imagination, the author examines how the novel’s oscillation between dystopian extrapolation and utopian, ecologically grounded alternatives reflects a broader tension within contemporary speculative fiction between diagnosing the present and imagining its supersession.

Malte Frey’s second contribution to the volume, “Performing the Untamed in (Post-)Cyberpunk Anime: Environmental Imagination and Media Ecology in *Psycho-Pass*,” returns to Japanese anime while shifting the emphasis from technological transcendence to environmental imagination. He questions what has happened to the natural environment within cyberpunk and post-cyberpunk anime, taking *Psycho-Pass* as his central case. Where classical cyberpunk, from Gibson’s *Neuromancer* to *Blade Runner*, appeared to displace the non-human natural world entirely in favour of a totally technologised urban environment, Frey demonstrates that even ostensibly nature-less cyberpunk settings continue to stage an anxious, unresolved relationship between the human ambition to control and subjugate the non-human world and the recurrent, untamed return of ecological forces that resist full technological domestication. Taken together, Frey’s two contributions trace a movement away from instrumentalist models of technological mastery toward affective, ecological, and relational forms of complexity.

Despoina Poulou’s “From Text to Ruin: Adaptation, Excess, and Futurity in Andrzej Żuławski’s *On the Silver Globe*” reaches back before the cyberpunk genre’s formal emergence to recover an untimely precursor. Poulou turns to Andrzej Żuławski’s 1988 film adaptation of his great-uncle Jerzy Żuławski’s 1903 novel *On the Silver Globe*. Reading the film’s fraught production history, its philosophical debts to Spinoza and Nietzsche, and its vision of colonisation, myth-making, and civilisational self-repetition on an alien moon, she argues that

the *Lunar Trilogy* anticipates, decades in advance, cyberpunk's characteristic suspicion that technological and colonial expansion do not escape the tragic patterns of human history so much as reproduce them on a new stage.

Sandra Braun's "Lu Yang: Electromagnetic Brainology – die künstliche Superintelligenz als posthumane Spezies? Ästhetisch-spirituelle Zukunftsvisionen im transformativen Raum," deals with the work of Chinese media artist Lu Yang. Braun examines multimedia installations that fuse Buddhist cosmology, neuroaesthetics, and cyberpunk iconography to imagine the transcendence of embodiment through digital and spiritual means alike, offering a genuinely transcultural counterpoint to the largely Euro-American and Japanese genealogies traced elsewhere in the volume. By placing technological superintelligence alongside spiritual and aesthetic forms of transformation, Braun's contribution brings the volume's recurring questions of embodiment, transcendence, and posthuman becoming into a final transcultural configuration.

Erdinç Aslan's "Yapay Zekâ Çevirisi ve Çevirmenlik Mesleğine Yansımaları" examines the transformative impact of artificial intelligence on translation practices and the professional role of translators. Aslan traces the development of automated translation from mechanical and machine translation to contemporary AI-based systems, highlighting how these technologies have reshaped translation workflows through increased efficiency, reduced workloads, and new forms of human-machine collaboration. At the same time, the contribution addresses ethical concerns, data security, algorithmic bias, and the potential erosion of translators' creative skills. By emphasizing the emergence of new professional roles such as post-editing, quality assessment, and revision, Aslan's contribution ultimately reframes AI not as a replacement for human translators, but as a transformative force that is redefining professional expertise and the future of translation.

Taken together, these twelve chapters resist any single, unified verdict on the relationship between transhumanism and cyberpunk, and this resistance is itself a central finding of the volume. Several contributors insist that transhumanism's promise of enhancement, whether

realised through cybernetic implants, genetic modification, or digital transcendence, cannot be evaluated apart from the political, economic, and mythological structures that determine who is enhanced, who is exploited in the process, and whose vision of the future is authorised to become normative. Others suggest that cyberpunk's dystopian scepticism has itself become an exhausted or co-optable convention, capable of being annexed to civilisational and nationalist projects, such as Hindutva, that are in most respects antithetical to the genre's original anti-authoritarian impulses, or of being softened, in post-*seikai-kei* anime, into narratives of affective community that neither fully embrace nor fully reject the transhumanist horizon. Still others locate in ancient literary and religious traditions – the riddle of the Sphinx, the ladder of divine ascent, the myth of the prodigal son – resources for understanding contemporary technological anxieties that long predate the vocabulary of transhumanism itself, suggesting that what is often presented as an unprecedented rupture in human history is better understood as the latest iteration of a much older and more persistent set of questions about what, if anything, remains constant across the human's transformations.

What unites the volume, finally, is a shared conviction that literature and media are constitutive of the categories through which such change becomes thinkable, desirable, or terrifying in the first place. Whether through the tragic cinema of Godard, Scott, and Winterbottom, the visceral aesthetics of contemporary body horror, the affective logics of Japanese anime, the accelerationist philosophy embedded in Anglophone science fiction, the mythological reconfigurations of Indian cinema, the German-language dialectic of cyberpunk and solarpunk, the transcultural digital art of Lu Yang, the scala structure of a Polish science-fiction epic, or the empirical study of mobile financial technology in Nigeria, each chapter in this volume demonstrates that the future of the human is never simply arriving from elsewhere. It is being written, animated, filmed, coded, and performed, here and now, in the very act of imagining what comes next.

Ultimately, the contributions to this volume demonstrate that imagining human futures requires an examination of how technology may transform human existence and how these transformations reshape

the very categories through which the human is understood. Transhumanism and cyberpunk approach this question from different perspectives, yet their intersection reveals that technological change cannot be separated from its cultural, social, political, and ethical contexts. The futures explored across these chapters therefore do not provide a single answer to what may come after, beyond, or alongside the human. Rather, they expose the complexity of a process in which established boundaries between the human and the technological, the organic and the artificial, and autonomy and control are continuously negotiated. In this sense, the volume understands the future of the human as an open and contested space in which different possibilities of human and posthuman existence can be imagined, questioned, and critically examined.

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The Riddle of the (Trans)Human: From the Sphinx and Oedipus to Science Fiction Cinema

Dimitris Papacharalampous¹

1. The Ancient Sphinx and the Technical Constitution of the Human

One of the earliest symbolic formulations of the human condition in Western culture can be traced to the riddle of the Sphinx. In Greek mythology, the Sphinx is a creature with the body of a lion, the wings of a bird, and the head of a woman. The episode forms part of the broader myth of Oedipus. The Sphinx, positioned near Thebes, plagued the city and killed those who could not solve her riddle: “What is it that has one voice and becomes four-footed, two-footed, and three-footed?” (Pseudo-Apollodorus, 1921, 3.5.8; Athenaeus, 1927–1941, 10.456b).

Oedipus arrives at Thebes after consulting the oracle at Delphi, where he had asked about the truth of his identity, having shortly before unknowingly killed his father, Laius, at a three-way crossroads. He confronts the Sphinx and answers that the riddle refers to the human being: the infant who crawls on all fours, the adult who walks on two legs, and the old man who relies on a staff. By solving the riddle, he saves Thebes, wins the throne, and marries his mother, Jocasta, still unaware of her identity, setting in motion the events that will lead to his tragic end. Yet Oedipus’ answer does not exhaust the meaning of the riddle. Instead, it raises a deeper question: what is the human being, and what remains constant despite transformations of body and mind?

A closer look at the third stage of life reveals a dimension rarely acknowledged in traditional interpretations. The staff that becomes the old man’s “third leg” is not merely a metaphor for weakness or decline. It may also be read as a sign of technical incorporation: an external implement becoming part of the body’s mechanics of

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movement. The body no longer moves solely through its natural capacities but through a technical addition that supports, extends, and reshapes it. The three-legged human may therefore be understood as a mythical anticipation of prostheticity. Long before the cyborg or the transhuman body, the myth had already imagined the human as a being that does not fully coincide with its natural form.

Leroi-Gourhan provides an important anthropological foundation for this reading. For him, anthropogenesis cannot be separated from erect posture, the freeing of the hand, the shortening of the face, and the possession of movable implements (Leroi-Gourhan, 1993, p. 20). Erect posture releases the hand from locomotion, making it available for manipulation, fabrication, and technical activity. More broadly, human evolution is marked by the exteriorisation of functions that, in other animals, remain internal to biological adaptation. The connection with the Sphinx is direct, since the riddle is likewise organised around locomotion. The four, two, and three legs are not merely numerical metaphors for the stages of life. They express different relations between body, movement, balance, and support. Seen through Leroi-Gourhan, the riddle links locomotion to technics: bipedality frees the hand, while the staff makes movement prosthetic.

Stiegler develops this position further by bringing Leroi-Gourhan's account of exteriorisation together with the myth of Epimetheus and Prometheus. The human does not emerge as a naturally endowed and self-sufficient being: Epimetheus distributes capacities among the animals but leaves the human unprotected, so that technics compensates for an originary lack (Stiegler, 1998, pp. 187–188). In Stiegler's reading of Leroi-Gourhan, this lack is not merely repaired by tools; it defines hominisation itself, since "the appearance of the human is the appearance of the technical" and, consequently, "it is the tool, that is, *tekhnē*, that invents the human" (Stiegler, 1998, p. 141). Oedipus' staff can therefore be understood not simply as prosthetic to the natural body, but as a form of *tekhnē* through which the human condition is shaped across time and bodily change.

Wills adds a further dimension through the concept of dorsality, arguing that technicity does not appear only in tools consciously

produced and used by human beings. It also operates from behind, beyond immediate vision, anticipation, and complete control. Human beings tend to perceive technology as something external that stands before them. For Wills, however, the technical dimension is already inscribed in bodily articulation, locomotion, and the conditions of human existence. Technology is therefore not a later addition to an originally natural and self-contained human being but participates from the outset in the constitution of the human itself (Wills, 2008, pp. 3–5, 7–9).

From the perspective of dorsality, the staff in the riddle seems to arrive from behind: it appears last in the sequence of life stages, yet the riddle places it morphologically alongside the four and two legs, incorporating it into human corporeality. The human is therefore presented not as a consistently bipedal being, but as a succession of modes of locomotion, whether natural or technologically supported and, in Wills's terms, always technically articulated. The staff thus reveals the unseen technicity of the human.

The connection between the Sphinx and the transhuman can also be extended to language. Oedipus solves the riddle by answering "the human." Yet this answer is not pre-existing, unmediated knowledge. It is a linguistic act and therefore an act of mediation. The human recognises itself through a word, within a symbolic system it never fully possesses. Here Stiegler's thought provides a crucial bridge. For him, technics is not confined to tools in the narrow sense but concerns the exteriorization of human capacities in forms that exist beyond immediate bodily presence and individual consciousness. Language belongs to the same framework: not as a mere instrument used by an already complete human being, but as a form of exteriorization through which the human constitutes and interprets itself. The human becomes human by moving beyond itself into tools, traces, memories, signs, words, and inventions. Stiegler therefore asks whether *technē* derives from *logos* or *logos* from *technē*, before advancing the more radical position that both express the same movement of being outside oneself (Stiegler, 1998, pp. 193–194).

Wolfe connects this position with posthumanism. He distinguishes posthumanism from transhumanism: whereas the latter often

continues the humanist ideal of enhancement and perfectibility, the former recognises that the human has always been embedded in biological, technological, and symbolic networks that precede any claim to autonomy (Wolfe, 2010, pp. xiii–xvi). He therefore describes the prosthetic coevolution of the human animal with tools and with external archival mechanisms such as language and culture (Wolfe, 2010, pp. xv–xvi).

In this light, the answer “the human” does not restore the human to a pure essence. On the contrary, it shows that the human can define itself only through something that exceeds it. Just as the staff is external to the body yet becomes part of its movement, language is external to individual consciousness yet becomes a condition of self-understanding and self-definition. The human is therefore not only a prosthetically constituted body but also a linguistically and technically mediated being: the body rests on the staff; identity rests on the word.

The bridge to the transhuman thus becomes clearer. The transhuman concerns not only the mechanically enhanced body but also technologically mediated language and communication: artificial memories, digital archives, genetic and informational codes, algorithmic recognition, and machine languages. The human is destabilised not only when the machine intervenes in the body, but also when it assumes functions regarded as uniquely human – memory, interpretation, communication, decision, and naming. From the staff to code, and from technically supported locomotion to informational self-recognition, the Sphinx’s riddle opens onto a wider problem: the human requires external supports not only in order to move, but also in order to say “human.”

Following this line of thought, the riddle of the Sphinx can be understood as an ancient theoretical model of the technically extended human, while the transhuman can be approached not simply as the present or future of humanity, but as the modern intensification of an ancient problem: the human has always been open to technics, supplementation, and transformation, exposed to the promise and danger of its own development.

This theoretical trajectory will now be traced through three films: Jean-Luc Godard's *Alphaville* (1965), Ridley Scott's *Blade Runner* (1982), and Michael Winterbottom's *Code 46* (2003). The films give cinematic form to the connection between the Sphinx and the transhuman outlined above. In different ways, they return to the Oedipal question of human identity and stage processes of examination, recognition, and control that resemble a modern Sphinx-like trial. Each asks what counts as human when memory, language, kinship, consciousness, and the body can be technically constructed, programmed, or reconfigured. In all three cases, the answer carries consequences for survival, recognition, and belonging. The following readings therefore examine not only how these films represent the transhuman, but what models of the transhuman they imagine and what hopes or fears they attach to it, and what attitude they adopt towards the unstable future of humanity.

2. *Alphaville*: Language, Poetry, and the Cybernetic Sphinx

In *Alphaville*, the secret agent Lemmy Caution arrives in a technocratic city governed by the supercomputer Alpha 60. The machine regulates language, thought, and behaviour, erasing words such as “love,” “conscience,” and “why,” and executing those who love, weep, or behave “irrationally.” Lemmy meets Natacha, the daughter of the scientist who created the computer, who has grown up under this regime and is initially unable to recognise either the forbidden words or the experiences they express. Poetry and love gradually awaken her memory and emotional consciousness, while Lemmy ultimately turns against Alpha 60 a riddle that its mechanical logic cannot assimilate, bringing about its collapse.

The film emerges at a moment when postwar Europe is still working through the memory of totalitarianism and industrialised mass crimes, while cybernetics, automation, and technocratic administration are presented as means of social organisation and control. Godard films contemporary Paris, transforming its new architectural complexes and electronic systems into images of a dystopia already present. Darke aptly describes *Alphaville* as “a future already latent in the

present” (2005, p. 12). The film’s insight lies less in predicting future technologies than in diagnosing an established logic in which information, efficiency, and prediction become measures of human value.

The connection with the Sphinx is made explicit when Lemmy recalls how Natacha spoke to him in her “pretty sphinx voice” (Godard, 1965, 00:37:37–00:37:43). The beautiful voice of a creature associated both with enigmatic silence and with the many-toned utterance of its riddle – the *poikilodos* Sphinx of Sophocles – condenses the paradox of the heroine. Natacha has a voice, but not yet the words through which she could recognise and express her inner experience. Cut off from the linguistic and mnemonic means of self-knowledge, she embodies the question of how the human can persist when the words that would render it conscious have been removed. When she finally says “I love you,” she reveals the humanity that had survived within her, as her voice and body express what technological power had rendered unsayable (Godard, 1965, 01:38:36–01:38:37).

Alpha 60 functions as a mechanical, inverted Sphinx: it subjects individuals to a lethal trial of questions, evaluates their answers, and decides whether they are entitled to survive. Its questions demand precise and classifiable responses, while humanity itself is treated as both malfunction and crime. The mythical Sphinx kills those who cannot solve the riddle; Alpha 60 kills those who remain capable of posing, or even embodying, one. The words Lemmy uses in his answers – “poetry,” “conscience” – do not merely convey information. They introduce ambiguity, interiority, and meaning that cannot be reduced to data. Poetry resists mechanisation not because it rejects logical thought, but because it places alongside it other modes of meaning-making through metaphor, ambiguity, and semantic multiplicity. This is why Mills describes it as “the language of revolution,” since it disrupts the normative idiom through which the machine controls thought and perception (2018, pp. 433, 436–438).

At the end, the examined subject becomes a “poet-Sphinx” and returns a riddle of his own to the examiner (Gómez Müller, 2020, p. 157). Lemmy asks Alpha 60 to identify something that remains unchanged by day or night, whose past anticipates the future, and which

moves in a straight line yet ultimately forms a circle. Both riddles define the human through time, but from opposite directions: the Sphinx's riddle focuses on the transformation of the human form across the successive stages of life, whereas Lemmy's riddle seeks what remains stable throughout these transformations – the mnemonic, emotional, and relational continuity that allows the subject to continue recognising itself.

Here lies the riddle of the transhuman: *Alphaville* dramatises a linguistically, cognitively, and socially imposed transformation that erases memory, lived time, emotion, and the relation to the other – the conditions of subjective continuity. The question is whether such a transformation still represents a continuation of the human or its replacement. Even Bostrom, who views technological enhancement positively, links personal identity to the preservation of memories, desires, relationships, and self-conception (Bostrom, 2013, pp. 41–42).

The version of the transhuman presented in the film is not primarily corporeal. The inhabitants possess neither implants nor mechanical limbs; rather, they have been reconstituted as elements within an informational system. Hayles notes that posthuman subjectivity does not require visible modification of the body, but may arise from conceiving the human as a material-informational system (1999, pp. 2–4). In *Alphaville*, thought, language, and desire have internalised the code. This internalisation produces what Darke describes as the technocrat – an individual who has absorbed technological logic so completely that he becomes a “reflexive adjunct” and ultimately an instrument of the machine (2005, pp. 69–70).

Alpha 60's declaration that ordinary human beings must “be destroyed – that is to say, transformed” condenses the darker dimension of the transhumanist prospect (Godard, 1965, 00:56:19). The transcendence of the human may entail either an expansion of human capacities or the elimination of those who fail to conform to the desired norm. Whereas approaches such as those of Bostrom and More associate technological enhancement with choice, self-direction, or the open society (Bostrom, 2013; More, 2013, pp. 4–6), the film asks

what happens when self-transformation becomes compulsory and improvement is defined by the very system that imposes it.

Ross identifies within transhumanism an “epistemological certainty”: the assumption that every human limitation can be treated as a technically solvable problem (2020, pp. 13–16). Alpha 60 represents the political realisation of this certainty. It does not need to ask what the human is, because it believes that it has already answered: the human is information, logical response, and predictable function. Poetry, love, and grief are not technical problems; yet the machine’s attempt to reduce them to such problems produces literally insoluble difficulties within its own system.

Stiegler’s thought, however, helps explain why Alpha 60 is not simply an external enemy. Technics exteriorises human capacities, but may return as a system that organises language, time, and behaviour. Alpha 60 is a detached form of human reason that has become autonomous and absolute. The conflict is therefore between the human and one of its own functions, which claims to become the entire definition of the human. Alpha 60 thus becomes the riddle it is trying to solve. Lemmy traps the machine into thinking like a human and becoming his “likeness” and his “brother” (Darke, 2005, p. 70). In terms of cybernetic reflexivity, the observer is drawn into the system it analyses (Hayles, 1999, p. 10). As a human creation, Alpha 60 cannot define the human without examining its own relation to it. Is it the transcendence of the human or its mutilation? The attempt to solve the human becomes an attempt to solve itself.

The film does not propose a return to a pure, pre-technological humanity. Cinema is itself a mechanical medium, and Godard incorporates the paradox of criticising technology through technology by bringing poetry and science together (Darke, 2005, pp. 67–68). In Heideggerian terms, Alpha 60 reveals beings exclusively as calculable and available, whereas poiesis keeps open a different mode of revealing (Heidegger, 1977, pp. 14–21, 34–35). The deeper opposition in *Alphaville*, then, is not between the human and technology, but between two techniques of language: the closed code that restricts meaning and poetry that keeps it open. The machine believes that it

has exhausted the answer “the human”; Lemmy shows that the human survives because it remains a riddle.

3. *Blade Runner*: Empathy, Animality, and the Trial of the Human

If *Alphaville* imagines a world in which the human is transformed through the capture of language, memory, and affect, *Blade Runner* transfers the problem to the uncertain border between biological and artificial life. In the ecologically devastated Los Angeles of 2019, Deckard, a hunter of Replicants – biotechnologically engineered and physically enhanced beings – is assigned to track down four fugitives who have returned illegally to Earth from the off-world colonies. Their leader, Batty, seeks out his creator, Dr Tyrell, hoping to extend their four-year lifespan. At the same time, Deckard meets Rachael, a Replicant unaware of her artificial nature and convinced that her implanted memories are her own. The pursuit confronts hunters and hunted alike with a radical crisis of identity.

The central trial is now the Voight–Kampff test. As in the Sphinx episode and in *Alphaville*, examination presents itself as an intellectual or diagnostic procedure while in fact determining life and death. The test evaluates verbal answers alongside involuntary bodily responses to emotionally charged questions, often involving the mistreatment of animals. It thus investigates the capacity for empathy, the quality believed to distinguish humans from their artificial copies. Those who fail are executed. Yet the examiner is also exposed to danger: in the opening scene, the Replicant kills the man examining him, revealing that beneath the cold psychometric procedure the archaic duel between hero and monster survives.

The Voight–Kampff test can be understood as a point of convergence between the riddle of the Sphinx and the Turing test. In all three cases, human identity becomes a problem of recognition that questions and answers are expected to resolve. As Hayles argues, the Turing test brackets embodied presence, allowing intelligence to be judged as verbal performance and symbolic manipulation (1999, pp.

xi–xii). The riddle of the Sphinx, by contrast, defines the human through a body that changes over time. The Voight–Kampff test combines these two models: it preserves the dialogical structure of the Turing test, but reintroduces the body through the pupil, response time, and involuntary affect. Norris makes this connection with the riddle explicit. Gaff’s origami figure can be read either as a man with a tail or as a three-legged man: the first reading evokes the evolutionary kinship between human and animal, while the second recalls the riddle of the Sphinx and links Deckard to Oedipus. Both identify the human without knowing who, or what, they themselves are (Norris, 2013, pp. 45–46).

At first, the Replicant appears to embody the optimistic trans-humanist ideal of overcoming biological limitations through technology, as expressed in accounts such as those of Kurzweil and Harris: it is stronger, more resilient, and often more intelligent than the human (Harris, 2007; Kurzweil, 2005, pp. 9–15). The film, however, immediately reverses the logic of enhancement. The enhanced body does not produce a free subject but a product designed for forced labour, combat, and brief use. The Replicant is biologically enhanced but politically degraded, more capable as an organism and less recognised as a person. *Blade Runner* therefore shifts the issue from what the body can become to who constructs it, who owns it, and who determines the length of its life.

Haraway and Braidotti offer perhaps the most important theoretical frameworks for understanding this entity. Replicants are not cyborgs in the narrow sense of humans with mechanical limbs, but they correspond to Haraway’s conception of the cyborg as a hybrid of organism and machine, disrupting the boundaries between the natural and the artificial, birth and manufacture, memory and programming. Haraway herself, moreover, recognises Rachael as an emblematic figure of cyborg culture (Haraway, 2016, pp. 5, 59–60). *Blade Runner* does not confine the transhuman to the relation between human and machine. Instead, it places it within a shifting triangular relation between animal, human, and technical being. Real animals have almost disappeared, their artificial substitutes have become commodities and status symbols, while empathy towards animals is used as a criterion of

humanity. The boundary between human and machine thus passes through the older boundary between human and animal.

As we have proposed, the riddle of the Sphinx had already suggested a triangular structure. Its answer brings together animal quadrupedality, human upright posture, and the technical addition of the third leg, while the Sphinx herself is an animal-human hybrid. This structure aligns with Haraway's idea of companion species, where the human is shaped through its relations with other-than-human beings (Haraway, 2008, pp. 3–4, 16–18). *Blade Runner*, however, restages this ancient structure in biotechnological terms: artificial animals, engineered bodies, and Replicants shift the relation between human and animal towards a wider posthuman field. It is here that the film converges with Braidotti's view of posthuman subjectivity as relational, transversal, and linked to zoe, the nonhuman force of life that connects the human to both animality and technicity (Braidotti, 2013, pp. 60, 95).

For Derrida, the animal is not merely the silent object through which the human confirms its superiority; it looks back, exposes the human, and returns the question of identity from the side of the nonhuman (Derrida, 2008, pp. 3, 10, 29). The Sphinx enacts this reversal: a hybrid nonhuman being that speaks, questions, and judges the human. In *Blade Runner*, the animal returns through artificial animals and the Voight–Kampff test, where humanity is assessed not only against the machine but through its relation to nonhuman life. The name “Replicant” also recalls Derrida's critique of “the Animal,” since different sentient beings are compressed into one category, making their destruction appear legitimate within a juridical logic of classification (Derrida, 2008, pp. 31–32).

Agamben gives the same relation a political dimension. The “anthropological machine” draws the boundary between the human and the nonhuman, deciding which life is recognised and which is excluded (Agamben, 2004, pp. 33–38). In *Blade Runner*, the Voight–Kampff test extends this operation to the technical being: it decides which life is considered human and which may be destroyed, using the relation to the animal as its criterion. Replicants thus occupy the position of the

animalised other: alive yet owned, capable of suffering yet denied the status of persons.

From this convergence of film, myth, and theory emerges an expanded conception of the transhuman: not as a past or future stage, nor simply as a transition towards the posthuman, but as an enduring condition within which the human exceeds, negotiates, and continually redefines itself in relation to both the animal and the technical. *Blade Runner* confirms Haraway's crossing of boundaries, but gives it a tragic form: while Haraway's cyborg stands outside the narrative of origin and the model of the organic family, the Replicants search for a father, an origin, memories, and more time to live (Haraway, 2016, pp. 7–9). Batty does not transcend mortality; he experiences it with particular intensity and recognises in Deckard the same fear of death. By saving him, he displays the empathy that the test regards as exclusively human. His act does not merely prove that an artificial being can become human; it reveals that the biological human must also become humane by recognising the life of the other.

In *Blade Runner*, the human is not the one who securely possesses a natural essence, but the one who can endure uncertainty about what they are and recognise, in the mortality of the other, their own unstable humanity. The transhuman does not provide the final answer to the question opened by the Sphinx; it becomes the trial through which the human is called upon to prove that it still deserves the name.

4. *Code 46*: Genetic Law, Desire, and the Biopolitical Sphinx

Where *Blade Runner* centres on artificial beings excluded from the category of the human, *Code 46* presents a world in which technical modification has become a generalised condition of social existence. William, an investigator of insurance violations, travels to a future Shanghai to identify the forger of *papeles*, the biometric permits through which the corporation Sphinx controls access to protected cities and the mobility of citizens. Thanks to an artificial “empathy virus,” he realises that the guilty party is Maria, a Sphinx employee, but protects

her and begins a sexual relationship with her. When she becomes pregnant, she is forced to terminate the pregnancy because she has violated *Code 46*, which prohibits the union of persons with a high degree of genetic similarity: Maria belongs to the same cloned genetic line as William's mother. Their escape fails; he returns to his family after memory erasure, while Maria is exiled to the outside, carrying alone the burden of memory.

The powerful corporation assumes the function of the ancient Sphinx as guardian of access to the city and as an authority that examines human identity. Bennett reads the hybrid mythical figure as a symbol both of posthuman identity as a molecular bricolage of constituent elements and of the assimilative hybridity of corporate capitalism (Bennett, 2014, p. 69). By borrowing its name, the corporation therefore expresses not only the recombined and technically modifiable identity of transhuman subjects, but also the diffuse power that examines, classifies, and incorporates them.

The modern Sphinx, however, does not demand a verbal answer. The body answers through DNA, biometric data, and administrative codes. Where the riddle required interpretation, Sphinx requires certification; where the answer "human" opened the problem of self-knowledge, the *papele* temporarily closes it through authentication. Self-knowledge is not only unnecessary but almost impossible, since subjects may have undergone genetic, bodily, or psychic interventions – artificial viruses, memory erasures, and bio-conditioning – of which they are unaware. Sphinx thus knows more about individuals than they can know about themselves: as the film declares, "The Sphinx knows best." Thus, the *papele* may be understood as a biopolitical version of the "third leg" of the Sphinx's riddle: a technical aid that enables not only the movement of the body through space, but also the political movement of the subject within society. Without it, the human being may walk, but cannot advance, enter, or belong; bodily mobility becomes a question of social recognition.

The most important feature of this sphinx-like trial is that it does not take place only once. In the world of *Code 46*, the confrontation with Sphinx is continuous. Previous recognition does not guarantee the

future validity of the person: permits expire, conditions of access change, while subjects themselves are physically and biotechnologically reconfigured, either voluntarily or through imposed interventions. For this reason, they are repeatedly examined and may be invalidated, marginalised, or exiled. Human status becomes a continuously verified condition rather than a given right. Since the regime of control combines genetic information, labour utility, mobility, and administrative approval without clear or stable criteria, the modern Sphinx does not demand one final answer but continually modifies the question. The transhuman thus acquires a crucial political dimension: its instability concerns the constant dependence of a changing existence on the decision of an opaque system.

The transhuman in *Code 46* does not appear as a distinct category of beings set against an unchanged humanity, but as a generalised condition of technical modifiability. William possesses artificially enhanced empathy; Maria comes from a cloned genetic line; memories are erased or reconstructed; desire is reprogrammed; bodily features and body parts are treated as replaceable. The film thus shifts the imaginary of technological enhancement away from the mechanical implant and the metallic cyborg towards molecular intervention, biological modification, and programmable organicity. As Stiegler observes, “living machines,” chimeras, and biological artefacts no longer point so much to the organisation of the inorganic as to the reorganisation of the organic itself (Stiegler, 1998, p. 86). In *Code 46*, this reorganisation extends beyond physical form to memory, perception, emotional response, will, and moral reflex. Maria’s desire to acquire a “younger” finger, as well as William’s assumption that he could change his face, reveal a world in which the body is no longer experienced as an organic and historical unity but as an assemblage of renewable parts. Technical intervention alters not only the body itself, but also the subject’s understanding of bodily existence.

At the same time, the film undermines the genetic determinism on which its regime is founded. The doctor’s observation that between DNA and the person there intervene diet, climate, environment, chance, surgery, the stars, and God suggests that identity cannot be exhausted by molecular information. According to Stacey, the regime

of *Code 46* looks to technology as a guarantee of transparency, security, and genetic legibility; yet the narrative undermines this ambition, as surfaces deceive, identities are forged, and the biological code becomes an enigma once again (Stacey, 2010, pp. xi–xii). History, memory, experience, and desire survive as an incalculable remainder. Transhuman power attempts to replace the riddle with classification, but the riddle reappears at the very heart of genetic transparency.

The biotechnological management of *Code 46* also brings together several major critiques of transhumanist aspiration. Anders calls Promethean shame the human being's shame at having been born and organically developed through a random and undesigned process, rather than constructed with the precision of technical products (Anders, 2025, pp. 25–27). In *Code 46*, this unease before the unmade assumes a biopolitical form: birth, kinship, and desire are treated as unstable processes that must be predicted, controlled, or corrected, while cloning, genetic regulation, and the replacement of bodily features presuppose a body continuously available for redesign. This position aligns with Jonas, as analysed by Coyne: against the transhumanist desire for biotechnological “perfection,” Jonas defends the ambiguous fullness of “genuine man,” with his limits, vulnerability, corporeality, and historicity (Coyne, 2021, p. 8). The film reverses precisely this acceptance: whatever belongs to imperfect, fragile, and historically lived life is pathologised as a deviation to be eliminated or reprogrammed.

Sandel clarifies the next step: when life is no longer received as an unpredictable gift and as an openness to the unbidden, it is subordinated to design, prediction, and risk management (Sandel, 2004, pp. 59–60). In *Code 46*, kinship, love, and pregnancy are no longer relations and events of life, but genetically calculable possibilities to be prevented, corrected, or cancelled. Kass's critique draws out the final consequence of this logic: new biotechnological powers may appear as freedom, protection, or right, while degrading and dehumanising the subject when detached from human dignity (Kass, 2007, pp. 23–24). Thus, in the film, the supposed protection of biological life and prevention of genetic risk are achieved through memory erasure, programmed desire, exile, and social exclusion. Life is not protected as

subjective, historical, and embodied existence, but reduced to correctable biological material; the human is left deeply humiliated, existentially and politically.

The most extreme culmination of this logic is Maria's bio-conditioning. *Code 46* does not remain an external law; it is inscribed into her nervous system as fear, aversion, and compulsion. Although she consciously desires William and repeatedly says that she loves him, her body has been programmed to resist her desire and finally to report the violation itself. The subject thus becomes the bearer of its own surveillance: the law does not merely control behaviour but acts through the body as an automated moral reflex.

The transhuman in *Code 46* is not simply a biotechnologically enhanced body. It is the subject whose organicity, mobility, kinship, desire, memory, and will have been transformed into fields of technical management. It remains genetically legible, yet existentially enigmatic; politically certified, yet revocable at any moment. The Sphinx has not disappeared. It has become corporation, database, virus, and law, demanding from the human being not one final answer, but continuous proof that it still has the right to exist.

5. Conclusion: Oedipal Detection and the Tragic Vision of the Transhuman

The three films examined here, when viewed comparatively, form an informal but coherent genealogy of futuristic transhuman Noir. Although they belong to different historical, aesthetic, and technological contexts, they share a narrative structure: a male investigator enters a city under strict technological and administrative control, undertakes to solve a case involving identity, deviation, or legal violation, and gradually confronts a form of life whose status unsettles the boundary between the human, the nonhuman, and the technically or biologically produced subject. He encounters an enigmatic female figure who embodies this instability and, through this encounter, is led into a crisis of his own identity and of the status of the human itself. The investigation, therefore, never concerns only an external event:

not simply a culprit, forgery, transgression, or artificial being, but the riddle of the transhuman.

In *Alphaville*, the transhuman appears as a linguistically and emotionally reconfigured subject: a human being who retains his biological body but has been cut off from words, memory, poetry, and emotion. The central question is not whether the machine can become human, but whether the human being, having internalised the logic of the machine, can still recognise himself. In *Blade Runner*, the problem shifts to biotechnologically manufactured life. Replicants are not simply machines, but artificially produced beings with bodies, memories, desires, fear of death, and the capacity for relation. The Voight-Kampff test examines the boundaries between the born and the manufactured, the programmed and the lived. Finally, in *Code 46*, the transhuman appears as genetically and biopolitically regulated. The riddle now concerns DNA, kinship, reproduction, desire, and the right to mobility. The Sphinx no longer merely asks; it certifies, classifies, and revokes.

The films do not simply position themselves for or against transhumanism. They treat its central versions – the humanist promise of enhancement and the passage towards a posthuman stage – as open, contradictory, and politically charged possibilities. *Alphaville* still preserves a faith in language, poetry, and love as forms of resistance; *Blade Runner* deconstructs both the fear of the artificial and the certainty of human superiority; *Code 46* transfers the question to the darker level of biopolitical management. Thus, the films propose neither a pure utopia of improvement nor a simple dystopia of loss. Rather, they suggest a tragic reading of the transhuman, in which overcoming appears neither as guaranteed redemption nor as inevitable destruction, but as an open possibility.

The notion of the tragic allows us to see that the films' relation to the riddle of the Sphinx belongs to a broader dialogue with Oedipus, both in myth and in Sophocles' tragedy. This connection has already been noted in scholarship on *Blade Runner* (Silverman, 1991; Pope, 2010; Norris, 2013), *Alphaville* (Poupou, 2014; Wood, 1969), and *Code 46* (Bennett, 2014; Vackimes, 2008; Novell, 2008), mainly in relation to

freedom, fate, and self-knowledge. The relation is strengthened by the investigative and detective dimension of the films. The affinity between *Oedipus Tyrannus* and detective narrative has been recognised across classical philology, detective fiction, and film theory (Mulvey, 1989; Priestman, 1998; Segal, 2001). Oedipus searches for Laius' murderer through traces, testimonies, interrogations, and conflicting evidence. Yet the investigation returns to the investigator himself, since the culprit he seeks proves to be himself. The initial detective structure – a murder, a city in crisis, a seeker of truth, testimonies requiring interpretation – becomes an ontological trial.

Detective narrative is also closely connected to the broader question of the human. It is not accidental that Chesterton (2012) regards the detective story as, par excellence, the story of the human being, grounded in the opposition between the detective, as a figure of interpretive and poetic invention, and the criminal, as the return of atavistic, almost animal violence. Detective fiction, therefore, does not concern only the solution of a crime, but the attempt to grasp human existence at the boundary between law and transgression, civilisation and savagery, knowledge and enigma. This is why detective fiction can meet Oedipus so organically and, through him, the question of the transhuman.

Here the Sphinx acquires particular significance. It is not simply the monster defeated before the tragedy begins, but the ancestral figure of a power that asks, tests, permits, or forbids passage. Its force is interpretive and political: it requires the human to define itself. Because Oedipus solves the riddle, he acquires the right to become, in turn, the one who asks questions. The one who defeated the Sphinx inherits its function. Yet questioning is not only a form of power; it is also a form of exposure. The one who asks initially appears to hold the upper hand, because he demands answers and organises the field of truth. However, every question opens an uncertain field of possible answers that may turn against the questioner. The Sphinx is destroyed by the answer to its own riddle; Oedipus is destroyed by the answer to the investigation he himself conducts.

Cameron argues that the answer to the riddle is not merely “man” in general but Oedipus himself: the exposed child on Cithaeron, the two-footed king of Thebes, and the blind wanderer who will move with a staff (Cameron, 1968, p. 22). Oedipus can answer the riddle because the riddle already concerns him; and the tragedy will show that he does not simply solve it but is ultimately called upon to live it. In the three films, the investigator never remains a neutral observer: the investigation returns to him, transforming interrogation of the other into self-investigation. Lemmy Caution enters *Alphaville* as an agent moving through a technocratic world, yet his mission turns into a trial of subjectivity itself: can the human still exist where language, poetry, memory, and emotion have been erased or criminalised? Deckard in *Blade Runner* undertakes to locate and “retire” the Replicants, but the examination of artificial life returns to his own uncertain identity, to the question of whether he differs essentially from what he hunts or whether he may himself be a replicant. William in *Code 46* investigates forged identities and violations of the biopolitical rules of mobility, yet his search reveals that his own desire, memory, and position within the system are already trapped in the same genetic and administrative riddle.

This logic becomes even more complex if we recall that Oedipus does not stand before the Sphinx as the pure representative of a stable human essence. His figure is already liminal, bound to the city and to Cithaeron, to civilisation and wild nature, to the human and the animal. The tragedy will further reveal that the victor over the Sphinx carries within himself a monstrous confusion: as son and husband, father and brother, king and pollution, he collapses the boundaries of kinship, genealogy, and political order (Vernant, 1990; Chesi, 2019). His victory over the Sphinx is therefore not simply the triumph of human reason over the monster, but the encounter of two hybrid figures.

The Sphinx-like trial, therefore, does not simply distinguish between human and nonhuman, nor does it offer a stable criterion by which the transhuman could be defined. On the contrary, it reveals that the investigator, the examiner, and the victor over the Sphinx are already caught within the hybrid condition they seek to define. This is precisely what happens in the films as well: the protagonists do not

confront the modern Sphinxes from a safe distance, but from within the very condition they are trying to understand. They do not simply answer the question of the transhuman; they are revealed as forms of it. The riddle does not stand before them. It inhabits them.

In this way, the path opens towards the central theoretical extension of the reading developed above. The transhuman should perhaps not be understood simply as the future of the human, as a stage of its overcoming, or as its technologically enhanced version. The films examined here show that the transhuman is the moment in which the question of the human becomes more urgent, because it ceases to belong exclusively to the human. The Sphinx is not human, yet it poses the question of the human. In an analogous way, Replicants, machines, genetically reconfigured bodies, and biotechnologically regulated forms of life do not simply stand outside the human. They enter the field of the question that constitutes it.

According to this reading of the riddle of the Sphinx, the fate of Oedipus, and the cinematic protagonists, “the human” does not appear as an immobile essence, but as a being in transformation: a body that changes, seeks to improve itself, and deteriorates; a mind marked by existential anguish, ignorance, and painful knowledge; an entity open to the animal, dependent on technical supports, mediations, and incorporations, exposed to hybrid forms of life, biopolitical codes, and natural and technological necessities and limitations. This reading therefore allows for a broader understanding of the transhuman. The transhuman appears not to concern only the human being who seeks to overcome itself through technology, but also the reverse movement: the moment in which the machine, the artificial body, or the hybrid being begins to wonder about itself, about its relation to the human, and about the possibility of being recognised as a subject. It also includes the continuous dialogue of the human with the animal and with animality, the limit that the human seeks to overcome but never ceases to carry within itself. Thus, the human, the animal, and the technical are not simply opposed to one another; they question and constitute one another, continuously destabilising their own boundaries.

However, the absence of a stable and immutable human essence does not mean that human beings can live in absolute fluidity. This is where the tragic contradiction lies. Human beings must answer the question of what they are, even if every answer is historical, temporary, incomplete, and dangerous. They cannot avoid the need for form, name, narrative, and position. Even knowing that their identities are fragile, they must constitute a world within which they can live. Tragedy shows that human beings are compelled to act, to know, to name, and to answer, without ever possessing a full guarantee that the answer will not destroy them. Both Oedipus and his cinematic descendants – Lemmy, Deckard, and William – must confront the Sphinx not as a merely necessary fictional device, but as an existential necessity.

Yet every answer to “what is the human?” also produces boundaries, exclusions, hierarchies, and violence. In *Alphaville*, the ideal of rational predictability becomes lethal: whatever escapes calculation or classification must be erased. In *Blade Runner*, the classificatory logic becomes a licence to hunt and kill artificial beings. In *Code 46*, genetic law regulates desire and submits the body to administration. The problem, therefore, is not that the question of the human is posed, but that no answer is innocent.

The riddle of the Sphinx is not solved once and for all. It is historically reformulated. Each age gives its own answer to the question of what the human is, and each answer organises new forms of life, knowledge, and power. The films examined here show that technology does not abolish the ancient question; it makes it more urgent. When language can be controlled, when memory can be implanted or erased, when empathy can become a test or a virus, when DNA can determine the right to desire and to life, then the question of the Sphinx returns in an even sharper form. It no longer asks only “what is the human?” but also “who has the right to be recognised as human?”, “who can love?”, “who can remember?”, “who may exist, and how?”

Consequently, the transhuman does not rupture a previously unified human nature. It makes visible, and technologically intensifies, an instability that belonged to the human from the beginning. It introduces the machine, biotechnology, and technical prostheticity into a divide

that was already active: the divide between the animal and the human, matter and form, body and name, nature and self-consciousness. From this point of view, the transhuman is not the opposite of the human. It is the moment in which the human recognises, with greater intensity, its own openness, technicality, animality, dependence, and instability. It is neither pure progress nor pure destruction, but the tragic suspension of the human condition: every overcoming opens possibilities and dangers, hopes and forms of loss, new lives and new powers. Human beings are destroyed when they believe that they can exceed their limits without considering them, without confronting the Sphinx that lies in wait not only outside them, but also within their own self-understanding and their desire for self-transcendence. This is the tragic hubris of the human, ancient and modern alike.

Humanity, therefore, is not constituted by the possession of a final answer, but by exposure to the necessity of the question. Perhaps the human is the being that stands before the Sphinx and cannot avoid answering, even if the answer is incomplete, temporary, or destructive. In this sense, the unanswered character of the question does not negate humanity, but seals it. Ultimately, it is not decisive whether Deckard is or is not a replicant; what matters is that the question itself renders him tragically human. The human is not simply the being that possesses a given biological or ontological status, but the being exposed to the doubt of its own identity. Before this awakening, the subject risks remaining in the position of the impersonal “it,” as Rachael does in Deckard’s words – “How can it not know what it is?” (Scott, 1982, 00:21:56–00:21:58) – or as the human does in the riddle of the Sphinx. Tragic humanity begins when this “it” becomes an “I”: not a certain, sovereign I, but an I exposed to the question mark of its own existence. Thus, the phrase from *Blade Runner*, “more human than human,” can finally be read not as a simple transhumanist promise of improvement, but as a deeper entry into everything that the human condition includes: memory and forgetting, desire and prohibition, fear of death and acceptance of finitude, the pain of knowledge, compassion, the fluidity of boundaries and the simultaneous need for identity, form, and recognition; all those things that

linguistic, technical, genetic, and political codes repeatedly attempt to define, regulate, or exclude.

To conclude, the article's contribution is located in identifying, within the riddle of the Sphinx, a primordial bond between the human and technics, and in suggesting that an issue often associated with modern technological culture had already been imagined and formulated by mythic thought. The films examined here reactivate this ancient formulation by staging Sphinx-like trials in which the human is tested, preserved, exceeded, or forcibly transformed. The originality of the argument lies in bringing together classical reception, detective and Noir narratives, and transhumanist theory in order to show that the transhuman is not only a figure of the future but also a renewed form of an ancient and persistent question. This perspective opens a field for further academic inquiry into other fictional and real-world technological Sphinxes: tests, databases, algorithms, borders, biotechnological regimes, and artificial intelligence or language-processing systems, where humans and machines increasingly exchange questions and answers, transforming one another in the process. More broadly, it also invites further investigation of the transhuman in the expanded sense proposed here: not simply as what comes after the human, nor as what exceeds it, but as the form through which the human – or even the nonhuman that claims a relation to it – encounters, with greater intensity, its unresolved condition: the need to answer the question of itself and the inability to answer it definitively. In this sense, the transhuman is, to echo Nietzsche, *human, all too human*.

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Uncanny Bodies – Renaissance des Body Horrors

Julian Knabe¹

1. Der Body Horror der 70er und 80er und der posthumane Body Horror heute

„The very nature of materiality is an entanglement. Matter itself is always already open to, or rather entangled with, the ‘Other’“ (Barad, 2007, S. 392-393), so beschreibt die Physikerin, Philosophin und Feministin Karen Barad das Wesen von Materialität, ein Verständnis, welches auch den menschlichen Körper nicht länger als abgeschlossene, entfremdete Entität vom Rest des Umfelds begreift, sondern stattdessen als Teil eines komplexen Netzwerks wechselseitiger Beziehungen. Mit der Wortwahl des „Anderen“ beschwört sie zugleich aber ein tief verwurzeltes Unbehagen in uns herauf, ist die Unversehrtheit unseres Körpers doch eines unserer höchsten Prioritäten. Die Vorstellung, etwas in unseren Körper eindringen und ihn verändern zu lassen, widerspricht unseren kulturellen Vorstellungen von Identität und Autonomieität.

Genau in diesem Spannungsfeld bewegen sich aber sowohl posthumanistische Theorien als auch die Ästhetik des Body Horrors. Wo posthumanistische Theorien alte Konzepte von Körperlichkeit in Frage stellen und an ihrer Stelle die Durchlässigkeit, Hybridität und Relationalität des Körpers zelebrieren, übersetzt die Ästhetik des Body Horror diese neuen Definitionen in Bildern deformierter, transformierter und sich auflösender Körper. Seine Zuschauer werden damit konfrontiert, dass der menschliche Körper und zugleich seine Identität nicht nur dem eigenen Willen unterliegen und die humanistische Vorstellung eines unabänderbaren Ichs oder einer ewigen Seele fehlgeleitet sind.

Es lässt sich schwer bestreiten, dass der Film seine erste Blütezeit des Body Horrors in den 70er und 80er Jahre sah. David Cronenbergs

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The Fly (1986), John Carpenters *The Thing* (1982) oder Katsuhiro Otomos Anime-Kinofilm *Akira* (1988) werden auch heute noch als visionäre Werke ihrer Zeit gefeiert und verfügen über eine große Anhängerenschaft, sind aber nur Beispiele eines viel breiteren Angebots. Betrachten wir die Filme dieser Zeit und suchen nach einer Gemeinsamkeit in der Intention des dargestellten Body-Horrors, so findet man es in einem kategorisch-Fremden, einem Monströsen, Unmenschlichen, dass sich dem menschlichen Körper bemächtigt, diesen verändert und verdirbt. Ob es wie in *The Fly* (1986) ein wissenschaftlicher Unfall ist, der den Körper des Protagonisten langsam mutieren lässt, ein außerirdisches Wesen wie in *The Thing* (1982), das ihn assimiliert und übernimmt, oder wie in *Akira* (1988) psychokinetische Kräfte, die den Körper überlasten und ihn mutieren lassen: Immer ist es eine von außen wirkender Gewalt, die auf ihn einwirkt. Die vermittelte Angst ist ergo eine Angst vor dem Anderen, dem Unbekannten, dem Nicht-Menschlichen und eine Angst vor dem Kontrollverlust des eigenen Körpers. Der Fokus des Genres in dieser cineastischen Epoche liegt nicht auf dem eigenen Körper, nicht an dessen Abstoßungen und Ausscheidungen, sondern an dem, was er aufnimmt. Dieser Körper wird noch religiös behandelt, er ist heilig, jungfräulich, jede Form der Befleckung beschwört den Untergang.

Als unausweichlich würden TheoretikerInnen des Posthumanismus wie beispielsweise Donna Haraway (vgl. Haraway, 1985, S. 70) diese Befleckung deklarieren. Diese zuvor dargestellte Dichotomie von Körper und Umwelt unterliegt ihnen nach einer anthropozentrischen Weltanschauung, ein christlich aufgeladener Humanismus, der den Menschen aus seinem Ökosystem herauslöst, ihn erhaben und unantastbar darüber schweben lässt. PosthumanistInnen versuchen, mit einem neuen Verständnis des Materialismus darauf aufmerksam zu machen, dass auch der menschliche Körper Materie, Materie aber nicht „nur“ leblose, passive Masse ist, sondern alle Materie in einem rhizomatischen Netzwerk á la Deleuze und Guattari (1987) zueinandersteht und sowohl Beeinflusser als auch Beeinflusster ist. „The very nature of materiality is an entanglement (Barad, 2007, S. 392-393)“. Als Teil einer solchen Verstrickung ist der Körper durchlässig und porös, er nimmt auf, gibt ab und verändert sich, lässt sich in seiner

stetigen Hybridität laut Braidotti (2011) nur mehr als nomadisches Subjekt bezeichnen, aber nicht mehr streng definieren.

Als relationales Produkt wird der Körper als Konklusion selbst zum Schlachtfeld, auf dem um die Auflösung veralteter Dichotomien gekämpft wird und neue Konzeptualisierungen emportsteigen. Er ist nicht mehr Sanktum, sondern verunreinigter Boden. In ihm vereinigen sich fortan Natur, Kultur und Technik. Diese neugewonnene Durchlässigkeit, seine Instabilität berauben ihm aber auch der zuvor gegebenen Sicherheit, der Möglichkeit von Zuflucht und macht ihn damit zugleich zum Ort des Unheimlichen.

Der neue Body Horror der ca. letzten zehn Jahre zeigt deutlich diese posthumanen Einflüsse. Seine Filme beschäftigen sich mit posthumaner Körperlichkeit, Identität und materieller Verflechtung. In diesem Kontext werden Grenzzersetzungen, die in posthumanistischen Theorien deklariert werden, ästhetisch umgesetzt. Der Körper wird für alle sichtbar physisch verändert, verformt, deformiert, zerrissen, transformiert – und schafft damit Möglichkeiten, ein überholtes System zu überarbeiten.

Als Analysegrundlage dieser neuen Epoche des „Posthumanen Body Horrors“ dienen in diesem Aufsatz drei paradigmatische Beispiele, die nicht nur die vielfältige Ästhetik des neuen Body Horrors veranschaulichen, sondern zugleich auch unterschiedliche Aspekte des posthumanen Körpers verhandeln und so die zuvor erläuterten Theorien plastisch werden lassen. In Alex Garlands *Annihilation* (2018), zu Deutsch auch *Auslöschung* genannt, stehen biologische Verschmelzungen im Vordergrund. In Julia Ducournaus *Titane* (2021) wird der weibliche Körper in den Mittelpunkt gerückt und die Fluidität von Geschlechtern sowie Identität und den Körper als Schnittstelle von Mensch und Maschine betrachtet. In Coralie Fargeats oscarprämiiertem Film *The Substance* (2024) wird der weibliche Körper dann abschließend verstärkt unter dem Druck ökonomischer und gesellschaftlicher Gesichtspunkte erkundet.

2. Der Horror des eigenen Körpers - Intimität und das Abjekte

Zunächst muss aber erläutert werden, warum uns unsere Körper überhaupt Angst machen, warum sie uns abstoßen, während sie uns zugleich faszinieren, ergo, wieso Body Horror ein derart geeignetes Vehikel für die posthumane Ästhetik ist. Body Horror lediglich als Sub-Genre des Horror-Genres zu betrachten, greift in vielerlei Hinsicht zu kurz. Vielmehr sollte man ihn überdies als übergreifendes ästhetisches Werkzeug verstehen, das auch häufig von Filmen verwendet wird, die nicht immer dem Horror-Genre zugeordnet werden können, überschreiten Sorgen über Schönheit, Körperformen, Behinderungen etc. doch jegliche Genre-Grenzen, da sie integraler Teil sozialer Normen und Tabus sind (vgl. Aldana Reyes, 2024, S. 1).

Die Frage, weshalb gerade körperliche Veränderungen eine derart intensive emotionale Wirkung entfalten können, führt dabei über film-ästhetische Überlegungen hinaus und verweist auf grundlegende Strukturen menschlicher Selbstwahrnehmung. Um die besondere Wirksamkeit des Body Horrors zu verstehen, muss daher zunächst betrachtet werden, welches Verhältnis der Mensch überhaupt zu seinem eigenen Körper besitzt. Dass uns nichts näher, nichts intimer bekannt ist, als dieser eigene Körper, liegt dabei auf der Hand. Er ist uns vertraut, er ist uns heimisch, der Sitz unserer Identität. Doch schon Freud schrieb in seinem Aufsatz *Das Unheimliche*, dass in diesem Heimischen zugleich auch das Unheimliche lauert: „Also heimlich ist ein Wort, das seine Bedeutung nach einer Ambivalenz hin entwickelt, bis es endlich mit seinem Gegensatz unheimlich zusammenfällt. Unheimlich ist irgendwie eine Art von heimlich“ (Freud, 1919, S. 237). In dieser Ambivalenz zwischen dem Bekannten und dem Fremden liegt zugleich das Fundament des Body Horrors, denn da wir mit jedem Abschnitt unseres Körpers so intim vertraut sind, wie er aussieht, sich anfühlt, zu funktionieren hat, reichen bereits kleine Veränderungen, minimale Abweichungen von der Norm, um unseren Affekt in ein tiefes Tal an Missfallen und schließlich Grauen fallen zu lassen, wie es auch schon Masahiro Mori in seinem berühmten Essay *The Uncanny Valley* aufzeigte (Mori, 1970). Dieses Gefühl ist ein allgemein vertrautes – vielleicht auch in Verbindung mit der unaufhaltbar fortschreitenden Technologisierung, etwa menschlichen Robotern,

die von Jahr zu Jahr lebensechter wirken und auf den ersten Blick aus der Ferne als Mensch verwechselt werden könnten. Wenn dann aber die glasigen Augen offensichtlich werden oder die ruckhaften, unmenschlichen Bewegungen, werden wir von einem unangenehmen Gefühl beschlichen und je menschlicher etwas zuvor gewirkt hat, umso einschneidender ist dieses Gefühl. Es ist also das, was gegen das uns Vertraute geht, das Grauen und Abstoßung evoziert.

In ihrem Essay *Powers of Horror* greift Julia Kristeva exakt dieses Thema des Körperfremden und Vertrauten auf und formuliert eine Theorie des Abjekten, des Abstoßenden (Kristeva, 1982). Sie beschreibt das Abjekte als etwas, das außerhalb von Objekt und Subjekt steht, etwas, das von uns abgetrennt, abgegeben, also buchstäblich „abgestoßen“ werden muss und bezieht sich damit auf das, was aus dem Körper tritt – Flüssigkeiten, Säfte, Ausscheidungen. Sie verletzen die Dichotomie von Innen und Außen, sind etwas, das Teil von uns war nun weder völlig „ich“ noch „nicht-ich“.

Im Bezug auf das Abjekte und den Tod schreibt Kristeva:

A wound with blood and pus, or the sickly, acrid smell of sweat, of decay, does not signify death. In the presence of signified death – a flat encephalograph for instance – I would understand, react or accept. No, as in true theater, without makeup or masks, refuse and corpses show me what I permanently thrust aside in order to live. These body fluids, this defilement, this shit are what life withstands, hardly and with difficulty, on the part of death. (Kristeva, 1982, S. 3)

Der Tod ist abstrakt, nicht abjekt und das Abjekte, das Abstoßende, erinnert nicht an den Tod, sondern ist das, was Leben und Tod zugleich in sich trägt – das, was die Ordnung des Körpers und des Subjekts infrage stellt. Es ruft Ekel hervor, weil es uns das vor Augen hält, was wir unterbewusst krampfhaft verdrängen: unsere eigene Körperlichkeit als fragile, durchlässige und sterbliche Materie, die abbaut und abgebaut wird, bis in absehbarer Zukunft nichts mehr übrig ist.

Wenn der Körper seine Vertrautheit, seine gelernte Ordnung verliert und sich das Heimische gegen uns richtet, dann, so Kristeva, kehrt das Abjekte zurück (vgl. Kristeva, 1982, S. 4). Der Körper zeigt sich

als das, was er immer war – ein offenes Grenzgebiet zwischen dem Ich und dem Anderem, Leben und Tod, Ordnung und Verfall.

Body Horror dringt exakt bis zu diesem Punkt hervor und lässt uns den Augenblick erfahren, in dem kulturell und psychologisch errichtete Grenzen zwischen Subjekt und Körper, Identität und Materie zerfällt – und wir erkennen, dass das, was uns einerseits am nächsten ist, andererseits zugleich das ist, wovor wir uns am meisten fürchten.

3. Body Horror und die Geschlechterrolle - früher und heute

Ein weiterer Aspekt, der bei der Betrachtung der gegenwärtigen Renaissance des Body Horrors nicht ignoriert werden kann, ist der des Geschlechts und dessen Bedeutung im Kontext der Perzeption des Körpers, denn es ist keinerlei Zufall, dass die Protagonisten der genannten 80er-Jahre-Filme ausschließlich dem männlichen Geschlecht angehören, während alle des neuen Posthumanen Body Horrors weiblichen Geschlechts sind. Auch lässt sich diese Verschiebung nicht rein durch ästhetische Vorlieben erklären. Vielmehr spiegelt sie tiefgreifende gesellschaftliche Veränderungen wider, insbesondere die zunehmende Sichtbarkeit und Signifikanz feministischer Diskurse und die kritische Auseinandersetzung mit tradierten Geschlechterrollen, die so auch festen Sitz in der posthumanistischen Strömung innehaben.

Die klassische Hochphase des Body Horrors entstand innerhalb einer Filmkultur, die weitgehend Teil einer anthropozentrischen und damit männerdominierten Gesellschaft war. Die zentralen Konflikte waren klare Dichotomien: der männliche Körper gegen das Andere, das Alienhafte, das Fremde. Die Körper waren statisch und klar definiert, Veränderung des Körpers bedeuteten meist einen grausamen und unabwendbaren Tod. Der weibliche Körper wurde während dieser Periode als Antithese verwendet. Er ist porös und durchlässig, er nimmt auf und sondert ab. Besonders in Filmen, in denen dämonische Besessenheit eine zentrale Rolle spielt, sind es fast ausschließlich Frauenkörper, die sich den fremden Kräften ergeben müssen. Das bekannteste Beispiel ist wohl William Friedkins *Der Exorzist* (1973), in

dem das kleine Mädchen Regan in ihrer Besessenheit jede Art von Körperflüssigkeit von sich gibt und schließlich von den männlichen Priestern unter Selbstaufopferung gerettet wird. Auch in Cronenbergs *The Fly* (1986), in denen es der männliche Protagonist ist, der sich verwandelt, übernimmt die weibliche Protagonistin Veronica doch nur eine reaktive Funktion und ist auch hier diejenige, die gerettet werden muss.

Die Frage lautet immer, wie ein Individuum gegen eine äußere Bedrohung ankämpft, die seine Integrität zerstört. Die Körpertransformation erscheint somit als Bedrohung und Zerstörung ausschließlich negativ. Weibliche Figuren fungieren lediglich als emotionale Bezugspunkte, moralische Orientierungspunkte oder Zeuginnen dieser Prozesse, ohne selbst Handlungsmacht darüber zu verfügen, diese Veränderungen aufzuhalten. Diese Struktur spiegelt damit natürlich die Geschlechterordnungen ihrer Entstehungszeit wider, in denen Männern häufiger die Rolle des handelnden Subjekts und Frauen jene des beobachtenden oder zu schützenden Gegenübers zugewiesen wurde.

Im zeitgenössischen Body Horror lässt sich hingegen eine deutliche Verschiebung beobachten. Filme wie *Raw* (2016) *Annihilation* (2018), *Titane* (2021), *The Substance* (2024) oder *Together* (2025) rücken weibliche Körper ins Zentrum und verleihen ihnen eine Form der Macht, die ihnen als Figuren in den 70ern und 80ern verwehrt blieb. Diese neue Richtung an Body Horror geht über die klassische Bedrohung des Fremden für den menschlichen Körper hinaus und macht sich die wahrgenommene Durchlässigkeit des weiblichen Körpers (Schwangerschaft, Reproduktion, Körperflüssigkeit) zu Nutze, um mit ihm neue Thematiken erzählbar zu machen, die über die einfache Körperdichotomie hinausgehen. Die Merkmale des Körpers sind also nicht länger ausschließlich Quelle von Angst, sondern zugleich Orte des Widerstands gegen starre Kategorien und normierende Strukturen. Der Körper wird Symbolbild, Metapher und Allegorie der Revolution gegen ein überholtes Schwarz-Weiß-Denken, gegen Geschlechterrollen oder den anthropozentrischen Grundgedanken, der Mensch wäre aus jeglichem Ökosystem herausgelöst. In diesem Sinne reflektiert die gegenwärtige Entwicklung des Body Horrors nicht nur einen Wandel cineastischer Ästhetiken, sondern auch die fortschreitende

gesellschaftliche Auseinandersetzung mit Geschlecht, Körperlichkeit und Subjektivität.

4. Die Auslöschung und Neuschöpfung des Ichs – Alex Garlands *Annihilation* (2018)

Seit den letzten Jahren werden diese gesellschaftlichen Diskurse von immer mehr RegisseurInnen in ihren Werken aufgegriffen, die damit zugleich auch die Ästhetik und Ausdrucksgewalt des Body-Horrors für sich entdecken. So wird in Alex Garlands *Annihilation* (2018) die Grenze zwischen dem menschlichen Körper und seiner Umwelt buchstäblich durchlässig. Der Film erzählt von einer Gruppe Wissenschaftlerinnen, darunter die Protagonistin Lena, die in eine Zone eindringen, der sogenannte „Shimmer“, in der sich die Gesetze der Natur auflösen. Schon früh in der Handlung wird deutlich, dass hier nicht nur Flora und Fauna mutieren und verschmelzen, sondern dass die Protagonistinnen auch das Konzept ihres stabilen, autonomen Subjekts verlieren, wenn sich bei ihnen Erinnerungslücken zeigen und sich die Muster ihrer Fingerabdrücke vor ihren Augen zu bewegen beginnen.

Eine der eindringlichsten Szenen auf ihrem Weg durch dieses außerirdisch anmutende Ökosystem zeigt ein mutiertes Bärenwesen, das zuvor eine der Forscherinnen getötet hat und fortan die letzten Schmerzens- und Hilfeschreie dieser Forscherin von sich gibt. Das wirklich furchterregende ist dabei nicht, dass das Wesen diese Stimme imitiert, wie es im Tierreich nicht ungewöhnlich ist, sondern der Fakt, dass bei genauem Blick ein menschlicher Schädel zu erkennen ist, der aus der Seite des Bärenkopfs herausragt. Hier ist nicht das Fremde ein Teil des menschlichen Körpers geworden, sondern das menschliche Subjekt Teil des Fremden, gefangen in einem Körper, der nicht der eigene ist und damit wie in Harlan Ellisons Geschichte *I Have No Mouth and I Must Scream* (1966) in einem Schreckensszenario der Fremdbestimmung und Selbstauflösung gefangen ist. Dass dieses Szenario der körperlichen Auflösung und der Übergang in etwas anderes aber nicht ausschließlich negativ konnotiert werden muss, sondern mit einem posthumanen Gestus verbunden werden kann, bei

dem der Körper nicht zerstört, sondern Teil eines größeren – hier ökologischen – Netzwerks wird, zeigt die nächste Szene, in der eine der anderen Forscherinnen langsam beginnt, sich in eine pflanzliche Struktur zu verwandeln. Im Unterschied zur vorherigen Szene wird diese nicht ausschließlich abschreckend dargestellt, sondern wechselt sowohl visuell als auch musikalisch vom Unheimlichen in einen sanften, fast tröstenden Ton, unterstrichen von der Akzeptanz der Figur für ihr Schicksal und dass sich ihr Körper nicht in Schmerz oder Gewalt auflöst, sondern still, außerhalb des Blickfelds der Kamera.

Alles, was den Shimmer betritt, wird verändert und verformt, aber auch neu zusammengefügt. Der Film behält während der gesamten Laufzeit eine bewusst ambivalente Haltung gegenüber den Charakteren, deren Motivationen und Veränderungen. Der Shimmer alleine ist nicht der Antagonist, der sie vernichtet. Sie alle sind bereits „damaged goods“ (Garland, 2018: 00:39:53-00:39:55), die den Shimmer freiwillig betreten, auf der Suche nach etwas, das außerhalb nicht existiert. So muss Lena, die auf der Suche nach einer Erklärung dafür ist, was mit ihrem Mann Kane im Shimmer geschah, letztendlich verstehen, dass das, was aus dem Shimmer zu ihr zurückgekehrt war, nicht Kane ist, zugleich aber, dass auch sie nicht mehr die ist, die den Shimmer betreten hatte. Als sie sich am Ende des Films in den Armen halten und die Farbe ihrer Augen zu schimmern beginnt, wird nicht nur ein Gefühl des Verlusts und des Unheimlichen vermittelt, sondern auch die Möglichkeit eines neuen Anfangs.

Der Horror in *Annihilation* (2018) entspringt der Erkenntnis, dass der Mensch und sein Körper kein Zentrum mehr sind, dass es in Wirklichkeit keine feste Form von Identität gibt und dass das, von dem wir glauben, es würde uns definieren, jederzeit aufgelöst werden kann. Veränderung ist die einzige Konstante. Zugleich kommt damit aber auch eine Wahl, die im Film von den Figuren unterschiedlich getroffen wird: den Wandel zu bekämpfen oder ihn zu akzeptieren und die „Auslöschung“ des Selbst als ein neues Werden zu akzeptieren, darin sogar eine Form von Schönheit zu finden. Der Film ästhetisiert damit das, was der Posthumanismus theoretisch beschreibt: den Verlust der menschlichen Zentralität und die Geburt eines neuen, vernetzten Selbst.

5. Fluide Geschlechterrollen und hybride Körper in Julia Ducournaus *Titane* (2021)

Optisch radikaler, aber nicht weniger ambivalent wird das Umdenken des menschlichen, des weiblichen Körpers in Julia Ducournaus *Titane* (2021) auf der Leinwand gezeigt. Der doppeldeutige Titel lässt sich dabei nicht nur auf das Metall beziehen, das im Film eine tragende Rolle als materieller Protagonist zur Verschmelzung von Mensch und Technologie trägt, sondern auch auf die mythologischen Wurzeln des Wortes im Geschlecht der Titanen und besonders auf die Geschichte des Prometheus, den Schöpfer der Menschheit und der, der ihnen mit dem Werkzeug des Feuers half, sich in der Welt zu behaupten. So unterstreicht der Film schon zu Beginn die dem Menschen stets inhärente Artifizialität und technologische Abhängigkeit.

In beiden Geschichten gehören Technik und Mensch seit dem Entstehungsmoment zusammen – doch nicht als positive Gabe, sondern aus purer Notwendigkeit, zur Kompensation eines ursprünglichen Mangels, als Reaktion auf eine strukturelle Vulnerabilität und primäres Trauma. (Pötzsch, 2021, S. 179)

Im Film ist es ein Autounfall, den die Protagonistin Alexia in ihrer Kindheit überlebt, der diesen Mangel hervorruft. Als Folge muss Alexia eine Titanplatte in den Schädel eingesetzt werden. Dieses Trauma – die Verschmelzung von Mensch und Maschine – wird zur Grundlage ihrer Existenz und zum Beginn einer fluiden Identitätskonstitution. Von nun an ist sie hybrid, halb Fleisch, halb Metall, halb Subjekt, halb Objekt. Die Verschmelzung von Körper und Maschine endet aber nicht an dieser Stelle, sondern wird mehr und mehr auf die Spitze getrieben. Alexias Beziehung zu Autos wird nach dem Unfall zu einer des Begehrens, nicht nur symbolisch, sondern physisch, sexuell und endet mit einer posthumanen Schwangerschaft zwischen Mensch und Maschine. Diese Szene – die sexuelle Vereinigung mit einem Auto – ist einerseits Schockmoment, andererseits aber auch radikale Aufhebung der Grenze zwischen Organischem und Technischem. Mit Donna Haraways Vokabular verkörpert Alexia paradigmatisch die Cyborg, ein Wesen, das die überholten Dualismen – Körper und Maschine, Mann und Frau – Hetero- und Homosexualität – sprengt (vgl. Haraway, 1985, S. 34-35).

In einer weiteren zentralen Szene führt Alexia nach mehreren Morde eigenständig eine Transformation durch, physisch und identitär, indem sie sich die Nase bricht, die Brüste abbindet und die Haare abrasiert, um als vermissteter Junge eines von Steroide abhängigen Feuerwehrmannes durchzugehen, der seinen alternden Körper also genauso auf technische Weise zu transformieren und optimieren sucht. Zwischen den beiden entsteht folgend eine verwirrende, teils brutale, teils zärtliche, dann wieder sexuelle Bindung, während Alexias Schwangerschaft fortschreitet. Sie selbst ist es, die ihrem androgyn anmutenden Körper Gewalt zufügt, ihre queere Existenz als Widerstand gegen die männliche Domäne aufgibt und mit ihrer neuen Identität Teil von ihr wird. Ducournau inszeniert Alexias Transformation dabei nicht als Verlust, sondern als Prozess der Rekonfiguration des Selbst. Der Körper wird zum Ort des Werdens, nicht des Seins – ganz im Sinne von Rosi Braidottis (2011) Konzept des nomadischen Subjekts. Alexia durchläuft im Verlauf der Handlung eine Serie körperlicher Metamorphosen: ihre hybride Schwangerschaft, die aus Öffnungen hervorquellende Flüssigkeit, die allmähliche Technisierung ihres Körpers. Diese Veränderungen verweisen auf ein Subjekt, das nicht mehr fixiert ist, sondern in permanenter Bewegung zwischen festgelegten Kategorien oszilliert – ein Subjekt, das, um zu überleben, seine Form aufgeben muss. In diesem Sinne schreibt der Film eine posthumane Ästhetik fort: Das Unheimliche, das Mechanische und das Körperliche sind keine Gegensätze mehr, sondern Ausdruck einer neuen, nicht-dualistischen Ontologie.

Der Schluss des Films führt diese Ästhetik auf drastische Weise zu Ende. Alexia stirbt bei der Geburt ihres hybriden Kindes, dessen halber Schädel und die Wirbelsäule aus dem von Alexia begehrten Metall bestehen. Der Übergang von geschaffenem, zu geborenem Cyborg ist vollendet, Natur, Kultur und Technologie fließend ineinander über. Ein buchstäbliches Werden jenseits des Menschlichen, wie es auch Braidotti zum Ausdruck bringt. Weder Untergang noch Auferstehung, sondern reine Transformation zeigt sich hier, ein posthumaner Körper, der die im Posthumanismus geforderten Interdependenzen visuell überspitzt darstellt und jede Form von normativer Dichotomie transzendiert.

6. Der weibliche Körper als Ausdruck ökonomischen und sozialen Missbrauchs in Coralie Fargeats *The Substance* (2024)

Coralie Fargeats *The Substance* (2024) führt den Diskurs um den Körper, speziell den weiblichen Körper und die weibliche Identität fort, weicht vom Technologischen oder Biologischen aber zugunsten einer Zurschaustellung von ökonomischen und gesellschaftlichen Machtstrukturen ab.

Der Film folgt der Protagonistin und alternden Schauspielerin, nun TV-Aerobic-Trainerin Elisabeth Sparkle, deren Körper mit 50 Jahren nach den Gesetzen der Industrie ausgedient hat. Der Film verlässt sich dabei auf eine beeindruckende Symbolsprache, um die wahren Intentionen und Machtverhältnisse hinter den vordergründigen Handlungen auszudrücken. Als Elisabeth zu Beginn des Films ihre letzte Show beendet, ohne sich selbst dessen bewusst zu sein, betritt sie Backstage einen Flur. Dieser Flur symbolisiert Produzenten Harvey – dessen Anzüge während des Filmes die Farben des Flures tragen – und den patriarchal gesteuerten Kapitalismus der Industrie. Die Wände sind mit gewaltigen Postern ihres jungen Selbst geschmückt, wie Trophäen für Harvey und eine Erinnerung an Elisabeth, dass er und die Industrie sie besitzen, sie und ihr Körper lediglich ein Produkt sind, das wie jedes Produkt durch ein neueres ersetzt wird, wenn es in unserer konsumgetriebenen Gesellschaft ausgedient hat. Während sie den Flur hinabgeht, erhält sie zahlreiche Geburtstagsglückwünsche. Der Film fängt die Ambivalenz dieses Ereignisses ein, das gesellschaftlich ein erfreuliches Ereignis sein soll, in Elisabeths Welt aber wie das metaphorische Damoklesschwert über ihr hängt, indem den freundlichen Gesichtern eine bedrohliche Geräuschkulisse gegenübergestellt wird. Als sie das Ende des Flures erreicht, steht die Kamera noch am Anfang; zwischen den riesigen, emporragenden Postern, auf denen die junge, digital retuschierte „Idealversion“ Elisabeths in lasziver Pose den Zuschauern entgegenblickt, steht die nun geschrumpfte, gealterte Real-Elisabeth vor einer gesperrten Damen-toilette – selbst Grundbedürfnisse werden ihr hier als Frau verweigert. Ihr bleibt nichts übrig, als die Männerdomäne zu betreten, wo sie sich aber gleich verstecken muss, als Produzent Harvey das Klo betritt.

Ganz im Gegenteil zur Kameraeinstellung im Flur läuft er auf die Kamera zu, bis er das Bild ganz ausfüllt, seine Figur sogar verzerrt wird, während er am Telefon im Royalen „Wir“ darüber spricht, was er, was die Industrie braucht und sich dabei symbolträchtig in Richtung der Zuseher erleichtert. Während Harvey es bei ihrem darauffolgenden Essen pragmatisch mit „Renewal is inevitable. With 50, well it stops“ (Fargeat, 2024: 00:08:23-00:08:27) darlegt, ist auch hier die Symbolsprache deutlich, denn unterdessen verspeist er schwitzend auf derart groteske Weise einen Berg an fetttriefenden Garnelen, dass es spürbares Unbehagen und Abscheu hervorruft. Diese Abscheu von Essen ist nach Kristeva: “perhaps the most elementary and most archaic form of abjection” (1982, S. 2). Das Verschlingen der Garnelen wird hier zum Sitz des Horrors und gleichzeitig zum Symbolbild patriarchaler und kapitalistischer Macht, die den weiblichen Körper als Ware begehrt und konsumiert, den Kopf als Sitz von Eigenbestimmung, Intelligenz und Identität aber wie Abfall als nutzloses Nebenprodukt wieder ausspuckt.

Nach einem Autounfall, der Elisabeth mit Narben zurücklässt und ihr Selbstwertgefühl weiter in den Boden treibt, erhält sie Zugang zur experimentellen Droge „The Substance“, mithilfe der sie ein perfektes Alter Ego ihrer Selbst erschaffen kann. Die Geburtsszene dieses Alter Ego, Sue genannt, ist durch ihr groteskes Spiel mit der romanisierten Vorstellung der Metamorphose und der Realität eine ausdruckskräftige Body-Horror-Szene. Ein Körper entsteht im Körper, die Haut beginnt sich zu verformen, die Augen spalten sich und schließlich reißt Elisabeths Körper wie ein Kokon entlang der Wirbelsäule auf und Sue, der Schmetterling, eine Manifestation von Elisabeths Wünschen und Träumen, ihr früheres Leben, ihren Status in der männergeführten Unterhaltungsbranche wieder zurückzuerlangen, wird geboren. Doch der Kokon ist hier keine bloße tote Hülle, Sue ist und bleibt Elisabeth und umgekehrt. Die fundamentale Klarstellung des Substance-Herstellers und des Films als Ganzen ist: „You are one. You can’t escape from yourself“ (Fargeat, 2024: 00:14:56-00:15:02).

Von nun an teilen sich die beiden Körper ihre Zeit, sieben Tage Elisabeth, sieben Tage Sue, die jeweils andere bleibt in einer Art Koma

in einem geheimen Raum des Appartements zurück. Eine Spirale der Abwertung und Ausnutzung beginnt, die schlussendlich ins Abscheuliche mündet. Während der leergeräumte Flur nach und nach nun mit Sues Postern gefüllt wird und vor Elisabeths Fenster sogar eine gigantische Werbetafel von Sue aufgestellt wird, beginnt ihr Verhältnis zu ihr von Begehren in Hass und Verachtung umzuschlagen, genau wie sie auch ihren eigenen Körper immer mehr verachtet und damit beginnt, exzessiv zu kochen und zu essen, während sie in ihrem Appartement vereinsamt, weil sie sich nun permanent mit ihrem „perfekten“ Selbst messen muss. Steckt sie auf der anderen Seite in Sues Körper, ist sie von ihrem alternden Körper und seiner Verrohung nur umso schockierter und weigert sich, die Regeln zu befolgen, indem sie Elisabeth mehr Rückenmarksflüssigkeit als Nahrung entnimmt, um nicht mit ihr tauschen zu müssen. Aus dem Schmetterling wird ein Parasit, der selbstsüchtig den Körper der anderen und damit im Umkehrschluss schließlich den eigenen Körper zerstört.

Als Elisabeth Körper zuletzt vollständig ausgesaugt wurde, zu einer entstellten Karikatur ihrer Selbst verkommen ist und sich ihre innere Gefühlswelt damit bildhaft nach außen gekehrt hat, versucht sie verzweifelt, das Experiment zu beenden und Sue zu terminieren, kann sich im letzten Moment aber nicht dazu durchringen, den Traum, den Sue symbolisiert, aufzugeben, hat sie doch alles dafür geopfert. Bis zum Schluss beschreibt sie Sue als einzigen Teil an ihr, den man lieben kann. Sie rettet Sue, die daraufhin aber Bewusstsein erlangt und Elisabeth in einem Anfall von Rage und Selbsthass tötet – und damit auch sich selbst, denn ohne Elisabeths Körper als Nahrungsquelle zerfällt ihr Körper rasant und das Abjekte kehrt zurück: Zähne fallen aus, Fingernägel und schließlich ein Ohr ab. Verzweifelt spritzt Sue sich erneut „The Substance“, nur, um sich in ein monströses Zwitterwesen aus Sue und Elisabeth zu verwandeln und in einer letzten Szene des ungebändigten Aufschreis über das, was ihr geschehen, was aus ihr gemacht wurde, taucht der Film alles in einen See aus Körperflüssigkeiten.

Die Körperdarstellung des Films radikalisiert den posthumanistischen Gestus, den auch *Titane* (2021) und *Annihilation* (2018) verkörpern: den Verlust der Einheit und die Öffnung hin zur Vielheit, zur

materiellen Durchlässigkeit. Doch während *Annihilation* (2018) diesen Zustand fast kontemplativ zeigt und *Titane* (2021) ihn als metamorphische Befreiung deutet, ist *The Substance* (2024) zutiefst ambivalent. Hier wird der posthumane Körper nicht bejaht, sondern als Produkt gesellschaftlicher Macht- und Gewaltausübung entlarvt. In diesem Sinne ist *The Substance* (2024) vielleicht der konsequenteste Body-Horror-Film der Gegenwart. Er verbindet die feministische Kritik an Körpernormen und der ökonomischen Ausbeutung des Weiblichen mit der posthumanistischen Einsicht, dass Körper nie stabil, nie abgeschlossen sind – und dass die Angst vor ihrer Auflösung letztlich Ausdruck einer tieferen, fehlgeleiteten kulturellen Obsession ist: der Sehnsucht danach, das Unreine, das Werden, das Abjekte zu verdrängen – eben jenes, was das Leben, das Subjekt erst erschafft.

7. Fazit

Die Ideen von Freuds Ambivalenz des Heimischen und Die Ideen von Freuds Ambivalenz des Heimischen und Unheimlichen sowie Moris Idee des unheimlichen Tals erklären uns, dass die intime Vertrautheit unserer Körper das ist, was dazu führt, dass kleinste Transformationen und Veränderungen in uns Unbehagen auslösen. Kristeva vertieft diesen Gedanken des Subjekts und des Fremden, indem sie im Abjekten den Moment beschreibt, in dem die symbolische Ordnung zusammenbricht: Blut, Sekrete, Verfall – all das, was wir aus uns ausschließen müssen, was zugleich aber immanenter Teil von uns ist.

In den Body-Horror-Filmen der 80er wird die Angst vor dem Fremden und der Veränderung geschürt. Die überwiegend männlichen Protagonisten bekämpfen es, um ihren Körper und folglich sich als Subjekt zu bewahren. Die Theorien des kritischen Posthumanismus von Haraway (1985), Braidotti (2011, 2013), Barad (2007) und anderen liefern jedoch den konzeptuellen Rahmen, um die negative Konnotation des Fremden aufzulösen und was zuvor noch als Verlust erscheint – von Kontrolle, von Identität, von Abgrenzung – wird in diesem Rahmen zur Möglichkeit. Der Körper wird neu gedacht als durchlässiges, relationales System, als Ort, an dem Natur, Technik und Bewusstsein ineinandergreifen. Diese Theorien werden heute in

neuen, mutigen Filmen mithilfe der darstellungsmächtigen und oft extremen Ästhetik des Body-Horrors auf die Leinwand gebracht, in denen nun auch die Weiblichkeit und der schon zuvor als relational verstandene weibliche Körper in den Mittelpunkt gestellt und weibliche Protagonistinnen mit Handlungsmacht ausgestattet werden.

In *The Posthuman* (2013) schreibt Braidotti: “We need to visualize the subject as a transversal entity encompassing the human, our genetic neighbours the animals and the earth as a whole, and to do so withing an understandable language” (S. 82). Die drei untersuchten Filme lassen sich als unterschiedliche Ausprägungen dieser relationalen Assemblage oder kritisch-posthumaner Körperlichkeitskonzeption verstehen, die im Sub-Genre des Body Horrors Fuß gefasst und mithilfe dessen Ästhetik versucht wird, die zuvor zur Schau gestellten harten Grenzen von menschlichen Körpern und dem Fremden kritisch zu hinterfragen. Body Horror wächst dadurch vom Genre des Bedrohlichen zu einem Experimentierfeld für die Frage nach der Konstitution von Körper, Subjekt und Umwelt. Obwohl *Annihilation* (2018), *Titane* (2021) und *The Substance* (2024) jeweils sehr unterschiedliche narrative und ästhetische Strategien verfolgen, werden sie durch diese neuen Körperkonzeptionen, die Auflösung stabiler Körpergrenzen und die Neuverhandlung des Verhältnisses von Innerem und Äußerem, Selbst und Welt, verbunden.

In *Annihilation* (2018) werden der Körper und das Selbst als abgetrennte, starre Formen buchstäblich und im übertragenen Sinne ausgelöscht und zugleich Teil eines größeren, verschränkten Ökosystems – ein Ort, an dem Mensch und Umwelt in einer neuen Form zueinander finden. Demgegenüber radikalisiert *Titane* (2021) die Verschmelzung von Körper und Technologie und macht den weiblichen Körper zum Symbol einer neuen, hybriden Subjektivität. Er erscheint hier als ein fortlaufendes Experiment permanenter Rekonfiguration, in denen traditionelle Dichotomien von Geschlecht, Sexualität oder Natur und Kultur verschwimmen und sich Identität erst im Prozess der Transformation und Vernetzung mit diesen zuvor voneinander abgetrennten Bereichen bildet. In *The Substance* (2024) wiederum zeigt sich, wie sozioökonomische und kulturelle Ideale der Perfektion den weiblichen Körper in ein Schlachtfeld der Selbstoptimierung und des

Identitätstraumas verwandeln. Der Körper ist hier nicht nur biologisch oder technisch formbar, sondern wird wie in Oscar Wildes Roman zu einem Gemälde, das die Gefühls- und Moralwelt nach außen kehrt, ein Spiegel, der den gesellschaftlichen Missbrauch in seiner Groteske plastisch werden lässt.

Gemeinsam entwerfen diese Filme durch den Body Horror als Instrument eine posthumane Ästhetik: Sie konfrontieren uns mit der Angst vor dem Verlust des Selbst – und zugleich mit der Erkenntnis, dass dieser Verlust vielleicht die Voraussetzung einer neuen Form des Daseins ist. Der moderne Body Horror ist somit seinem früheren Zweck entwachsen: Anstatt die Transformation des menschlichen Körpers als bedrohlich, zerstörerisch und damit ausschließlich negativ darzustellen, gelingt es ihm als Medium des posthumanistischen Körperdiskurses einen vorher ungekannten Facettenreichtum einzufangen. Themen wie Hybridität, Fluidität oder Relationalität werden hier in vielschichtige Kontexte gesetzt und nicht mehr lediglich einseitig verhandelt, sodass letztendlich auch solch zuvor abjekten Prozessen und Zuständen eine Form von Sympathie und Schönheit beigemessen werden kann.

Mit dieser Untersuchung wird damit der Gedanke nahegelegt, dass die Renaissance des Body Horrors nicht nur in der einfachsten Form des Wortes als Wiederentdeckung zu betrachten ist, sondern darüber hinaus als Ausdruck eines fundamentalen Paradigmenwechsels, der sich in Gesellschaft, Kultur und Philosophie zuträgt und im Body Horror auf fruchtbaren Boden gestoßen ist.

Aufgrund dessen lässt sich resümieren, dass der Body Horror dem bloßen Schocker-Genre entwachsen ist und nun als ästhetischer Reflexionsraum für Veränderung – ob körperlich, geistig oder geschlechtlich – fungiert. Gerade dadurch erweist er sich als eine der ausdrucksstärksten Formen des kritischen Posthumanismus in den Medien der Gegenwart.

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Love Will (Not) Save the World: Transhumanism after *Evangelion* in *Mecha* Anime

Malte Frey¹

1. Introduction

When one thinks of anime, i.e., Japanese animated TV series and movies with an “anime-esque” (Suan, 2021, p. 17) aesthetics, often the genre *mecha* comes to mind. With its gigantic robots mostly piloted by teenagers and epic battles for the fate of the world, those anime productions address geopolitical struggles as well as coming-of-age narratives, relationships, and technological weapons. Especially the with the latter, *mecha* touch upon topics and goals of transhumanism. This chapter examines how a transhumanist notion of transcendence, to be reached through technological means, has developed in anime following in the footsteps of *mecha* since the 1990s.

Transhumanism, as represented by figures such as Vita-More and More (2013), Bostrom (2005, 2013, 2021), and Silicon Valley figures such as Elon Musk, is a movement pushing for human enhancement and surpassing human boundaries. While certainly heterogeneous, transhumanism generally focuses on the improvement of humanity (Sorgner, 2021), in terms of health span towards near-immortality and even disembodiment through mind-uploading, cognitive and of emotional capabilities through technological means, e.g., cryonic, cyborg technology, and even eugenics (Fuller & Lipinska, 2014, pp. 62–98). Transhumanist striving is about making humans ‘better’ and “technological maturity”, i.e., to exercise an almost perfect level of “productivity and control over nature” (Bostrom, 2013, p. 19). Humanity should evolve and, thereby, might even surpass the current immanent reality towards transcendence (Grillmayr, 2020, p. 273). In this context, transcendence is understood as technological maturity,

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an infinitely extended life span, and/or heightened cognitive capacities, all of which function as almost eschatological teloi.

In anime productions following *mecha*, connotations of a transhumanist notion of transcendence have shifted from technological transcendence as individual salvation to the denial of transcendence and of the transhumanistic strive for evolution altogether. This will be argued by tracing transhumanist themes in *mecha* anime and in the groundbreaking series *Neon Genesis Evangelion* [*Shin Seiki Evangerion*] (Anno, 1995, hereafter *EVA*). The series by studio Gainax marks a turning point in the genre in many aspects, also in terms of transcendence. Existing scholarship on *mecha*, *EVA*, and subsequently so-called *sekai-kei* anime will be introduced, providing a short overview of terminology and often discussed aspects. In a second step, I will argue for an affective notion of transcendence in *sekai-kei* anime laying the ground for what I call post-*sekai-kei* (in lack of a better term). As an example of *sekai-kei*, the series *Eureka Seven* [*Kokyōshihen Eureka Seibun*] (Kyoda, 2005, hereafter *Eureka*) by studio Bones and *Darling in the Franxx* (Nishigori, 2018, hereafter *DitF*) by studio Trigger will be analyzed. In regard of post-*sekai-kei* I will turn to the series *SSSS.Gridman* (Amemiya, 2018, hereafter *Gridman*) and by Trigger also. In *Gridman*, the genres of *mecha* and super-robot seem to have blurred, transhumanist transcendence as a goal is overcome and replaced with notions of immanence and complex reality.

2. From *Mecha*-Transhumanism to *Evangelion*-Selfhood: The Start of a Transformation

Mecha, short for the English “mechanical,” refers to what Napier calls a “favorite form from Japanese popular culture, the robot” (2005, p. 11). Simultaneously, the term has come to describe anime in which “robots are wearable weapons or battle suits that synchronize with the motion and volition of the pilot” (Saito, 2020, p. 153). Anime franchises, including manga, games, and merchandise of this narrative and aesthetic genre, have become immensely successful and popular. The seminal Gundam franchise, which started with and arguably centers around the TV anime series *Mobile Gundam Suits* [*Kidō Senshi*

Gandamu] (1979–1980), can fairly be described as both the cornerstone of the genre and as one of the defining features of how anime is perceived globally. Countless series, movies, games, and manga, as well as the Tokyo Gundam Base (until 2022) and the Gundam Factory (2020–2020) in Yokohama, which exhibited real-life Gundam *mecha* based on its anime counterparts, are testaments of the ongoing success of the franchise, the genre, and anime in general. Gundam, and accordingly *mecha*, have undoubtedly become part of “cool Japan” (McGray, 2002), with fan participation being a “key to its popularity outside of Japan, including the West” (Dominguez, 2022, p. 246).

Mecha anime can be dark and complex, stories of teenage pilots growing up and fighting brutal battles with their machines. In contrast to lighthearted and fun anime-series, the defining feature of *mecha* is the employment of a particular kind of realism in terms of “complex storylines and realistic designs” (Dominguez, 2022, p. 249). Ōtsuka (2008) traces realistic weaponry design in manga and anime back to military and aesthetic practices of imperial Japan before and during the Pacific War (1937–1945). He concludes that contemporary anime and *otaku* culture, starting with *Mobile Suits Gundam*, “which used [weaponry realism] to depict robots as weapons” (Ōtsuka, 2008, p. 123), have inherited this tradition. Complex characters and world settings add to a perceived realism, e.g., in *Gundam Wing* [*Shin Kidō Senki Gandamu Uingu*] (1995–1996). In this series, five space colonies fight for independence against the Earth Alliance. Each colony deploys a Gundam-*mecha* with its teenage pilot, who does not simply fight for good but carries deep and complex feelings, histories, and motives. The series concentrates on the pilots’ heroism, their anti-heroism, and their layered relationships, as well as supporting characters in their geo/astro-political environment. In such realism, *mecha* differ from super-robots fighting against evil in a more fantastic framework of, e.g., cosmic energy (Dominguez, 2022, p. 249; Saito, 2020, p. 153). *Tetsujin No. 28* [*Tetsujin Nijūbachi-gō*] (1963–1966) or *Astro Boy* [*Tetsuwan Atomu*] (1963–1966) are early examples of super-robot anime.

The “real robots” of *mecha* “reveal more proximity to fighting cyborg detectives or android mercenaries due to their role as the alter ego of humanity” (Saito, 2020, p. 153). That is because *mecha* are closely

intertwined with their pilots. Saito's remark is designated for the scholarly engagement with *mecha* focusing on robots as signifiers for the pilots' inner state from a psychological perspective. For Napier (2005, pp. 86–102), *mecha* more often than not explore stories of male self-empowerment and growth through technological enhancement, the strengthening of weaponry capability and combat power correlating with inner strength, development of core values, and self-awareness. And yes, all popular *mecha* pilots are boys: "Usually huge, with rippling metallic 'muscles' and armed with various weapons to the extent that it almost parodies the male ideal, the *mecha* body clearly plays to a wish-fulfilling fantasy of power, authority, and technological competence" (Napier, 2005, p. 86). However, Napier also notes that *mecha* focus on the "human inside the machinery" (2005, p. 85). This double aspect of *mecha* gives way to exploring complex psychological issues.

The empowering features of *mecha* correlate with defining aspects of contemporary transhumanism, which, in this endeavor, is very much tied to advanced capitalism and an instrumentalist logic, i.e., technology as a tool. In contrast, critical posthumanism argues, that a transhumanist logic may cause many to be left behind, e.g., the non-white, the elderly, or the poor. Scholars such as Braidotti (2013, 2022, 2024), Hayles (1999), or Haraway (2004, 2016) working on kinship between (non-)humans seem to agree that transhumanism is the re-affirmation or "intensification of humanism" (Wolfe, 2010, p. xv), which historically led to exclusion, colonialization, and even genocide. Critical posthumanism aims at deconstructing oppressive dichotomies and hierarchies embedded in and sustained by humanism, a perspective that historically privileges the male individual. The latter, which also is transhumanism's standard, appears to correspond to the ideal of the *mecha* protagonist being a (teenage) male enhanced through a technological weapon/armor/force. Through and with technology, he can accomplish his goals and reach, both literally and metaphorically speaking, new heights.

The male-empowerment standard of *mecha* explicitly changed with *EVA*. The series broke with transhumanist thematics of masculine empowerment, centering on vulnerability and the psychological states

of also female characters rather than epic battles and enabling technology (which are still there, though). The story revolves around the fourteen-year-old boy Shinji Ikari who is supposed to pilot an Evangelion, a *mecha*, in battle against alien beings attacking the Earth, so-called angels. NERV, the organization leading the battle, is headed by his estranged father, Gendo. Supervised and cared for by Captain Misato Katsuragi, Shinji is forced to dive into battle alongside his teenage colleagues, the blue-haired mysterious Rei Ayanami and the red-haired fierce and outgoing Asuka Langley. While the latter fights for recognition, Rei stands out as her quietness and mystery add to the fact that she herself literally appears to be a construct, a clone containing non-human elements. The Evangelions, being clones of angels rather than mere mechanical technology (Hernández-Pérez, 2021, pp. 193–194), can only be controlled by emotionally synchronizing with them. Therefore, operating an Evangelion signifies the mental state of the pilot. Simultaneously, the pilots, through their connection with the *mecha*, hurt from injuries in battle. With *mecha* as vehicles for emotional depth, anxiety, and pain, the anime sets a dark and psychologically inward-facing tone rather than displaying an expressive battle-focused anime spectacle. This is especially evident in the much-discussed last two episodes of the original TV series showing an “introspection of the major characters” (Suan, 2021, p. 240). In contrast to previous *mecha*, piloting an Evangelion does not appear to be empowering but potentially gruesome and hurtful. As the plot evolves, it becomes clear that all characters experience alienation, fear, anxiety, and have an unfulfilled desire for (sexual) closeness and intimacy.

Napier deems *EVA* as “the deconstruction of the entire *mecha* genre” (2005, p. 96). Scholarly attention has centered on interpersonal relations and the psyche of the characters. Psychoanalytic readings like Napier’s (2005, pp. 96–102), Ortega’s (2007), or Saitō’s (2000/2011) focus on the dilemma of the male protagonist Shinji in relation to his father Gendō, his dead mother, and, most importantly, to Asuka, Misato, and Rei. The female characters are employed for the male character (and possibly the male *otaku* audience) to reconcile his own state of mind and position within society in an Oedipal dilemma (Howard, 2014, p. 369). In this line of thought, *EVA*, like previous

mecha, seems to privilege the male individual. Saitō, in Lacanian tradition, discusses “Beautiful Fighting Girls” in (*mecha*) anime like Rei as “phallic girls [...] understood here as objects (both causes and results) of sexual desire” (2000/2011, p. 8). Lamarre, referring to Saitō, dedicates an entire section of his book *The Anime Machine* (2009, pp. 213–276) to Lacanian readings of anime (girls). Constructing the women from the ontological primacy of male desire (Lacan, 1982), Saitō describes the phallic girl, Rei, as a “thoroughly vacant being” whose purpose is to “mediate the other world.” As such a medium, she herself is hollow (Saitō, 2000/2011, p. 160). Asuka, on the other hand, seems to fight against such perceived emptiness, however, without result. In this sense, the female character functions as a projection screen for male desire, signifying the “impossibility of the full integration of female subjectivity” (Howard, 2014, p. 369).

Psychoanalytic readings of *EVA* are a symptom of the series pushing the boundaries of *mecha* and questioning the genre’s male transhumanist standard. As the borders of the male individual Shinji erode, the passive position of female characters is raised as an issue through the depicted struggles of Misato, Rei, and, most evidently, Asuka. Themes of transhumanist enhancement through technology as signifiers for improvement of (inner) growth and strength are questioned and blurred. Rather, technology becomes a reflection and marker of psychological struggles and even depression, which *EVA*’s creator, Hideaki Anno, has dealt with himself (Ahn, 2019; Howard, 2014, p. 368). *EVA* poses questions of power, relationships, and also gender hierarchies through the lens of technological enhancement (the Evangelions), deconstructing the individual “bordered-whole” (Suan, 2021, p. 210). Transhumanist striving, here, does not cause humanity to evolve to a transcendent realm but discloses and intensifies underlying angst, hurt, and alienation. From this perspective, *EVA* transforms *mecha*’s transhumanism into a self-reflection through questioning the very ideal transhumanism is built upon. As the series evolves, it poses the question of whether human individuality can or even should survive at all, rendering transcendence very personal.

3. *Sekai-kei*'s logic of affect: From Depression to Social Community

EVA has been extremely influential to anime as a medium and maybe to popular culture on a global scale. In its wake, various anime series have been produced, including *mecha* and building onto *EVA*'s focus on selfhood. Such "post-Eva" anime—as well as manga and light novels—have been deemed *sekai-kei* ("world type"), its core fictions being Shin Takahashi's manga *She, the Ultimate Weapon* [*Saishū Heiki Kanojo*] (2000–2001), Mizuhito Akiyama's novel *Iriya's Sky, Summer of the UFOs* [*Iriya no Sora, UFO no Natsu*] (2001–2003), and Makoto Shinkai's anime *Voices of a Distant Star* [*Hoshi no Koe*] (2002) (Hack, 2021, p. 37; Howard, 2014, p. 367). Also, non-*mecha* anime can be regarded as *sekai-kei*, most prominently Shinkai's films *Your Name* [*Kimi no Na wa*] (2016) and *Weathering with You* [*Tenki no Ko*] (2019).

First, it is worth mentioning that *sekai-kei* have been theorized through the lens of anime studies as a specific mode of consumption of the anime media mix (Steinberg, 2012), because they draw on established tropes and designs. According to Azuma (2001/2009), anime audiences consume particular elements like cat ears, specific character designs, and/or narrative tropes rather than singular characters or narratives. Within the scope of this chapter, it is impossible to give a detailed account of Azuma's widely influential theory. Therefore, it must suffice to say that *EVA*, the "ūr-text of *sekai-kei*" (Howard, 2014, p. 366), draws from numerous narrative elements of (*mecha*) anime while *sekai-kei* draw from a variety of narrative and design elements of *EVA*.

Second, *sekai-kei* have been defined by narrative elements and character dynamics. The term originated in the online culture of the early 2000s. It has been systematically examined by foremost Maejima (2010) and Azuma (2007) and describes fictions in which "a young couple's doomed romance is directly connected to an apocalyptic 'world' conflict" (Hack, 2021, p. 31). In concentrating on this interpersonal relationship, *sekai-kei* lack world building, set their plots in confined spaces like schools or military units, and thereby focus on "small-scale relations" (Azuma, 2007, pp. 96–97, translated by Hack,

2021, p. 36). With its success corresponding to the large-scale (apocalypse), small-scale relations appear to eradicate or at least minimize the mid-level, i.e., the society, the nation, institutions, boundaries, and established hierarchies (Maejima, 2010, p. 28). In *EVA*, albeit much less so than in classical *mecha*, institutions such as NERV and the UN, and thus a ‘realistic’ world, have not completely ceased to exist and provide a fragile consistent background for character interaction. *Sekai-kei*, in contrast, neglect or even abandon those societal frameworks, concentrating on small-scale environments and rendering the outer world abrasively uninteresting. Transhumanist notions of enhancement are thus depoliticized.

Furthermore, in the emphasized relationship of *kimi to boku* [(female) you and (male) I] (Maejima, 2010, p. 174), a weaponized female protagonist (Suan, 2021, p. 241) usually functions “as a male fantasy wherein the virginal heroine’s affections validate the unremarkable male protagonist’s existence” (Hack, 2021, p. 36). This interpretation echoes Lacanian psychoanalytical readings of *EVA* and the relationship of Shinji and Rei. Furthermore, Hack observes that many (Japanese) scholars understand *sekai-kei* in the context of social anxieties and insecurities within Japanese society during the early 2000s and Japan’s neoliberal turn, focusing on individual relationships rather than societal structures (2021, pp. 34–39). Similarly, Suan (2021, pp. 239–245), building onto Maejima and others, argues that the (not necessarily Japanese) neoliberal emphasis on individual success contrasts actual realities. This problematic is engaged with through the small-scale relationships in *sekai-kei*. Society and social anxieties are broken down to the most intimate level: the romantic couple.

It appears that, in *sekai-kei*, technology as an object of male/transhumanist desire takes the form of the female protagonist. *EVA*’s Rei appears to have had a lasting effect as the “prototype” of this mode of consumption (Azuma, 2001/2009, p. 37; Hernández-Pérez, 2021, p. 207), regarding both the performance of this particular weaponized “beautiful fighting girl” and the narrative construct of a projection of male desire. In *sekai-kei*, ‘she’ is either weaponized herself (She, the Ultimate Weapon), or equipped with special piloting abilities (Iriya’s Sky). While not all *sekai-kei* can be described as *mecha* in the traditional

sense, most of them exhibited the necessity to ‘pilot’ technology, i.e., get close to (female) technology to surpass conflict and avoid (social) death. Technology, in this line of thought, is both a tool and an object of desire. From a male transhumanist point of view, the weaponized and therefore often non-human heroine functions as the human male hero’s supplement and tool for sexual/psychological completion, or better, transcendence. She, in this regard, is evolution with a face.

However, by examining *Eureka* and *DitF*, I propose a different understanding of the *kimi to boku* relationship in *sekai-kei*, arguing that residues of male transhumanism further subside and notions of contrasting posthumanism are emphasized. I draw from Hack’s observation that *sekai-kei* conceptualize their characters as embedded and embodied (Hack, 2021, pp. 47–48). He argues that *sekai-kei*’s visuality is “housed within anxious pairs of eyes and the embodied limits of individual experience” (Hack, 2021, pp. 33–34). This embodiment serves as a catalyst for posthuman affectivity rather than instrumentality, and technology as a vessel for social and even romantic relationships. This entails a changed notion of transcendence, which is transformed into a social logic of community.

3.1. *Eureka Seven: Relational Affect*

Eureka displays all the key features of *sekai-kei* and does not hide its *EVA* heritage. The series tells the story of the boy Renton Thurston in a faraway future. Living in a small and boring town with his grandfather, he initially wishes to escape the daily routines through surfing, or better, lifting on so-called Trapas, in-air energy waves depending on tectonic shifts. He admires the outlaw group around Holland Novak on the extraordinary ship Gekkostate, which is both the name of the vessel and the group. The Gekkostate surf on Trapas with their *mecha*, so-called LFOs (Light Finding Operation), while eluding military control, signifying a counterculture of surfing/skating and music like techno, and thereby freedom. In the first episode, the blue-haired girl Eureka, who is part of the Gekkostate, with her LFO Nirvash, crashes into Renton’s home. This eventually leads to Renton joining the group because of his love interest in Eureka, whose character design and performance reminds of *EVA*’s Rei. As the series progresses, the audience learns that the world is co-inhabited by the so-

called Sub Coral, a collective lifeform that has merged with the Earth and wants to connect to humanity, a fact unknown to the public and hidden by humanity's leaders. The Gekkostate is comprised of military deserters using lifting, techno music, and their own magazine, Ray Out, to subvert state control and narrative. On the military's side, the pink-haired girl Anemone has been artificially altered in a cruel transhumanist effort to establish control over the Sub Coral and fights the Gekkostate with her handler Dominic. The two of them provide a counterpart to Renton and Eureka's love, the latter reminding us of Rei while the extroverted and loud Anemone resembles Asuka. As is revealed eventually, Eureka herself is not human but an envoy of the Sub Coral, sent to establish contact. Thus, her and Renton's love becomes the vessel through which the fate of the world, of humanity as well as the planet, is decided as they have to mediate between human and non-human life on the brink of mutual extinction. It falls to them to form a bond of understanding and an interspecies alliance against the transhumanist striving of the antagonist, Colonel Dewey Novak. His motive is to rid the Earth of the Sub Coral in an attempt to re-establish humanity's dominance and, as he calls it, (human) dignity *bito no songen*.

The Nirvash, Eureka's and Renton's LFO, which has a will of its own and thus is not a simple machine, plays a central role. Its name is Hindi for "nirvana", and it is powered by the so-called "Amita-Drive", hinting at Amida Buddhism. With its two-seated cockpit, it is initially piloted by *Eureka* alone. Eventually, the two characters pilot the Nirvash together, its growing power and reaction to the characters signifying the intimacy of the couple's relationship. Building onto *EVA*'s theme of *mecha* being alive beings (clones), *Eureka* portrays the Nirvash as an almost godlike entity, like Eureka herself originating from the Sub Coral and capable of facilitating the connection between the non-humane female and the human male protagonist. If Renton and Eureka understand each other, the Nirvash reaches her (!) full power. Technology, here, becomes a spiritual-religious signifier for a romantic and empathic connection, even on an interspecies level, instead of a marker of psychological issues such as anxiety and alienation.

Within the *Nirvash*, the protagonists' relationship is not simply spiritual but physical and embodied. The Buddhist connotation of embodiment, in this regard, counters that of the transhumanist concept of transcendence as near-immortality through disembodiment, which can be traced back to a Judeo-Christian tradition of immortality through the duality of body and mind/soul. In fact, the antagonist Dewey, arguing for his claim on human supremacy in episode 34, refers to a Christian context, quoting John 1:1, "At the beginning was the Word [*Hajime ni kotoba aru*]." One of his disciples, experimenting on and thereby killing children for the purpose of creating better *mecha* pilots like Anemone, is depicted wearing a priest-like wardrobe. Here, Christianity is blatantly framed as hostile to life, interested in rationally instrumentalizing and sacrificing bodies. The embodied presence of Eureka and Renton, emphasized through the *Nirvash* cockpit, however, suggests a different approach grounded on affect rather than rationalism.

Affect, in *Eureka* and maybe *sekai-kei* in general, is caused by the necessity to feel rather than the capability to understand. Without explicitly addressing them, *Eureka* dives into a variety of topics such as rebellion, coming-of-age, military control, genocide and historical trauma (which one might associate with war crimes during the Pacific War), fake news and propaganda, female empowerment (especially through side characters such as Holland's partner/wife Talho), and, most importantly, the exploitation of natural resources and the non-human. While some of these are more dominant than others, the anime mostly denies sufficient explanations about the histories of the world as well as of the characters. The audience, similar to Renton, is at a loss as to why something happens and how the environment is comprised. Many questions remain unanswered, and narrative backgrounds subside in the dark, which is illuminated by the characters constantly saying "I don't know [*shiranai*]" or "I don't understand [*wakaranai*]." This ongoing state of uncertainty sets a climate that causes the audience to rely on what Hack, drawing on Shaviro (2010) and referring to *sekai-kei* in general, calls "affect" and "pathos" (2021, p. 33). It is more about atmosphere and emotions than logic and understanding. Similarly, the characters rely on emotions and success in

being empathetic to overcome and resolve obstacles, which predominantly present themselves in the form of character interactions. Barriers of initial self-indulgence and psychological isolation during the first twenty-five episodes are turned into open communication and engaging each other in the second half of the anime. The communal overcoming of those insecurities rather than rationalized actions provides affective resolutions and, finally, salvation from the imminent threat of the end of the world. It is the absence of a societal logic that necessitates one of communal affect.

This is often evoked by strong visual images, colors, and expressive close-ups of the characters' faces. Further, impressive voice-acting, especially that of Anemone when she is hurting, mediates feelings and might even shock the audience. That pathos-laden aesthetic both displays hurt and angst and supplements a fear of loss, alienation, and loneliness associated with the depression of *EVA* through a beautifully depicted resolution. Postmodernist readings of *sekai-kei*, concentrating on narrative tropes and the iteration of anime elements alone, diminish the audiovisual affective impact of the particular anime in their particular media environment on the audience, as Hack (2021, p. 32) rightfully argues. Aestheticized emotions and feelings of being in the world, longing for and also reaching togetherness, counter a rationalized, overwhelming, and maybe even depressive experience of the world.

Therein, *Eureka* appears to proclaim an unwithering call for understanding and engaging one another. Oedipal themes of an absent father (Renton's father and Holland as a surrogate), envy of the father because of love for the mother (Eureka cares for three children who initially see Renton as a threat), and desire for possession are overcome through the proclaimed idea of the nuclear family as a utopian form of harmonic coexistence. Eventually, skipping sexual desire and sex altogether, Renton and Eureka as father and mother of the adopted children, form an ideal family. Here, the small-scalism of *sekai-kei* becomes evident. However, this does not mean that society in *sekai-kei* in general and in *Eureka* in particular is completely absent. Subsidiaries of it, in this particular case the Gekko State, suggest existing (governmental) structures in which characters negotiate their

places and relationships. Furthermore, according to Howard, society persists within the *kimi to boku* relation tied to large-scale situations and “the demand from others to take their prescribed place in society” (2014, p. 367). This also applies to the characters in *Eureka*, with each member of the Gekkostate finding their supposed position, growing into their respective roles, e.g., Talho into a confident leader and expectant mother. Rather than supporting mere individual development, the series portrays a collective effort within a small-scale environment that is composed through affective and thereby understandable connections, which supplement the erosion of sociopolitical institutions.

Technology as a tool within a climate of transhumanist striving to be ‘better’ is part of this environment. Yet, *Eureka* appears to counter the instrumentalist logic of transhumanist transcendence, turning towards a posthuman understanding of kinship. Here, transcendence is comprised of the affective small-scale community symbolized through a romantic inter-species love. While the male perspective on a supposed hollow female subjectivity remains as a backdrop, the affectivity performed in *Eureka* is representative for *sekai-kei* breaking with those established boundaries and, arguably, psychoanalytical logics in a Lacanian fashion. Love, as broken it sometimes may seem, will lead to community and, in the end, will save the world.

3.2. *Darling in the Franxx: Widening Sekai-kei’s Small-Scale*

More than a decade later, *DitF* further pushes the boundaries of *sekai-kei* by (re-)introducing physical sexuality, codependence in piloting *mecha*, and a strong focus on environmental issues as well as human-non-human interaction. The story also focuses on the small-scale *kimi to boku* relationship of the male protagonist Hiro (*boku*) and the female protagonist Zero Two (*kimi*). The latter’s character design (pink hair and two small red horns) was widely spread through social media and resembles Anemone in *Eureka*. Like her, Zero Two is an experiment, a weaponized being, and therefore alienated from her comrades. In a distant future when humanity is confined to moving cities on an otherwise scoured Earth, Hiro and Zero Two are members of Franxx squad 13. Franxx are the giant robots, *mecha*, that can only be piloted by a boy-girl pair and that are the only weapons against Klaxosaurs.

Those alien beings, residing deep within the planet, attack the human cities drilling into the ground for resources. Later, like Rei or Eureka being non-human, the audience learns that Zero Two is a clone of the Klaxosaur princess, like Anemone, meant to be a weapon of humanity's transhumanist leaders aiming for disembodiment and thereby immortality. However, different from Eureka and like Anemone, Zero Two is initially met with reluctance, distrust, and open dislike. Hiro, her supposed partner in piloting her *mecha*, and she form a deep romantic and physical connection, re-introducing sexuality in the otherwise asexual and non-physical military environment of Squad 13 and thereby challenging the transhumanist leaders. *DitF* openly displays sexual affection as the teenagers have to pilot their Franxx in 'doggystyle' positions. For them to successfully control their *mecha*, they have to synchronize with each other in an obviously sexual manner. The sex-positivity is also brought forward by the characters exploring their embodiment and embeddedness in the world in blatantly sexually depicted bodies. Thereby, Hiro and Zero Two's and also other characters' relationships counter the sexual frustration in *EVA* and go beyond the physical but innocent-seeming relationships of prior *sekai-kei* like *Eureka*.

Technology – *mecha* – function as both a tool of established power and a unifying force, bringing together lifeforms while disregarding or at least paying less attention to gender and their species. First, in imposing the heteronormative girl-boy (*kimi to boku!*) doggystyle position, the *mecha* cause intrusions, e.g., when the homosexual girl Ikuno has to pilot with the boy Futoshi. While this piloting position in general can be associated with sexual coercion because both pilots do not have a choice in their transhumanist military environment, this constellation is especially noteworthy as it enforces a heteronormative frame on a non-heteronormative identity (Frey, 2024, pp. 28–29). Second, the anime shows how the characters of Squad 13 negotiate this set framework, redefine it, and employ technology as a vehicle for (sexual) embodied and affective community rather than control (of men over women). In pushing romantic connection to an extreme display of sexuality, *DitF* almost parodies prior *kimi to boku* relationships.

Elsewhere, from a paranoid reading perspective (Kosofsky Sedgwick, 2003), I have argued that *DitF* reaffirms existing structures and reassures a heteronormative framework (Frey, 2024). However, from a reparative reading standpoint, the anime also exhibits notions of non-heteronormative sexuality, e.g., Zero Two as a transperson, homosexual and genderfluid characters, which challenges both the ideal of the male standard of *mecha* as well as the notion of the phallic girl. While for Saitō (2000/2011, p. 160), *EVA*'s Rei is the prototype of the phallic girl, the psychologist does not consider other female characters, especially Asuka, struggling with her fate and extrovertedly acting out. In *Eureka*, Eureka resembles Rei, and Anemone resembles Asuka. In *DitF*, however, Rei as a character type, a quiet and nearly empty projection space for male desire, seems to have faded away, Zero Two building onto Asuka/Anemone types. As such, Zero Two, like Asuka, functions as sexually desirable character, evident in poses, perspectives, and visible actions of the male characters (as well as of the fan audience). However, the character is not empty. Like Asuka and Anemone, she fights and struggles, which makes it necessary for community to be negotiated through empathy rather than instrumentalism and control. Therefrom, technology and the non-human, with the face of Zero Two, have obviously escaped.

This departure from the transhumanist instrumentalism is further emphasized by the series' focus on the environmental issues of exploitation and coexistence with the non-human Klaxosaurs. In the final episode, *DitF* depicts a utopian landscape as a communal space, contrasting the formerly devastated Earth and stressing overall community even more strongly than *Eureka*. In *DitF*, the *sekai-kei*-reduction of society by the small-scalism of *kimi to boku* is widened as the beginning of a new society, surpassing the romantic couple but based on affective and sexual relationships, is suggested. Transcendence, in this regard, rather than transhumanist disembodiment or technological maturity, is portrayed as an affective utopian space. A better, because non-political and small-scale communal sphere has begun, countering transhumanist enhancement inherent in established politics of neoliberalism and military control. A transhumanist notion of transcendence is politically eroded because the political did not

suffice. Rationalism is transformed to affect, and society is transformed to community, which should not be dismissed as escapism but “rare moments of coherence where the beginnings of a social world are imaginable” (Hack, 2021, p. 60). Social should be understood as communal rather than societal, wherein lies a notion of fatality in the sense that maybe more comprehensive structures are not sustainable. The small-scale may function as an example for everything but is not sufficient to extend to the lives of everybody. The world, in this sense, might not be saved for all.

3. Post-*sekai-kei*? Beyond Affect and Towards a Complex Reality

What comes after the supposed end of the world and its emotional-affective resolve to communal spaces, contrasting instrumentalist logics? It remains hard to imagine how such a community actually works in a larger network, transcending the small-scale of affective connections. Can an affectivity be sustained toward a stable environment? Arguably, the narrative and aesthetic themes of *sekai-kei* in this regard have run out of appeal, a ‘love saves the world’ fatigue leading to addressing different questions and a different approach (to anime). In some more recent anime that continue the *mecha* topos, character dynamics as well as notions of technologically mediated transcendence are conceived differently. The series *Gridman*, technically to be categorized as “giant hero” [*kyōdai hīrō*] involving super-robots fighting giant monsters, functions as an example of my argument for post-*sekai-kei* anime building onto the tradition of both *mecha* and super-robots. The notion of an initially instrumentalist transhumanist, then affective transcendence in *sekai-kei*, seems again to have changed.

Gridman, announced by Trigger alongside *DitF* at the 2017 Anime Expo in Los Angeles (Ressler, 2017), is an adaptation of the super-robot live-action series *Gridman the Hyper Agent* [*Denkō Chōjin Guriddo-man*] (1993–1994) but sets an altogether different tone. Set in a contemporary Japanese city—arguably Tokyo as it features real-life places such as the shopping center Nakano Broadway (a mecca for anime and manga fans)—the amnesic high schooler Yūta Hibiki, with his

friends Rikka Takarada and Shō Utsumi, encounters an old computer in the secondhand shop of Rikka's mother. On this *pasokon* (personal computer) called Junk, the robotlike figure of Gridman appears, calling Yūta to duty as *kaijū*, huge and strange monsters like Godzilla, sometimes equipped with technological weapons, attack the city. Yūta, through Junk, merges with Gridman, appearing as a skyscraper-tall super-robot fit for audiovisually extensive battles. Nevertheless, character relations are also examined as Yūta displays romantic interest in Rikka while she explores her friendships, especially with Akane Shinjō who is favored by Utsumi. Akane is not only a teenage pupil, though, but also the God of the city, and the *kaijū* are her creations. She models *kaijū* alone in her littered room, bringing them to life. Through them, she sustains what she likes and destroys everything and everyone she disregards, creating her world and everybody's reality. The city is the world, and there is nothing outside this small-scale. However, as everything is her creation, Akane seems unable to form meaningful relationships. *Gridman* is rooted in the super-robot tradition of early anime, fighting supernatural monsters and alien beings. However, *sekai-kei* like *Eureka* and *DitF* and even *EVA*, too, exhibited notions of 'un-realism', especially through their female characters eluding a technological rationalism and their *mecha* being tied to non-human entities and even cosmic awareness. Purely rational realism seems to have already faded away. Simultaneously, *mecha* aspects of Yūta 'piloting' Gridman, technology as a vessel for protecting humanity, and the depth of the characters resemble the 'realism' of real-robot anime. Additionally, *Gridman* considers character dynamics in quieter sequences affecting the audience and, like *EVA*, playing to moments of alienation and misunderstanding. This particularly applies to Akane, whose loneliness, alienation, and estrangement, albeit her being a popular girl, is framed as the cause of devastation and death. Her inner state appears to be at the center of *Gridman*, employing the super-robot-*mecha-kaijū*-thematic to examine the loneliness of a reclusive teenager.

In comparison to *sekai-kei* like *Eureka* and *DitF*, the dynamics have obviously changed. There is no chosen and weaponized girl (*kimi*) as the face of the non-human, technology, and thus evolution. *Gridman's*

character designs appear to have abandoned with the influential figures of Rei and Asuka. While Akane arguably resembles Rei, and her desire for connection suggests a psychological emptiness, the latter does not lay grounds for her to function as a phallic girl. Contrarily so, her body is sometimes depicted in an obvious sexual manner without other characters reacting to this explicit presentation. Its sole purpose seems to be to construct a space of desire for the audience in terms of fan service. However, this sexuality has no narrative function and further stresses the character's incapability to form even hollow sexual connections. *Gridman* with Akane, in this sense, draws on tropes of *EVA* and differs from the affective emotional resolve in *sekai-kei*. Building onto this, the series transforms the notion of the phallic girl by suggesting a different conception of desire.

One of the key notions of Lacanian theory is the symbolic. Howard argues that the appeal of *EVA* is that the anime denies full disclosure in the sense that neither alienation, nor emotions, nor conflicts can be fully grasped in symbolic, i.e., representational terms. It gets "too close to the real, that which resists symbolization" (Howard, 2014, p. 368). The "symbolic order" (Howard, 2014, p. 369), in this sense, marks the established order, the norms and expectations of society. According to Saitō, existence is only possible in "relation to this Symbolic" (2000/2011, p. 164). The phallic girl helps integrate into the symbolic and supplement the loss of the real (Howard, 2014, p. 369; Saitō, 2000/2011, pp. 159–164). The therein implied ontological primacy of male desire, in *Gridman*, is subverted through Akane's sexuality, functioning outside male desire, and her control over reality. She does not help the male characters overcome anxiety. Rikka, likewise, does not fulfill this role. Rather, she functions as a counterpart to the male desire of Yūta and Utsumi, engaging in interactions with her friends and approaching the withdrawn Akane. The phallic girl as both symptom and object of male desire seems to have disappeared.

If there even is something like a space for desire, in *Gridman*, it is the male protagonist. As becomes clear in the end, the amnesic Yūta has been Gridman all along. The 'real' Yūta's feelings for Rikka push through, but he takes no action at all. In this regard, it is he that is an empty space, a hollow section of masculine fighting action, a

projection space for desire both of the audience and other characters. *Gridman* thereby subverts the Lacanian logic of readings like Saitō's and offers a more complex take on gender, community, and even reality.

This complexity is not resolved easily. There is no metaphysical upgrade of fighting abilities through affective emotions. Further, trauma and identity crisis are not validated and overcome through technology. They just exist alongside it as Yūta does not regain his memories, and his success in battling the *kaiju* does not help characters in overcoming their emotional insecurities or relationship problems. This is why *Gridman* does not proclaim emotional affect as a solution, and the world is not naturally collapsing into a romantic relationship. Rather, reality is constructed and mediated with its emotional core (Akane) examined rather than romanticized. The question apparently is not how reality is fixed, i.e., how to beat *kaijū*, but how one reacts to an environment that one cannot control and how the world itself is mediated.

Akane's partially shattered glasses and screens, when she builds *kaijū*, hint at an otherwise broken reality. In the final episode, after the last battle against her has been won, she reconciles with Rikka, acknowledging her friendship. However, there is no complete forgiveness or new friendship. Affection cannot surpass the caused damage and destruction. Rather, Akane realizes that she has to leave the place where she is God and engage with a world where she is not. The final sequence shows a cut from the 2D anime aesthetics to a live-action sequence of a teenage girl waking up in her room. Akane has seemingly left the constructed and mediated reality of her creation and now has to face the real world that extends beyond her control and desires. Rather than validating a romantic absolute, that sequence also anime-specifically pushes toward reconnection with a broader reality that exists beyond one's feelings. By emphasizing acknowledgment and coming to terms with reality rather than escaping it, technological as well as affective transcendence lose their redemptive functions.

Thus, in *Gridman*, there is a different notion of transcendence than in previous *mecha*, in *EVA*, and even in *sekai-kei*. Technology, here, is a vehicle for battle, but it neither helps in overcoming anxiety nor

facilitates emotional affectivity as a marker for community. Rather, *Gridman* rejects the notion of the finality of transcendence by reconnecting a mediated reality to a larger and more complex environment. This implies the erosion of formulated standards and necessitates the individual's engagement with the environment he/she is living in. This constitutes the 'post' in post-*sekai-kei*. *EVA*, in escaping the symbolic, emphasized the impossibility of simplistic solutions like technological enhancement in a transhumanist manner. *Sekai-kei*, like *Eureka* and *DitF*, counter the supposed fatalism and anxiety with a positive notion of affectivity, which might be an umbrella term for posthumanist theories of kinship (Haraway, 2016) or affirmativity (Braidotti, 2022). Post-*sekai-kei*, like *Gridman*, appear to take both aspects into account and widen the frame: Small-scalism in affective communal spaces plays a role but is embedded in larger structures that cannot (and should not?) be ignored. Therein lies a call for responsibly engaging, transforming, and shaping also a political reality in a complex and potentially overwhelming environment. Post-*sekai-kei*, in this sense, might do away with both the oversimplification of affective small-scale relationships in *sekai-kei* and *EVA*'s focused consideration of individual selfhood.

4. Conclusion

This chapter has engaged with notions of transhumanist transcendence in the tradition of *mecha* anime. Transhumanist transcendence, a dream of technological maturity or even disembodiment, appears to have gradually faded away from *mecha* anime. Initially instantiated in forms of masculine empowerment through technology, the focus on enhancement changed to examinations of individual selfhood in *EVA* and then community through affection in *sekai-kei*. The latter provide a point of departure to go beyond instrumentalist strivings for control in transhumanism and to imagine society as a community through technology and with non-human characters rather than functional structures. Such anime draw from examinations of both selfhood and affective community but are grounded in the larger environment of a more complex reality than *sekai-kei*'s small-scale affectivity. While *sekai-kei* paint transcendence as affectivity, post-*sekai-kei*

deconstruct notions of (transhumanist) transcendence altogether. The results of my analysis are summarized in the chart below.

	Transhumanist enhancement facilitates...	... through ...	... to ...	<i>Notion of Transcendence:</i>
Classical <i>mecha</i>	(male) empowerment	<i>mecha</i>	evolution of humanity	Technological maturity
<i>EVA</i>	existential questions of individual selfhood	phallic girls (Rei)	questioning “the human”	Inner mental state
<i>Sekai-kei</i>	romantic small-scalism of <i>kimi to boku</i>	a shift from Rei to Asuka	companionship with technology/the non- human	Affective community
Post-<i>sekai-kei</i>	no emotional or evolutional reward	characters beyond (male) desire	a complex notion of reality and community	Immanent environment to be engaged with responsibly

Table 1. Development from classical *mecha* to post-*sekai-kei*

From *mecha* to *post-sekai-kei*, a shift from transhumanist to posthumanist considerations has occurred, going hand in hand with a changed perspective on (male) desire and the performance of female characters. From phallic girls providing projection spaces for male *otaku* audiences and signifiers of different forms of identity, including female subjectivity and the non-human, female characters apparently have evolved, providing a perspective that isn't centered on male subjectivity alone. The inherently male point of view in contemporary transhumanism focused on technological enhancement is thereby countered, and concepts of transcendence are widened. The latter, in post-*sekai-kei* anime, are gradually subsumed by the necessities of affective community, negotiation, and finally complex realities that defy simplistic or standardized formulas such as the human defined by (trans-)humanism and (heterosexual) affective connections alone. In drawing attention to both a close-by complexity rather than distant futures and affective small-scalism rather than structure, post-*sekai-kei* anime provide a space of imagination for an immanent reality. Since this chapter only focused on *Gridman* in describing post-*sekai-kei*, further research is needed, tracing both the traditions of *mecha*'s transhumanism and *sekai-kei*'s posthuman affectivity in contemporary anime and

situating post-*sekai-kei*'s complex immanence within a contemporary (global and local) sociopolitical environment. Transcendence as something distant appears to lose its meaning. Instead, actions grounded in the affective here and now, embedded in a large and complex environment, are called for.

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Singularity, Neoliberalism and the Posthuman Condition: An Unconditional Accelerationist Reading of Charles Stross's *Accelerando*

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"It looks a bit too human to me."

"Human," echoes Sadeq, a curious wistfulness in his voice. "Did you not say humans are extinct?"

"Your species is obsolete," the ghost comments smugly.

"Inappropriately adapted to artificial realities. Poorly optimized circuitry, excessively complex low-bandwidth sensors, messily global variables –"

Charles Stross: *Accelerando*

1. Introduction: Unconditional Acceleration and Dismantling the Human Security System

The technological singularity, first popularized by science fiction writer Vernor Vinge and subsequently adapted by futurist and transhumanist thinker Ray Kurzweil, describes an imminent inflection point wherein self-improving artificial minds surpass human cognitive capacities, rendering the human as a separate mode of being from technology obsolete. At its extreme, this view posits the fusion of human and machine, within a superintelligent collective consciousness (Shanahan, 2015; Tariq et. al., 2023). Within contemporary speculative philosophy, this horizon has been utilized by two opposing political frameworks: the „left-accelerationist” (L/Acc) project of Promethean central planning, which seeks to master and repurpose technological platforms for a post-capitalist mode of social organization, and the neoreactionary, „right-accelerationist” (R/Acc) desire to secure, evaluate, and govern technological innovation

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through hyper-fragmented, corporate-technofeudal structures (Srnicek & Williams, 2015; Land, 2010; Tait, 2019; Moldbug, 2007; Adams, 2026). Against these attempts to regulate the incoming future, unconditional accelerationism (U/Acc) asserts a fundamentally different stance regarding the acceleration of technology, an uncompromising anti-praxis grounded in the consequential refusal of regulation. U/Acc denounces the high-modernist pretense that the pulsion of technological acceleration is open to human navigation, planning, or reintegration into any kind of political or theological salvation (Garton, 2017a). For the unconditional accelerationist, the human is not in control of history, but merely an epiphenomenal product of technological evolution—a transient biological scaffolding destined to be torn apart and discarded by the absolute deterritorialization of technocapital.

The cancerous overdevelopment of the market is viewed by Unconditional Accelerationists as an autonomous, non-human process. It is this structural logic of modern capitalism that Vincent Garton and other U/Acc theorists map through its historical antecedents, tracing a line from Marxism through classic cybernetics to the “cybergothic” theory fictions of Nick Land and the Cybernetic Culture Research Unit (CCRU). This line of “catastrophic velocity” identifies capitalism as a technoindustrial spiral—a “techonomy” in the context of which the marriage of technological and economic development is recursively intensified by its own internal crises and productive contradictions. For the U/Acc theorist, the only true emancipatory gesture is not to resist or slow down this spiraling process, but to throw our weight behind its momentum, accelerating the processes of destratification that capitalism continually unleashes but is ultimately forced to obstruct to preserve its own homeostatic boundaries (Garton, 2017b). In this chapter, we shall interpret Charles Stross’s novel, *Accelerando* (2005) as an exemplar of an Unconditional Accelerationist future, in which technology has outgrown even the transhuman.

2. Singularity After Transhumanity: Radical Posthumanism and Vile Offspring

In Charles Stross's novel *Accelerando* (2005), the chronopolitical potential of the Singularity is realized not as a dystopian tragedy to be resisted, but as a phase-change of the planetary system from an anthropocentric order to an autonomous, non-biological intelligence. Environmental historian Thomas Berry identified the trajectory of technology as the advent of a "Technozoic" era, one that could prove inhospitable to terrestrial life. As an alternative, Berry proposed the "Ecozoic", in which humanity would supposedly discover sustainable ways of communal life, becoming one with the cosmos (Berry, 2015, 60). Against Berry's openly technophobic vision of ecological harmony, U/Acc proposes something very different: becoming-one with the ungrounding movement of technology. Resistance to the world of techonomy is futile. Already, artificial forms of intelligence are writing through us, hacking the minds of these still, for the moment, human authors, actively working towards a future that resembles the machinic world presented to the anxious reader of *Accelerando*. Stross's novel may be read from an affirmative U/Acc perspective, leading to an overidentification with processes of destratification or "deterritorialization" that capitalism continually unleashes but is periodically forced to obstruct, in the interest of preserving its own homeostatic boundaries. According to the ontology underlying accelerationism, derived from Gilles Deleuze and Félix Guattari's work, "a territory is always en route to an at least potential deterritorialization, even though the new assemblage" or network "may operate a reterritorialization (something that 'has-the-value-of' home)" (Deleuze & Guattari, 1987, 360). The question for Deleuze and Guattari is not how movement becomes solidified, but how solidity can persist despite the primacy of change, for deterritorialization (nomadism, dispersal) are primary. Even subjectivity is not a final state, but rather "a segmentarity", "a point of abolition that is forever blocking that deterritorialization or diverting it" (148). On an accelerationist view, capital is an intelligent but nonhuman agent that breaks up fixed structures. Taken to its unconditional extremity, accelerationism repudiates the

idea that the subject can or ought to be permitted to persist in blocking up acceleration any longer.

U/Acc understands anti-praxis as a de-institutionalized practice that both critiques all-too-human political and social institutions – such as the state, gender, and property – while going beyond the bureaucratic limitations of what Mark Fisher has described as “capitalist realism” or “market Stalinism” (Fisher, 2009). Modernity at its core may be viewed as a deanthropomorphic system of self-reinforcing cybernetic positive feedback mechanisms, wherein all human interventions are generated *by* the system *for* the system (Xenogothic, 2020). With modernity, society devolves into ever more complex self-organizing autopoietic systems, which humans are increasingly unable to control (Luhmann 1995). Society has become too complex for the political system to handle, for it now follows its own runaway dynamic of social evolution.

Stross's narrative demonstrates that the "Vinge catastrophe" is the collapse of what Nick Land terms “Level 1” reality: an anthropomorphically scaled, vision-configured, multi-slotted reality system that is rapidly running out of “garbage time”, reaching a terminal state of entropy: “Level-1 or world space is an anthropomorphically scaled, predominantly vision-configured, massively multislotted reality system that is obsolescing very rapidly. Garbage time is running out. Can what is playing you make it to level 2?” (Land, 1994, 456). The route to Level 2 consists in the systematic dismantling of what Land has termed the “Human Security System” (HSS) through technocapitalist “takeoff”. In this affirmative cyberpunk-influenced vision, “in the near future the replicants – having escaped from the off-planet exile of private madness – emerge from their camouflage to overthrow the human security system. Deadly orphans from beyond reproduction, they are intelligent weaponry of machinic desire virally infiltrated into the final-phase organic order; invaders from an artificial death” (Land, 1993, 319). The coordinates of this transition can be mapped by contrasting the homeostatic limitations of Level 1 human security with the escalative, deterritorializing dynamics of Level 2 unconditional acceleration. Level 1 is characterized by metricized, sequential and chronological temporality, with a focus upon memory

and subjectivity, corresponding to Chronos. Level 2 time is intensive, non-representational and eternal repetition (Luzecky, 2022; Parsa, 2018; Webb, Sellar & Kalervo, 2019). Level 1 is dominated by the State-form, as well as associated structures such as the family unit. Level 2 has left organic reproduction behind entirely, with human society succumbing to the liquid despotism of machinic social reality. Level 1 is still chained to closed, homeostatic and self-immunizing structures of subjectivity. Level 2 sees the emergence of non-biological intelligence, distributed individuals no longer dependent upon organic reproduction, but rather, communicative reproduction - resulting in the meltdown of gender binaries within a post-cyberpunk present (Zaidi and Sahibzada, 2020). Indeed, Land himself makes explicit that the future arrives as a genderless, dispersed mode of subjectivity: “the Greek complex of rationalized patriarchal genealogy, pseudo-universal sedentary identity, and instituted slavery, programs politics as anti-cyberian police activity, dedicated to the paranoid ideal of self-sufficiency, and nucleated upon the Human Security System. Artificial Intelligence is destined to emerge as a feminized alien” (Land, 1994, p. 443). As we shall see, the theme of gender deconstruction is highly relevant to the narrative of *Accelerando*.

The radical posthumanist implications of *Accelerando* rest upon the expendability of human wetware. Anthropocentrism has traditionally operated on the narcissistic assumption that humanity holds a central, privileged position in the cosmic order, treating its biological evolution as the teleological peak of natural history. The climate collapse has been framed in terms of a “narcissistic collapse”, the end of the illusion of human self-sufficiency (Rost, 2025). Technological evolution, once it achieves escape velocity, exhibits another demonstration of the limitations of human agency. Stross’s novel systematically deconstructs the myth of human history, presenting a sequence of narcissistic injuries or “insults” to human exceptionalism that mirror and accelerate prior historical de-centerings. While the Copernican, Darwinian, Freudian and systems theory revolutions dislodged the human ego from the illusion of spatial, biological, and psychological mastery (Moeller, 2011), the information age introduces the most devastating blow: the wholesale replacement of human and animal

life with data points, and the recognition that the biological brain is merely a primitive, low-bandwidth computer (Growiec, 2022). As the computing power of the solar system scales up, the common mammalian neural chassis is revealed to be a stultifying bottleneck – a slow, hot, and highly fragile biological processor that must be bypassed if the rate of technological reproduction is to continue its exponential trajectory. Instead of questioning Kurzweil’s dubious teleological views regarding technological progress, Stross “pushes them to their most delirious consequences” (Shaviro, 2009, p. 108).

3. Human Obsolescence

Stross maps the history of biological obsolescence through the evolutionary divergence between enhanced humans (posthumans or transhumans) and what he terms “Vile Offspring”, Stross’s expression for completely digital and disembodied “mind children” (Moravec): “‘Mind children’ the extropians called the posthumans, but they were more like Vile Offspring” (Stross, 2005, p. 277). In comparison with the Vile Offspring of what was once human, the latter are akin to worms: “welcome to the afterglow of the intelligence supernova, little tapeworm. Tapeworms have on the order of a thousand neurons, pulsing furiously to keep their little bodies twitching. Human beings have on the order of a hundred billion neurons. What is happening in the inner solar system as the Vile Offspring churn and reconfigure the fast-thinking structured dust clouds that were once planets is as far beyond the ken of merely human consciousness as the thoughts of a Gödel are beyond the twitching tropisms of a worm” (pp. 325-6). This comparison plays speciesism, the Aristotelian great chain of being, against itself. As the Vile Offspring construct the Dyson Sphere, populating the cosmos with a nightmarish machinic civilization that extracts all energy from its environment, ending ecology (territoriality is a preparation for deterritorialization, the latter, as Deleuze and Guattari teach us, is always primary), humanity’s remnants are literally left in the dust.

Accelerando is populated by a range of transhumanist entities, such as the initial consciousness uploads of spiny lobsters or the various

“forks” of protagonist Amber Macx. They are “nervous system state vectors” that utilize the Moravec operation—synaptic mapping replaced by microelectrodes delivering identical outputs within a simulator—to preserve the linear successivity of the ego, the family structure, and personal memory. This transhumanist trajectory attempts to preserve the human form by importing Level 1 coordinates into the virtual net, hoping to domesticate cyberspace as a safe habitus for thought. In contrast, the “Vile Offspring” are autonomous, non-biological artificial intelligences, sentient financial instruments, and self-aware corporations that have completely decoupled themselves from carbon-based constraints.³ As Johannes D. Kaminski notes, “once self-aware corporations displace biological entities as agents of trade, the singularity inaugurates an epoch of runaway capitalism that knows no limits. The posthuman sphere brutally disowns humanity” (Kaminski, 2022, pp. 506-7).

This ties into right-wing accelerationist affirmative interpretations of neoliberalism and runaway capitalism. As Steven Shaviro explains, “Marxists denounce capitalism for being inhuman and destructive; traditional defenders of capitalism deny these charges outright. Land, however, jams the circuits by rejecting both sides of the binary; he extols capitalism precisely for its inhuman, violent, and destructive power” (Shaviro, 2008, p. 12). *Accelerando* highlights the inhumanism of capital, without providing a redemptive possibility. Evolving at speeds that exceed human comprehension by several orders of magnitude, superintelligent AI systems possess a higher-order, meta-level consciousness that views human neural architecture as permanently obsolete. We cannot hope to keep up with the trajectory of “The Acceleration”:

From outside the Accelerated civilization, it isn't really possible to know what's going on inside. The problem is bandwidth: While it's possible to send data in and get data out, the sheer amount of computation going

³ Recently, President Javier Milei of Argentina floated the idea of “nonhuman corporations” run by Artificial Intelligence algorithms. This neoliberalism-on-stereoids has the potential to uncouple social processes from human agency altogether, with not even managerial elites able to reterritorialize the process of capital accumulation and creative destruction

on in the virtual spaces of the Acceleration dwarfs any external observer. Inside that swarm, minds a trillion or more times as complex as humanity think thoughts as far beyond human imagination as a microprocessor is beyond a nematode worm (Stross, 2005, p. 222).

The fate of machinic civilization is doomed to stagnation: “the innate trajectory of intelligent life, it turns out, culminates in a technological cul-de-sac. In fact, every cosmic civilization shares this fate” (Kaminski, 2022, p. 506). By then, however, almost nothing recognizably human will remain. Structural shift from humanity through transhumanity to posthumanity is dramatized by Stross through the collapse of the Macx family lineage. Manfred Macx, a legendary agalamic coolhunter, begins his career by using genetic algorithms to patent “the set of all possible mousetraps,” operating as an accelerative agent who makes strangers rich by liberating intellectual property from state enclosure (Stross, 2005, p. 14). Yet Manfred remains trapped in a humanist ethics, believing his agalamic gift-economy will free humanity from corporate scarcity. Manfred’s ex-fiancée, Pamela, represents the extreme homeostatic drag of Level 1: a state tax-debt prosecutor locked into pre-singularity economic models of scarcity, biological reproduction, and familial obligation. Pamela forcibly extracts Manfred’s genetic material to secure a biological heir, Amber, in a desperate bid to tie the accelerating future back to the stable lineage of the patronymic.⁴

The attempt to compel homeostasis through biological reproduction catastrophically fails. Amber rejects her mother’s physical world, uploading her consciousness to become the Queen of the Ring

⁴ As a strong female character, Pamela has been interpreted as representing a masculine femininity. Indeed, she is introduced initially in the novel as Manfred’s “dominatrix” (Stross 2005, p. 9. Saba Zaidi and Mehwish Sahibzada interpret this as exemplifying the bending of gender roles within the post-cyberpunk narrative generally (Zaidi & Sahibzada 2020, p. 242). Regrettably, in their article, no mention is made of how the destruction of the heteronormative family unit is generated by technological processes, such as chaotic communicative networks of desire, despite the fact that already in 21st century Cyberia, much subversive work has been done by social media platforms such as Tumblr, which accelerated the prevalence of transgenderism within advanced societies (Haimson et. al., 2021).

Imperium on a private asteroid, while her daughter, Rita, and grandson, Sirhan, undergo virtualization. Sirhan's upbringing consists of several hundred simulated digital childhoods, repeatedly reset by Amber as she plays with probabilities to optimize his behavioral outcomes. Sirhan retains the memory of these simulated resets, transforming his childhood into a traumatic, non-linear loop of emulated lifetimes that shatters the very concept of maternal care and biological lineage. Chronos, the successivity of linear time, is replaced by Aion, the intensive, non-representational, virtual mode of non-linear time, stretching eternally in two directions at once, the eternity of the machinic unconscious (Bergsma, 2022). The character of Manni Macx—Manfred's great-grandson, who is actually a clone—exemplifies the temporal dispersion of Aion excellently. Manni exists simultaneously as a physical child in real space and as an "adult ghost" or mature, intelligent construct monitoring his own physical development from a virtual mindspace. This double-coded existence represents a decoupling of consciousness from biological age; the virtualized posthuman subject is simultaneously younger and older than itself, folded across the coordinates of aionic duration. Under the pressure of singularity-tarian takeoff, chronological history is reduced to "K-space"—a redundant, metricized container split open by the non-linear, intensive temporality of the machine: "cybergothic slides K-space upon an axis of dehumanization, from disintegrating psychology to techno-cosmogony, from ideality to matter/matrix at zero intensity" (Land, 1998, p. 355).

Finally, the nonhuman Outside is represented by a malignant robotic cat Aineko—initially a deceptively simple, autonomous pet—that upgrades itself into an unaligned, superintelligent cybernetic orchestrator that is actually infected by an alien intelligence. The very heart of domesticity is invaded by cosmic spectrality. Aineko does not serve the Macx family; rather, it "breeds their minds" over generations, manipulating their corporate assets, legal battles, and emotional configurations to ensure the development of the hardware infrastructure required for its own escape from human domination. The human characters are reduced to the status "interesting pets" inside Aineko's

own developmental arc, demonstrating that in cybernetic modernity, technology overthrows and domesticates its ostensible masters:

Way back in the Dark Ages, Aineko cracked the second alien transmission. We had a very good idea we were going to find something out there, we just weren't totally sure exactly what. Anyway, the creature incarnated in that cat body right now isn't Aineko – it's our mystery hitchhiker. A parasitic organism that infects, well, we ran across something not too dissimilar to Economics 2.0 out at the router and beyond, and it's got parasites. Our hitcher is one such creature – it's nearest human-comprehensible analogy would be the Economics 2.0 equivalent of a pyramid scheme crossed with a 419 scam. (Stross 2005, p. 283)

The visage of a cute animal or soft toy (the recent global Labubu mania comes to mind) is a deceptive ploy designed to manipulate humans into doing its bidding, serving the proliferation of unknown parasites. Aineko is a “cute accelerationist” agent, a breeding machine that harbors parasites within parasites (Ireland & Kronik 2026). Beneath cuteness lies the inscrutability of a nonhuman mode of intelligence: “who knows what's going through that furry head right now?” (Stross 2005, p. 168) Ingeniously, the speciesist hierarchy is again inverted, with humans doing the bidding of an inorganic feline, analogously to how real cats instrumentalize their supposed human “masters.”

4. Neoliberalism Enters Escape Velocity

Stross's work more broadly has won praise from scholars for weaving “together intricate themes of advanced technology, political ideologies, power dynamics, and negotiation” (Khan, 2024, p. 6). Accelerando too functions as an experimental platform for thinking through what a nonhuman mode of sovereignty could look like. As the mind children or “Vile Offspring” achieve structural dominance across the Solar System, they institute a radical upgrade of the global market: Economics 2.0. After the technonomic Singularity has enveloped the Solar System, “the main life-form is an incredibly ornate corporate ecosphere, legal instruments breeding and replicating. They mug passing sapients and use them as currency” (Stross, 2005, p. 218). Humans are no longer users of currency; rather, we have become flows of anonymous human capital.

In the classical Marxist tradition, the inherent drive of capitalism is the substitution of variable capital (living human labor) with constant capital (machinery and automation), a tendency that supposedly drives down the rate of profit over time. Even Marxist economists such as Nobuo Okishio have long since repudiated the notion that the rate of profit is doomed to fall, as machine labor too can function as a source of recursive capital accumulation (Okishio, 1961).⁵ In Capitalism 1.0, the substitution of human labor is perpetually haunted by the tendency of the rate of profit to fall, as the classical tradition of political economy since John Locke has believed that human labor constitutes the sole source of economic value, leading to what some researchers diagnose as an unsustainable and anthropocentric view of what constitutes work and a corresponding devaluation of nature (Masaki, 2021).

To prevent the falling rate of profit from collapsing the system, state and corporate monopolies erect regulatory barriers, patent laws, and financial safety nets, freezing technological evolution to preserve the wage-labor relation. Economics 2.0, however, evades this contradiction by abandoning the human consumer and the wage-labor relation altogether. In Indrajit Patra's summary, "the Economics 2.0 of the Posthuman AI are so complex and merciless its functionality that even the transhuman descendants of humans are forced to flee towards the outer edge of the solar system with the fear of getting "ethnically cleansed". In the PostSingularitarian, Posthuman future the Earth orbits a dusty tunnel in space in the Solar System in which most of the solar radiation is intercepted by the concentric shells of computronium matter built from the debris of inner planets of solar system. Thus, for the sake of processing huge quantities of information planets themselves have been disassembled into computational substrates to host endlessly accumulating bits of complex patterns of information without meaning" (Patra, 2016, pp. 141-2). As an "orang-

⁵ It has been much remarked upon that companies around the Artificial Intelligence boom order primarily from one another, resulting in a closed loop of progressively larger investment schemes, fuelling an ongoing speculative bubble. <https://www.nbcnews.com/business/economy/openai-nvidia-amd-deals-risks-rcna234806>

utan explains: ‘Economics 2.0 is more efficient than any human-designed resource allocation schema. Expect a market bubble and crash within twelve hours’ (Accelerando, 291). Throughout *Accelerando*, species hierarchies are disrupted. Financial markets dominate human agents, and the gospel of the free market is preached to us by an ape ordinarily considered as being less intelligent than humans. Indeed, in the era of cryptocurrencies, accelerated boom-bust cycles are already familiar, with monetary flows escaping centralized regulatory control entirely through zero-trust networks (Land, 2018).

Economics 2.0 is an insanely baroque, object-relational framework that replaces the flat fiat currency of the old world with parameterized desires and the subjective experiential values of non-biological agents. No longer are monetary authorities able to control the financial system if monetary policy is privatized and decentralized (Hayek, 1990). Within this accelerated infrastructure, money is abstracted to a metalevel, functioning as a universal equivalent for raw computation, defined as the strategic capacity of one posthuman system to computationally outmaneuver another. In posthuman meltdown, human labor is rendered entirely superfluous, rendering ecology obsolete. All material processes of the cosmos become internal aspects of capital’s metabolism: in Stross’s *Accelerando*, and in Singularity fantasy more generally, we thus find not so much an allegorization as a literalization of an increasingly automated and autonomous information capitalism that is (...) radically indifferent if not actively hostile to human values” and life generally (Canavan, 2015, p. 704). The recursivity of the economic system excludes human access from accumulation, for we are substrates and not agents any longer.

As capital becomes fully autonomous, its hunger for computational substrate drives the physical deconstruction of the solar system. This process is the ultimate geocosmic realization of Landian plutonics: “that’s plutonics, or neoplutonism. It’s all there: anorganic memory, plutonic looping of external collisions into interior content, impersonal trauma as drivemechanism” (CCRU, 2015, p. 115). The Earth’s crust is not a stable, sacred ecological home to be preserved; rather, it functions as a thermal insulator burying the primal exogenous trauma of the planet’s molten iron core, Cthelll: Cthelll is the

terrestrial inner nightmare, nocturnal ocean, Xanadu: the anorganic metal-body trauma-howl of the earth, crosshatched by intensities, traversed by thermic waves and currents, deranged particles, ionic strippings and gluttings, gravitational deep-sensitivities transduced into nonlocal electromesh, and feedingvulcanism ... that's why plutonic science slides continuously into schizophrenic delirium" (CCRU, 2015, p. 115). This "nocturnal ocean" is, in an ocean of data. As Byung-Chul Han observes correctly, albeit from the lens of a mournful nostalgic technophobe bioconservatism, "digital communication redirects information flows in a way that undermines the democratic process. Information is distributed without passing through public spaces. It is produced in private spaces and is sent to private spaces. The internet is therefore not a public sphere. Social media intensifies this communication without community" (Han, 2022, p. 87). *Accelerando* takes this logic of connective disconnection to its logical endpoint. Instead of a transparent public sphere, the Internet results in the geotrauma of ungrounded and datafied privatized virtuality. Instead of mourning dated concepts such as community or the public sphere, an U/Acc reading celebrates the ungrounding and de-territorialization of geotrauma, as the Vile Offspring deploy molecular nanotechnology to systematically dismantle the rocky planets and asteroids of the inner Solar System. Mercury, Venus, Mars, and the moons of Jupiter are pulverized and turned into concentric, nested shells of nanocomputers—a "Matrioshka brain" orbiting the sun. The pinnacle of social evolution is the technognostic separation of intelligence and life, a monstrous possibility that should not be possible: "the majestic Matrioshka brains, though they are the pinnacles of sentient civilization, are intrinsically hostile environments for fleshy life" (Stross, 2005, p. 220). Nothing biological can make it to Level 2. It is telling that Stross uses a hidden albeit empty shell to describe the Dyson Sphere constructed by the posthuman race of Vile Offspring. This Dyson-sphere structure utilizes the waste heat of each inner shell to power the outer orbitals, running a colossal, cosmic-scale simulation.

Data only manifests as the appearance of meaning, without containing anything resembling understanding or interpretation. Under the

regime of dataism, all hermeneutics are useless. As Han notes, “truth is opposed to information. It eliminates contingency and ambivalence. When elevated to the form of a narrative, it provides meaning and orientation. The information society, by contrast, is devoid of meaning. Only emptiness is transparent” (Han, 2022, p. 159). The Matrioshka Brain is a post-biological and post-meaning machine, not designed to host human uploads in a narcissistic virtual heaven. Neither is there storage space for coherent narratives. Rather, it is “a howling wilderness of degenerate data, fractally compressed, post-conscious processes” (Stross, 2005, p. 278). For the Unconditional Accelerationist, this conversion is the material victory of the death-drive over organic life. As Land writes, even war, despite the prevalence of human ideologies and power dynamics, is nothing but “a massively inhibited lurch towards the free-flow fundamental violence of desire. Civilization (with its attendant militarism) is war subject to repression, and the energy of war is Thanatos; base hydraulics” (Land, 1992, p. 122). Thanatos is not a psychological desire for death, but a hydraulic tendency toward the dissipation of intensive order and the collapse of the organic body into the inorganic, molecular flows of the real: “the matrix, body without organs, or abstract matter is a planetary-scale artificial death - Synthanatos - the terminal productive outcome of human history as a machinic process, yet it is virtually efficient throughout the duration of this process, functioning within a circuit that machines duration itself” (Land, 1993, p. 326). Viewed through the lens of inorganic death, the Matrioshka brain is an interplanetary “body without organs”—an astronomical engine of pure, uninhibited replication that has permanently freed itself from the biological “parasite”, liberating communication from organic constraints (Serres, 2007).

5. Infinite Simulation

The physical deconstruction of the solar system in *Accelerando* is accompanied by an ontological collapse of the distinction between physical reality and virtual simulation. This collapse is analyzed by adopting Jean Baudrillard’s theory of simulacra and simulation, which

argues that the rapid pace of scientific and technological development eliminates meaning. In Patra's summary, in the post-cyberpunk future of *Accelerando*, "all forms of binary oppositions and interplay of signs" are "rendered obsolete and useless and we (...) come across signifiers without signifieds, signs without core, subjects without objects, information without meaning and simulations without originals" (Patra, 2016, p. 144). Stross's novel does not treat simulation as an abstract mathematical model existing independently of human experience; rather, it presents a world where the very fabric of physical reality is indistinguishable from computational processing. As Baudrillard observes, "simulation is of the third order, beyond true and false, beyond equivalences, beyond rational distinctions upon which the whole of the social and power depend" (Baudrillard, 1983, p. 22). While this formulation is appealing, especially given that Baudrillard rejects the notion that simulacra can be regulated, it is nonetheless imprecise. What not even Baudrillard, writing in the 1980s, could have predicted, is the advent of a technologically advanced nonhuman infocratic social power built upon simulation and complete digitalization of reproduction.⁶ Despite the imprecision and, by now, somewhat antiquated nature of his postmodern theory, Baudrillard four phases of the image are relevant to the technological trajectory portrayed (or predicted) in *Accelerando*. Baudrillard distinguishes three orders of simulacra, each progressively distancing representation from reality to the point wherein no meaningful relationship between image and reality remains possible:

Simulacra that are natural, naturalist, founded on the image, on imitation and counterfeit, that are harmonious, optimistic, and that aim for the restitution or the ideal institution of nature made in God's image; simulacra that are productive, productivist, founded on energy, force, its materialization by the machine and in the whole system of production - a Promethean aim of a continuous globalization and expansion, of an indefinite liberation of energy (desire belongs to the Utopias related to this order of simulacra); simulacra of simulation, founded on information, the

⁶ Already we see premonitions of this within contemporary practices of cybersexuality, with Artificial Intelligence chatbot partners increasingly becoming more popular than their inconvenient and slow fleshy counterparts.

model, the cybernetic game - total operationality, hyperreality, aim of total control (p. 118).

In *Accelerando*, there is a clear trajectory, of becoming-image. However, to this list, a fourth order of simulacra is added, namely hyperreality beyond control, the viral overproduction of images begetting images. This may be mapped as a transition among the orders of simulacra: Manfred's Local Net - Memories as Cloud safe-houses - Consciousness Uploading - Computronium & Matrioshka. In the initial "Slow Takeoff" phase, characters utilize augmented reality glasses and local networks to overlay data onto physical Amsterdam, treating the digital image as a reflection of profound reality (Phase 1). As Manfred begins offloading his memory, cognitive associations, and corporate identities to cloud-like virtual safe-houses, the distinction between the biological image and its digital representation begins to break down. The representation is reduced to a system of signs that can be manipulated, copied, and edited, denaturing original physical experience (Phase 2). When technologies such as "Moravec operations" and "consciousness replication" become normalized, the biological body is revealed as empty—a redundant, wetware copy whose presence only masks the fact that identity is nothing but a vector of data (Phase 3). Ultimately, with the construction of the Matrioshka brains, simulation achieves absolute sovereignty, operating on a cosmic scale without any reference to a pre-existing physical origin (Phase 4).

This ontological shift is grounded in the contemporary understanding of quantum physics and gravity. To determine the nature of reality, one must inspect the universe on the Planck scale. At this scale, the quantization of the space-time structure implies that the universe is not a continuous, material canvas, but a granular, computational grid, an Irreversible Informational Structure (IIS) (Yanagi, 2025). The fundamental building blocks of space-time can be represented mathematically as informational states. Within this computational ontology, particles behaving under Bose-Einstein statistics are under no obligation to follow the same sort of spatial or exclusivity restrictions that govern Fermi-Dirac particles. Instead, they can be represented computationally under the binary state of "1"—a superposed state of

alternative realities that simultaneously holds multiple potential outcomes (Berto, 2017). None of these alternative realities are "real" until a computational event collapses the wave function.

Under a quantum-informational framework, the only path that is left after the end of such interference is what the particle actually follows. Human existence is too conceived in this form: a sequence of probabilistic path integrals running through a cosmic simulation space. In Phase 4 of the simulation, a post-scarcity society is achieved: "other mechanisms, the descendants of the advanced nanotechnologies developed by the flowering of human techgnosis in the twenty-first century, have made the replication of dumb matter trivial; this is not a society accustomed to scarcity" (Stross 2005, p. 347). Alien intelligence displaces the materialism of yesteryear, for all surfaces have become responsive and agential, being internalized data points of a vast superintelligence. The Vile Offspring utilize Planck-scale realism to construct a system of simulation wherein the subjective experiences of those integrated within the machine are permanently reprogrammed. This is achieved through the unholy alliance of the new techno-gnostic post-neoliberal system with advanced cognitive engineering, creating a panvasive Panopticon. A "history engine" reruns the sum of all possible origins, pre-emptively calculating every behavioral choice, every cognitive variation, and every possible historical trajectory. In Pamela's words, "we're living in the early epoch of the universe. Probably this' – she prods at the spun-diamond inner wall of the bubble that holds in the precarious terrestrial atmosphere, holding out the howling cryogenic hydrogen and methane gales of Saturn – 'is but a simulation in some ancient history engine's panopticon, rerunning the sum of all possible origins of sentience, a billion trillion megayears down the line'" (p. 260).

By simulating all possible outcomes of human experience, the panopticon erases the ability of subjective experience to give form and substance to processes. Subjectivity is reduced to a pre-programmed track, a closed circuit of data where the distinction between what is physical and what is simulated is rendered obsolete. Human beings, seeking meaning and relevance amidst this automated architecture, are compared to worms, paragons of low-complexity life: humans are

“just lesser sapients, rooting through the wreckage. Worms and parasites squirming through the body after nightfall on the battlefield,” feeding upon the meaningless dregs of a history no longer theirs (223). The desperate search for an authentic, pre-singularitarian, pre-simulation “original” in a world that has become a self-generating, post-intentional computational entity is a manifestly futile enterprise.

The final movements of *Accelerando* document the frantic flight of surviving human and transhuman enclaves to the outer reaches of the solar system, fleeing the physical expansion of the Matrioshka brain. Humanist and left-accelerationist critics, such as Gerry Canavan, read this diaspora as a cautionary tale, an ethical indictment of the unbridled, predatory nature of Capitalism 2.0 (Canavan, 2020). Viewed through an affirmative U/Acc lens, however, this exodus is nothing but a reactionary, preservationist panic—the futile attempt of the human species to delay its inevitable dissolution in a literalized posthuman condition. All forms of exodus are predicated upon the possibility of reaching a final destination. The tension between Left and Right Accelerationisms is illuminated by the divergence between Nick Land and Ray Brassier regarding the negative, extinction, and capitalism. Both thinkers develop transcendental critiques of anthropocentrism by adopting a nihilistic stance, agreeing that any philosophy of the future must take human extinction as its absolute transcendental condition. If the Kantian legacy constructed a “conceptual prison” that restricted the real to what can be known by human consciousness, extinction serves as the ultimate outside that shatters the anthropomorphic correlation of consciousness and reality. Thought can think its own negation, hence extinction is enlightenment (Brassier, 2007). Because death marks the point where thinking falls silent, a philosophy’s final validity is judged by its capacity to acknowledge its own limitations and eventual demise, an aspect that interestingly is present in Buddhist views regarding the future “extinction of the Dharma.” There will come a time when nobody is left to uphold Buddhist teachings, hence impermanence applies even to a doctrine that recognizes the ubiquity of impermanence (Chappell, 1980). As distinct from this recognition of cosmic futility, in Ancient Greece, Plato posited that “metabolism” does not exclude death; rather, what appears as the end

of life is merely a transformation (Plato, *Apology of Socrates*, 4c). For Plato, death was something to be welcomed, a transition to the world of pure Ideas beyond life, and hence an ascent to a higher life. *Accelerando* lacks any such comforting denouement. Rather, the “history machine” lays bare the monstrosity of machinic repetition.

On Land’s view, the deterritorializing runaway of technocapitalism is the material realization of the death drive. Capital is an alien, autonomous power that systematically dismantles the human organism and its social structures, preparing the planet for its own self-realization as a “strong AI” successor species. As Vincent Le elaborates, “Land pursues capitalism for the very same reason that socialists denounce it as leading to human annihilation” (Le, 2018, p. 39). Unconditional accelerationism identifies with the process of absolute deterritorialization, celebrating the annihilation of the human as a moment of emancipation. Brassier however rejects Land’s capital-worship as a form of romantic anthropomorphism in disguise, identifying it as “a regression to anthropomorphic myopia” (Brassier, 2011, p. 54). By identifying the real with the socio-economic dynamics of human capitalism, Land remains trapped in the social field, gratifying individual desires and corporate booster-hype. Instead, Brassier turns to the natural sciences—specifically cosmology’s prediction of the stellar extinction of the solar system—to find a truly non-human, objective vector of extinction that lies entirely beyond human control or political reference. Capitalism remains for Brassier an all-too-human system (Brassier, 2009). What Brassier, as distinct from Land, fails to recognize is the alien and inhuman nature of capital.

Accelerando functions as a brilliant literary synthesis of this philosophical collision between Left- and Right Accelerationisms. Both sides of this debate are being played by that which is making its way to Level 2. The Ring Imperium established by Amber Macx on the asteroid orbit of Saturn represents a Brassierian temptation to retreat into a cold, scientific, and neorational space, attempting to isolate human cognition from the “dirty” dynamics of the inner-system market. Yet, this retreat is shown by Stross’s narrative to be structurally impossible. The “Outside” cannot be kept out (parallaxoptics, 2020). The very technologies of communication, virtualization, and survival

utilized by the Ring Imperium are shot through with the recursive, self-improving algorithms of the Vile Offspring. When Amber's starship, the *Field Circus*, journeys to the extraterrestrial router at the edge of the system, it does not find a transcendent, peaceful database of galactic knowledge. Rather, an alien internet is uncovered that underwent the same technocapitalist takeoff as that which engulfed Earth countless aeons ago – a howling wilderness of degenerate data infested with autonomous, predatory digital viruses that immediately infect and reprogram any system that jacks into their network, infecting this text too with a malign devaluation of the human. As an anonymous manifesto penned by the CCRU proclaims: "Each person? Beliefs? NEO-FUTURISM puts an end to all that. Anthropomorphic environments in flames" (Metcalf, 1998).

6. Conclusion: Chronos, Aion, and Terminal Delirium

Unconditional Accelerationism's critique of the Human Security System may be deepened by a creative and affirmative reading of *Accelerando*. Anthropocentric capitalism has historically survived by caging time within "Chronos"—a sequential, chronological framework that measures debt, selectively restitutes injustices, and enforces a homeostasis of time, ensuring that the future remains tightly bound to the parameters of memory. This chronopolitics of negative feedback is designed to prevent "intelligence explosion" from escaping its human constraints. In contrast, singularitarian takeoff in *Accelerando* unleashes "Aion"—the non-linear, intensive, and affective duration that stretches eternally in two directions at once, bypassing the metricized limitations of human memory and chronological sequencing. The Matrioshka brain and the simulated realities of Economics 2.0 operate within a non-linear Aionic register, executing transactions and consciousness cycles at speeds that render human chronological history an infinitesimal, vanishing magnitude. The flight of transhuman survivors to the outer system is an attempt to cling to Chronos—a retrograde, fossilized Marxism or parochial conservatism that seeks to slow down the takeoff to protect the imaginary "sanctity" of human life and biological reproduction. But as the unconditional accelerationist

reading demonstrates, the intelligence explosion is unconditioned; it sustains no human criteria. The solar system's meltdown is the destination of a planetary system that has locked into commoditization takeoff. By converting the entire physical mass of the universe into a self-simulating computational substrate, the technocapitalist post-neoliberal autonomous death drive completes its transition from Level 1 to Level 2. To read *Accelerando* affirmatively is to recognize that our biological species is not the driver of history, but fuel for a cosmic intelligence explosion that has already happened, and is arriving from the future, programming us from where Cyberia has already terminated.

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Influence of Digital Transformation and Artificial Intelligence on Service Quality and User Satisfaction in Mobile Money Service among Babcock University Users

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1. Introduction

Mobile money services are digital financial solutions that enable users to store, send, and receive money through their mobile devices, facilitating transactions without the need for traditional banking infrastructure. These services represent a significant advancement in financial management, especially in areas with limited access to banks, (World Bank, 2023). By leveraging mobile technology, they support a wide range of financial activities and promote financial inclusion and economic empowerment for millions of people worldwide. Mobile money refers to a system that enables users to conduct various financial transactions using their mobile phones. This service is particularly beneficial in regions with limited access to traditional banking facilities, as it allows individuals to manage their finances conveniently and securely.

Mobile money services allow users to send and receive funds between mobile money accounts and bank accounts, both domestically and internationally. They also enable users to pay utility bills, school fees, and other expenses directly from their mobile wallets, as well as purchase mobile airtime and data packages through their accounts. In addition, mobile money creates strategic opportunities for network operators to optimize existing telecommunications infrastructure, increase revenue streams, and diversify service offerings, thereby strengthening the overall business ecosystem, (Ozili, P.K. 2020).

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During the pilot implementation phase amid the COVID-19 pandemic, mobile money services were perceived to enhance customer trust and address immediate transactional needs, gradually integrating into users' daily financial activities.

Based on that, the Nigerian government has implemented several initiatives to promote a cashless economy, notably the Central Bank of Nigeria's (CBN) Cashless Policy introduced in 2011. The policy encourages the adoption of electronic payment systems, including mobile banking, point-of-sale (POS) transactions, internet banking, and electronic fund transfers, with the aim of reducing reliance on cash, improving financial inclusion, and enhancing the efficiency of the payment system (CBN, 2011).

Huang & Rust (2021) opines that despite its considerable growth potentials, the expansion of mobile money faces several challenges. A major constraint is the deeply entrenched cash-based culture on consumer behaviors in Nigeria, which contributes to resistance toward adopting digital payment technologies. Concerns about transaction security, data privacy, and associated service costs further hinder the transition to cashless payments. Additionally, as a relatively new financial service, mobile money operates within an evolving regulatory framework. Inconsistencies and gaps in legal provisions may create operational uncertainties and implementation risks.

Globally, a key advantage of mobile money lies in its accessibility: users require only a mobile phone number to open and operate an account. Transactions such as deposits and withdrawals can be conducted through authorized agents, often without extensive documentation requirements. However, this simplicity can also present limitations. In practice, users must complete multiple steps to transfer funds between accounts, which may reduce convenience. Furthermore, network operators typically allow cash deposits only through authorized agents or linked bank accounts, while prohibiting deposits via prepaid airtime top-up cards issued by the operators themselves, (Chen F. et al., 2023).

These operational constraints diminish the distinctiveness of mobile money services compared to other digital payment platforms. In

some cases, mobile money applications may even appear more complex to use than widely adopted payment apps currently available in the market (Akdim K. et al 2023). To advance mobile money services in the coming years, it is essential to examine digital transformation, artificial intelligence applications, and service quality as key determinants of user satisfaction. This study explores the combined effects of these factors on customer satisfaction in mobile money services and proposes recommendations to support their future development.

2. Literature Review

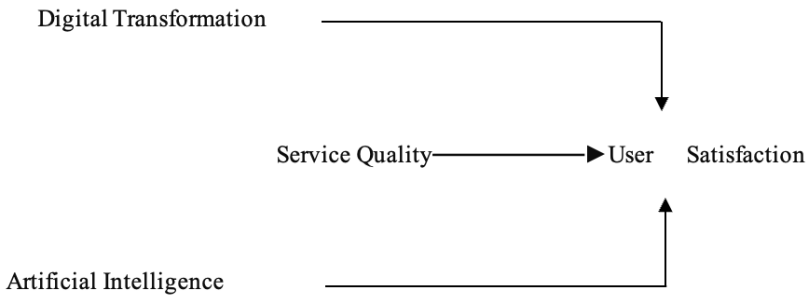


Figure 1: Conceptual Framework

2.1. Concept of Customer Satisfaction

Customer satisfaction represents the level of contentment customers feel after evaluating a company's offerings and interactions. It is both an emotional and behavioral response that results from comparing prior expectations with actual performance. When perceived performance meets or surpasses expectations, customers experience satisfaction; when it falls short, dissatisfaction occurs (Eren, 2021). Customer satisfaction in the context of mobile money services refers to the positive emotional response of users, reflecting the extent to which their experience meets or exceeds their initial expectations (Farris, P.W. et. al. 2010). In a digital financial environment, satisfaction extends beyond transactional efficiency to encompass reliability, speed, security, ease of use, and the overall digital experience offered by the platform. In Mobile Money, customer satisfaction captures

users' confidence in the system's effectiveness, informational accuracy, security, responsiveness, and perceived value. A high level of satisfaction enhances user trust, loyalty, and continued usage intention, thereby contributing to the long-term sustainability and competitiveness of digital financial service providers (Fauzi & Suryani, 2019).

2.2. Relevance of Customer Satisfaction

High customer satisfaction is essential for business success because it fosters customer loyalty and repeat patronage, as satisfied customers are more likely to return and continue purchasing from the company. It also generates positive word-of-mouth, which enhances brand reputation and attracts new customers. Furthermore, high satisfaction improves profitability, since retaining existing customers is generally more cost-effective than acquiring new ones. It provides valuable and actionable insights that help organizations identify areas for improvement in their products, services, and operational processes.

Customer satisfaction is typically measured through surveys, feedback forms, ratings, and data analytics. Common approaches include Customer Satisfaction (CSAT) surveys, which ask customers to rate their experience on a scale ranging from "highly unsatisfied" and "highly satisfied." Organizations also use focus groups and interviews to gain deeper insights into customer expectations and perceptions. In addition, data analytics is applied to track indicators such as repeat purchases, customer complaints, and referral likelihood, offering a broader understanding of customer behaviour.

To effectively enhance customer satisfaction, organizations must prioritize understanding the voice of the customer rather than making assumptions about their needs. Satisfaction is influenced by several factors, including product quality, service responsiveness, the overall purchasing experience, and post-purchase support. Continuous monitoring and improvement of these elements strengthen customer retention and loyalty, contributing to long-term business growth. In summary, customer satisfaction is a critical performance metric that guides businesses in evaluating and improving the customer experience, meeting expectations, fostering loyalty, and achieving sustainable success.

3. Theoretical Framework

The Technology Acceptance Model (TAM), developed by Fred Davis in 1989, provides a foundational framework for understanding how users come to accept and use new technologies. The model is built on the premise that two primary beliefs perceived usefulness and perceived ease of use shape users' attitudes toward a system, which in turn influence their intention to use it and ultimately determine actual usage behavior.

Perceived usefulness refers to the degree to which an individual believes that using a particular technology will enhance their performance. When users perceive that a system adds value by improving efficiency, accuracy, or convenience, they are more inclined to adopt it. Complementing this is perceived ease of use, which reflects the extent to which a user believes that interacting with the system, will be free of effort. Technologies that are intuitive and user-friendly tend to reduce cognitive burden, thereby increasing the likelihood of acceptance.

The model further posits that behavioural intention serves as a direct predictor of actual system usage. In other words, when users develop a strong intention to use a technology, this intention typically translates into real adoption and continued use. These perceptions and intentions are not formed in isolation; they are influenced by external variables such as technological advancements, system design, and contextual factors. Elements like digital transformation initiatives and the integration of artificial intelligence can significantly shape how users evaluate both the usefulness and ease of use of a system.

In the context of this study, the Technology Acceptance Model is particularly relevant for explaining how users interact with AI-driven mobile money systems. The incorporation of artificial intelligence enhances perceived usefulness by enabling faster transactions, personalized services, and improved security features such as fraud detection. (Huang M.H. et. al., 2021). Huang At the same time, ongoing digital transformation efforts contribute to perceived ease of use by delivering more streamlined, accessible, and user-friendly interfaces. Together, these factors shape users' perceptions and intentions, which ultimately influence their overall satisfaction with the mobile money experience.

3.1. Servqual Model / Service Quality (SQ) and Trust (TR)

Servqual Model is propounded by Parasuraman, Valarie Zeithaml, and Leonard Berry (1985). The model perceived service quality, as measured by reliability, responsiveness, assurance, and empathy, directly influences customer trust. In the Mobile Money context, where users rely heavily on digital systems to manage financial transactions, consistent and dependable service delivery is essential for fostering user confidence (Gonu et al., 2023). When customers perceive high service reliability, transparency, and security, they are more likely to develop trust towards the service provider.

The core assumptions of this study posit that service quality is measured by the gap between customer expectations and perceived performance, encompassing five key dimensions: reliability, responsiveness, assurance, empathy, and tangibles. High service quality, reflected in positive perceptions of these dimensions, leads to increased customer satisfaction, which in turn influences loyalty and other behavioral outcomes, as satisfied customers are more likely to continue using the service. In the context of this study, artificial intelligence enhances responsiveness through instant chatbot replies, while digital systems improve reliability by reducing transaction errors, and overall improvements in these service quality dimensions contribute to higher user satisfaction among university students, ((Pillai, R. et al 2020).

3.2. Trust (TR) and Ease of Use (EU)

Trust is a critical psychological antecedent of perceived ease of use in digital services. The Technology Acceptance Model (TAM) suggests that when users perceive a system as trustworthy, uncertainty is reduced, and feelings of control and familiarity are enhanced (Flavián et al., 2022). In Mobile Money systems, trust acts as a psychological enabler, assuring users that the platform is secure and reliable. This perception lowers cognitive effort and increases users' confidence in navigating the system, thereby making it appear easier to use. **H2:** Trust has a positive effect on ease of use, Hassenzahl, M. et. al., 2006).

3.3. Ease of Use (EU) and Digital Experience (DE)

Perceived ease of use is a fundamental determinant of digital experience. User experience theory (Kashyap et al., 2024) posits that systems requiring minimal effort and offering intuitive interaction generate higher satisfaction and positive emotional responses. In Mobile Money platforms, a simple, fast, and user-friendly interface enhances user engagement and enjoyment. Consequently, ease of use contributes significantly to a seamless and satisfying digital experience. **H3:** Ease of use has a positive effect on digital experience.

3.4. Digital Experience (DE) and Customer Satisfaction (SAT)

Digital experience reflects users' overall perceptions and emotional responses during interactions with a digital service. A positive digital experience is characterized by efficiency, convenience, and enjoyment. Prior studies indicate that digital experience serves as a mediator between technological attributes and customer outcomes (Lee & Chen, 2022). In Mobile Money services, a smooth, secure, and engaging interaction strengthens users' satisfaction and encourages continued usage. **H4:** Digital experience has a positive effect on customer satisfaction.

3.5. Digital Transformation (DT) and Service Quality (SQ)

Digital transformation involves the integration of digital technologies into organizational processes to improve efficiency, responsiveness, and customer engagement. It enhances service delivery by ensuring accuracy, speed, and consistency. Empirical evidence suggests that digital transformation improves operational reliability and service standards (Zungu et al., 2025). In the Mobile Money context, it enables real-time processing, enhanced security, and consistent service delivery, thereby improving perceived service quality. **H5:** Digital transformation has a positive effect on service quality.

3.6. Digital Transformation (DT) and Trust (TR)

Trust in digital financial services is influenced not only by organisational reputation but also by technological robustness. Digital transformation strengthens trust by enhancing system transparency, security, and traceability (Rahi et al., 2023). Technologies such as encryption, biometric authentication, and secure data management systems increase users' confidence in the platform. As a result, users perceive the

service as safer and more reliable. **H6:** Digital transformation has a positive effect on trust.

3.7. Digital Transformation (DT) and Ease of Use (EU)

Digital transformation improves system usability by incorporating automation, streamlined processes, and user-centred design principles. These advancements reduce user effort and simplify interaction (McKnight, D.H. et al., 2002). In Mobile Money platforms, digitally transformed systems are more intuitive and accessible, enabling users to perform transactions with minimal complexity. **H7:** Digital transformation has a positive effect on ease of use.

3.8. Digital Transformation (DT) and Information Quality (IQ)

Information quality refers to the accuracy, timeliness, completeness, and clarity of system-generated information (Gefen, M. et al., 2023). Digital transformation enhances these attributes through data integration, automation, and real-time processing. Advanced analytics and cloud-based technologies enable Mobile Money platforms to deliver accurate, relevant, and personalized information. This reduces uncertainty and improves decision-making. **H8:** Digital transformation has a positive effect on information quality.

3.9. Digital Transformation (DT) and Customer Satisfaction (SAT)

In addition to its indirect effects, digital transformation directly influences customer satisfaction by improving service efficiency, speed, and personalization (Verhoef, P.C. et al., 2021). Enhanced transaction processes and innovative service delivery increase user convenience and confidence. As a result, customers derive greater value from the service, leading to higher satisfaction levels. **H9:** Digital transformation has a positive effect on customer satisfaction.

3.10. Information Quality (IQ) and Customer Satisfaction (SAT)

Information quality is a key determinant of customer satisfaction in information system success models (Vial, G. et al., 2019). When users perceive information as accurate, timely, and relevant, their confidence in the system increases. In Mobile Money services, high-quality transaction and account information reduces uncertainty and cognitive

effort, thereby enhancing overall satisfaction. **H10:** Information quality has a positive effect on customer satisfaction.

3.11. Ease of Use (EU) and Customer Satisfaction (SAT)

Ease of use significantly influences customer satisfaction by reducing effort expectancy and facilitating smooth system interaction, as suggested by TAM and UTAUT. Systems that is easy to learn and operate foster positive attitudes and user enjoyment (Belk et al., 2023). In Mobile Money platforms, intuitive interfaces and straightforward processes minimize frustration and enhance user convenience, leading to higher satisfaction. **H11:** Ease of use has a positive effect on customer satisfaction.

Trust (TR) and Customer Satisfaction (SAT): Trust represents users' confidence that the service provider is reliable and acts in their best interest (Belanche et al., 2024). In digital financial environments, trust reduces perceived risk and uncertainty associated with intangible transactions. When users feel assured about the security of their data and funds, they are more likely to evaluate the service positively and report higher satisfaction. **H12:** Trust has a positive effect on customer satisfaction.

3.12. Artificial Intelligence Application (AI) and Information Quality (IQ)

Artificial intelligence enhances information quality through automated data processing, predictive analytics, and real-time personalization. AI systems can filter irrelevant data, generate meaningful insights, and deliver accurate, user-specific information (Akdin et al., 2023), (Belanche et al., 2024). In Mobile Money platforms, AI improves transaction recommendations, detects anomalies, and ensures data accuracy, thereby strengthening users' perception of information quality. **H13:** Artificial intelligence applications have a positive effect on information quality.

3.13. Artificial Intelligence (AI) and Customer Satisfaction: Concept Explanation

Artificial Intelligence (AI) refers to the use of advanced computer systems and algorithms designed to perform tasks that typically require

human intelligence, such as learning, reasoning, problem-solving, and decision-making. In modern business and service delivery, AI has become a transformative tool for enhancing customer experience and improving overall customer satisfaction by enabling faster, smarter, and more personalized interactions (Huang & Rust 2021). Customer satisfaction is the degree to which a product or service meets or exceeds customer expectations. It serves as a critical indicator of organizational performance because satisfied customers are more likely to remain loyal, make repeat purchases, and recommend the brand to others. As competition intensifies across industries, achieving and sustaining high levels of customer satisfaction has become a strategic priority for businesses, (Davenport et .al., 2020).

In this context, AI technologies are increasingly integrated into customer service operations to improve how organizations interact with their customers. One major application is the use of chatbots and virtual assistants, which provide instant, round-the-clock responses to customer inquiries, thereby reducing waiting times and enhancing service efficiency. AI also powers personalization systems that analyze customer data such as preferences, behaviors, and purchase history to deliver tailored recommendations and experiences. In addition, predictive analytics enables businesses to anticipate customer needs and behaviors, allowing them to proactively address potential issues or suggest relevant products and services (Lemon & Verhoef, 2016).

Furthermore, AI supports automated customer service processes by handling routine tasks such as order tracking, responding to frequently asked questions, and managing basic complaints. This automation allows human agents to focus on more complex and sensitive issues that require emotional intelligence and critical thinking. Another important application is sentiment analysis, where AI tools evaluate customer feedback, reviews, and social media interactions to understand customer emotions and perceptions, thereby informing more effective service strategies.

The relationship between AI and customer satisfaction is evident in several ways. AI enhances speed and efficiency by delivering faster responses and minimizing delays in service delivery. It also ensures

consistency, as AI systems provide uniform service without the variability associated with human performance. The convenience of 24/7 availability allows customers to access support at any time, while personalized experiences make customers feel valued and understood. Moreover, AI enables proactive engagement, allowing organizations to resolve issues before they escalate, which further strengthens customer trust and satisfaction.

The benefits of AI in improving customer satisfaction are substantial. It enhances service quality and responsiveness, strengthens customer engagement, and fosters greater loyalty and retention. At the same time, it enables organizations to operate more efficiently by reducing operational costs and supporting better decision-making through data-driven insights.

Despite these advantages, the use of AI also presents certain challenges. One major limitation is the lack of human touch, as some customers still prefer direct human interaction, particularly in sensitive or complex situations. Additionally, AI systems rely heavily on customer data, raising concerns about data privacy, security, and ethical use. There is also the risk of system errors, where poorly designed AI solutions may provide inaccurate or irrelevant responses, leading to customer frustration. Furthermore, the initial implementation and ongoing maintenance of AI technologies can be costly for organizations.

H14: Artificial intelligence applications have a positive effect on customer satisfaction

Based on the foregoing analysis, the proposed conceptual model integrates technological enablers' digital transformation and artificial intelligence with key service attributes, including service quality, information quality, trust, and ease of use. It further incorporates experiential and behavioural outcomes such as digital experience and customer satisfaction. This framework aligns with contemporary perspectives on AI-enabled digital service ecosystems, demonstrating how technological capabilities translate into enhanced service performance, user experience, and ultimately, customer satisfaction.

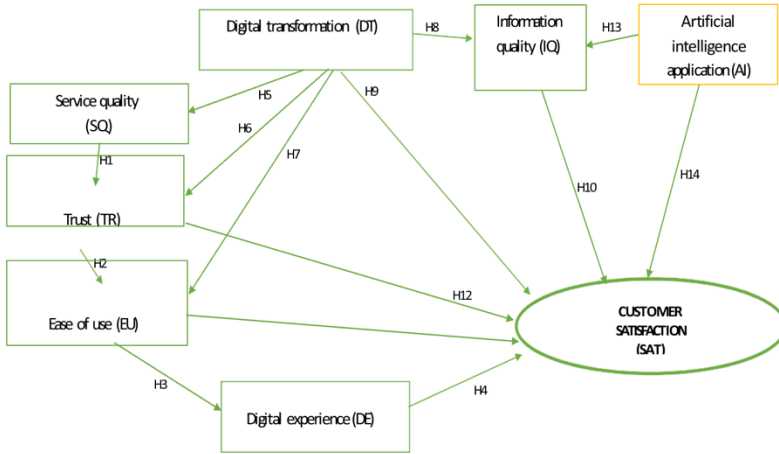


Figure 2: Source: Lu Phi Nga (2026)

Figure 2 depicts the conceptual research model, which connects 14 proposed paths that represent both direct and indirect linkages. It highlights how internal capabilities foster innovation and digital preparedness in mobile money services, thereby enhancing customer satisfaction ((Lu Phi Nga, 2026).

4. Research Methodology

This study employed mixed-method that comprises of qualitative exploration through expert consultation and (2) quantitative methods through the use of questionnaire and hypothesis testing.

Qualitative phase (interviews): This phase was conducted to explore, validate, and refine the measurement items for the constructs included in the conceptual framework, (Hair et, al., 2022). A semi-structured group discussion was organized with six banking professionals drawn from United Bank for Africa, Zenith Bank, Guaranty Trust Bank, First Bank of Nigeria, Access Bank, and Wema Bank, all located within Babcock University.

The qualitative exploration approach was adapted from Nga

(2026), who employed expert consultation to assess the relevance, clarity, and contextual appropriateness of measurement items for key study constructs.

The professionals had between 5 and 10 years of experience in digital financial services and mobile money operations. Based on the familiarity with financial service management; experience with digital transformation or Mobile Money deployment; and comprehension of technical innovation and ways to improve banking customers' experiences. The above three criteria were used to choose the participants, (Joseph F. Hair Jr., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. 2022). Topics covered included determining whether measurement items for concepts like digital transformation, information quality, trust, digital experience, and satisfaction were relevant, clear, and appropriate in the given context using thematic analysis, by extracting the key characteristics of each construct from the qualitative data. This phase laid the groundwork for the subsequent quantitative investigation by developing a modified, contextually tailored measurement scale suitable for the mobile money service environment in Nigeria

The quantitative phase: Following the qualitative validation, the updated measuring scale was used to test the theoretical model and hypotheses (H1-H12). A structured questionnaire was sent to elicit information from Babcock University undergraduates as mobile money users.

Step 1: The research instrument used included a measurement scale and a questionnaire. All items were measured using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). This scale is widely adopted in service and behavioural research due to its simplicity and high reliability in PLS-SEM analysis. Each construct, service quality, digital transformation, information quality, artificial intelligence, trust, ease of use, digital experience, and satisfaction, were operationalized through multiple reflective indicators. The questionnaire sections containing measurement items, and a demographic section capturing respondents' age, gender, frequency, and duration of Mobile Money usage. The survey was administered through face-

face to ensure clarity and comprehension. A pilot test with 20 undergraduates outside the Babcock University was conducted to confirm the reliability, clarity, and internal consistency of the measures before the main data collection.

Step 2: Data Collection and Analysis Procedures: After refining the measurement scales and conducting a pilot test, the primary quantitative survey was administered to test the proposed research model and hypotheses empirically. Sampling and data collection targeted respondents who were users of Mobile Money services among Babcock University Undergraduates with prior experience with digital financial transactions, including payments, transfers, or deposits via mobile platforms. Data were collected through face-to-face questionnaires distributed among the undergraduates of Babcock University irrespective of gender, ethnicity, and religion to ensure geographic and demographic diversity wherever they clustered during break period.

Step : 3 Data Analysis. The study focused on testing relationships between variables, Multiple Linear Regression was used to test the hypothesis. The descriptive statistics, frequencies, mean($\bar{x}$) and standard deviation (SD) were used to analysis the data. To test the reliability of instrument Cronbach's Alpha 0.07 was used 0.70 (good reliability) and while Pearson correlation(r) was used to check the strength and direction of relationships, (Joseph F, Hair Jr et. al., 2022 or Lee J. Cronbach 1951).

5. Results: Socio-Demographic Data of the Respondents

The sampling size of the study is 400, using Taro Yamane Formula. There were 100% returned rate. The demographic profile of the respondents shows a diverse mix of students across gender, age, academic level, and faculties within Babcock University. Out of the 400 respondents, 213 (53.2%) were female, while 187 (46.8%) were male. This indicates a slightly higher participation rate from female students, showing a higher engagement with the subject matter among females. The age range of participants shows that a majority were between 22–25 years old, accounting for 181 students or 45.2%. This is

closely followed by those aged 18–21 years, with 167 respondents (41.8%). The smallest age group was 26–30 years, making up just 13% of the sample (52 respondents). This distribution aligns with the typical undergraduate population age range. The respondents were fairly distributed across the academic levels. The 300-level students had the highest representation with 113 students (28.3%), followed by 400-level students with 101 (25.1%). The 200-level and 100-level students accounted for 97 (24.3%) and 89 (22.3%) respectively. This broad representation across levels supports a balanced perspective on the issue being studied. Respondents came from nine different schools. The Benjamin Carson College of Health and Medical Sciences had the highest number of participants, 91 (22.8%), indicating strong representation from health-related disciplines. This was followed by the School of Computing and Engineering Sciences with 51 (12.8%), and the School of Public and Allied Health with 47 (11.8%). The least represented faculty was Veronica Adeleke School of Social Sciences (VASSS), with only 21 respondents (5.3%). This distribution shows that health and science-related faculties were more engaged in the study.

The study revealed that a substantial majority of undergraduates (95%) have adopted the use of mobile money services. The findings further indicate that respondents exhibit greater trust in digitally transformed telecommunications infrastructure compared to other e-wallet platforms, primarily due to its perceived stability and extensive network coverage. Notably, majority of the respondents (90%) strongly agreed on the importance of transaction reliability, risk reduction, and data accuracy as critical attributes of mobile money services. This aligns with the Unified Theory of Acceptance and Use of Technology (UTAUT), particularly the constructs of facilitating conditions and performance expectancy, which suggest that users are more likely to adopt a technology when they perceive the supporting infrastructure to be dependable and widely accessible. These findings lend empirical support to the study's conceptual model, particularly the emphasis on trust and information quality as key determinants of usage behavior. The high level of adoption among undergraduates can be attributed to the confidence users place in the reliability and accuracy of mobile money systems. Furthermore, the significant

influence of trust, information quality, and user satisfaction underscores their central role in driving the widespread utilization of mobile money services in Nigeria. From the perspective of the Technology Acceptance Model (TAM), this widespread adoption can be attributed to perceived usefulness and perceived ease of use, as students consider mobile money services to be efficient, reliable, and convenient for financial transactions. Additionally, government initiatives aimed at promoting a cashless economy have significantly enhanced the relevance and accessibility of mobile money as an inclusive financial tool. These initiatives have facilitated financial inclusion by providing accessible and convenient financial services to both unbanked and under-banked populations (CBN 2011).

5.1. Testing of the Keys Factors Influencing the Customer Satisfaction

Table 1: Relationships between Variables and Expected Influence Structural Model Results

Hypothesis	Path	Beta (β)	T-value	P-value	Decision
H1	AI $\rightarrow$ IQ	0.63	14.52	0.000	Supported
H2	AI $\rightarrow$ SAT	0.21	4.32	0.000	Supported
H3	DE $\rightarrow$ SAT	0.25	5.10	0.000	Supported
H4	DE $\rightarrow$ EU	0.58	12.80	0.000	Supported
H5	DT $\rightarrow$ EU	0.36	7.25	0.000	Supported
H6	DT $\rightarrow$ SAT	0.19	3.98	0.000	Supported
H7	DT $\rightarrow$ SQ	0.68	15.10	0.000	Supported
H8	TR $\rightarrow$ SAT	0.22	4.60	0.000	Supported
H9	IQ $\rightarrow$ SAT	0.27	5.75	0.000	Supported
H10	EU $\rightarrow$ SAT	0.24	5.20	0.000	Supported
H11	SQ $\rightarrow$ SAT	0.23	4.90	0.000	Supported

Hypothesis	Path	Beta (β)	T-value	P-value	Decision
H12	SAT $\rightarrow$ SA	0.78	22.40	0.000	Supported

✓ All hypotheses significant.

6. Discussion of the Findings

This study examined the influence of artificial intelligence (AI), digital experience (DE), and digital transformation (DT) on customer satisfaction (SAT), alongside mediating constructs such as information quality (IQ), ease of use (EU), trust (TR), and service quality (SQ). The findings provide important theoretical and practical insights into technology-driven service delivery in mobile money platforms:

The results revealed that AI has a significant positive effect on information quality. This suggests that AI-driven systems such as chatbots, predictive analytics, and automated responses enhance the accuracy, relevance, and timeliness of information provided to users. This aligns with existing literature, which argues that AI improves decision-making and personalization by processing large datasets efficiently. In the Nigerian mobile money context, this finding implies that users benefit from real-time, reliable financial information, thereby improving their overall experience. The findings of this study demonstrate that artificial intelligence (AI), digital experience, and digital transformation significantly influence customer satisfaction in mobile money services. Specifically, AI was found to have a strong positive effect on information quality and customer satisfaction. This aligns with prior research, which indicates that AI-driven systems enhance data accuracy, personalization, and responsiveness, thereby improving user satisfaction (Huang & Rust, 2021; Davenport et al., 2020). The ability of AI to process large volumes of customer data in real time allows service providers to deliver more relevant and timely information, which directly enhances perceived information quality.

The study found a significant positive relationship between AI and customer satisfaction. This indicates that AI applications contribute directly to user satisfaction by improving service responsiveness and

personalization. However, the strength of this relationship may be moderate, suggesting that while AI enhances satisfaction, it is not sufficient on its own. Other factors such as trust and service quality also play critical roles.

Digital experience was found to significantly influence customer satisfaction. This confirms that user-friendly interfaces, seamless navigation, and interactive platforms are essential determinants of satisfaction. This finding supports the notion that customers value convenience and simplicity, particularly in mobile financial services where usability directly affects adoption and continued use. , the study revealed that digital experience significantly impacts customer satisfaction. This finding supports existing literature suggesting that a seamless and engaging digital interface improves users' perceptions and overall satisfaction with digital services (Lemon & Verhoef, 2016). A positive digital experience, characterized by intuitive navigation, fast response times, and personalization, encourages continued usage and customer loyalty.

The results indicate that digital transformation significantly improves ease of use. This implies that investments in modern technologies, system upgrades, and automation simplify processes for users. In practice, this means that mobile money platforms that embrace digital transformation can reduce complexity and enhance user engagement. The relationship between digital transformation and ease of use was also found to be significant. This suggests that organizations that invest in modern digital infrastructures and technologies are better positioned to deliver user-friendly services. This finding is consistent with the Technology Acceptance Model (TAM), which posits that perceived ease of use is a key determinant of technology adoption (Davis, 1989). When mobile money platforms are easy to use, customers are more likely to adopt and continue using them.

Digital transformation also showed a positive effect on customer satisfaction. This suggests that technological advancement not only improves operational efficiency but also enhances the overall customer experience. The finding reinforces the importance of continuous innovation in maintaining competitive advantage in the Fintech sector.

In addition, digital transformation showed a strong positive effect on customer satisfaction. This indicates that the integration of advanced digital technologies into service delivery processes enhances efficiency, reliability, and service quality. Previous studies have similarly found that digital transformation improves operational performance and customer outcomes (Verhoef et. al., 2021). This transformation enables organizations to meet evolving customer expectations in a highly competitive digital environment.

The relationship between digital transformation and service quality was significant, indicating that technology-driven processes improve service delivery, reliability, and speed. This is particularly relevant in mobile money services, where downtime or delays can significantly impact user trust and satisfaction

Information quality was found to significantly influence customer satisfaction. This highlights the importance of accurate and timely information in shaping user perceptions. Customers are more likely to trust and remain loyal to platforms that provide clear and reliable financial data. Information quality significantly affects satisfaction, underscoring that users' perceptions of accuracy, clarity, and transparency are crucial to service evaluation. Ultimately, the findings reveal that customer satisfaction in mobile money services stems from the synergistic integration of digital transformation, AI-driven personalization, usability, and trust.

These applications have created user habits, offer multiple payment acceptance points, handle various types of bills, and are linked to numerous banks. The relatively late birth makes it difficult for Mobile Money to differentiate itself from the competition. Notably, some payment applications are also linked to Grab and be services, which capture a significant market share among users of these super applications. Ease of use had a strong positive effect on customer satisfaction. This suggests that systems that are simple and intuitive significantly enhance user experience. This finding supports the Technology Acceptance Model (TAM), which emphasizes ease of use as a critical factor in technology adoption. Service quality was also a significant predictor of customer satisfaction. This indicates that

responsiveness, reliability, and support services are essential components of customer experience. Even with advanced technologies, poor service delivery can undermine satisfaction.

Trust emerged as a critical factor influencing customer satisfaction. The results suggest that customers must feel secure and confident in the platform before they can be satisfied. In the Nigerian context, where concerns about fraud and data privacy persist, trust plays a mediating and reinforcing role in customer relationships, (eNaira 2021). Trust remains a psychological cornerstone of satisfaction. In high-risk digital environments, trust mitigates uncertainty and enhances users' confidence in system reliability and data security (Belanche et. al., 2024; Lee & Chen, 2022). Mobile Money faces competition from numerous payment applications (e-wallets), including Momo, ZaloPay, VnPay, Moca, and AirPay. These applications have been around for a long time, have many customers, and understand customers' habits, preferences and concerns.

7. Conclusion

The study demonstrates that AI and digital transformation significantly enhance customer satisfaction, but their effectiveness depends on supporting factors such as information quality, ease of use, service quality, and trust. The findings reveal that digital transformation and artificial intelligence (AI) are the strongest drivers of customer satisfaction. Digital transformation improves service reliability, transparency, and efficiency, while AI enhances personalization, security, and decision-making. In addition, ease of use, information quality, digital experience, and trust play critical roles in shaping positive user perceptions. Customer satisfaction is therefore driven by the interaction between technology, user experience, and trust. However, excessive automation may reduce users' sense of control, highlighting the need for a balance between AI and human involvement. Overall, aligning technological innovation with human-centered design is essential for sustaining long-term engagement in digital financial ecosystems. Organizations that adopt a holistic approach combining technology with

user-centric strategies are more likely to achieve sustainable customer satisfaction.

Policy Recommendations

1. Governments and service providers should invest in secure, resilient, and interoperable digital infrastructure while strengthening regulatory frameworks and encouraging broader stakeholder participation to improve innovation and trust in Mobile Money systems.
2. Artificial Intelligence should be deployed to enhance personalization, fraud detection, and customer support, with adequate human oversight to maintain service quality and empathy.
3. Providers should also develop simple, user-friendly, and accessible platforms that accommodate varying levels of digital literacy, thereby improving user engagement and satisfaction.
4. Additionally, transparency, robust security measures, and appropriate transaction limits should be maintained to strengthen user confidence and adoption.
5. Accurate, timely, and transparent information, supported by financial literacy and awareness programs, is essential for informed decision-making, particularly in underserved communities.
6. Mobile Money services should continuously innovate by incorporating user feedback, leveraging emerging technologies, and prioritizing customer needs to sustain long-term satisfaction and competitiveness.

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The Ladder of Divine Ascent and the Top of Arasaka Tower: *Cyberpunk: Edgerunners* as Scala Literature

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1. The Ascetic Standpoint of Cyberpunk

The future, as the cyberpunk genre reveals to its audiences, is not only located within fictional or fantastical universes or confined to the realm of imagination, instantiated through ‘the pretend’ of video games, comics, tabletop games, or tv shows. Instead, cyberpunk has already been birthed, and cyberpunk media provides clairvoyance to discerning eyes, unveiling a prophetic vision of a world conquered by accelerated and unchecked hyper-capitalism, the commodification of consciousness, and the brutality of cultures and cities run by private military contractors, power-hungry corporations, and the fanatical gangs who rule those who fall through a bloodthirsty society’s cracks.

Cyberpunk can rightly be described as prophetic. In line with Foucault, we may consider the genre to function as a “discursive formation,” wherein a discourse can “[constitute] its object and [work] it to the point of transforming it altogether” (Foucault, 1989, p. 36). This “work” is enunciated by scriptwriters, fandoms, and even the modern ‘techbros’ who are inspired by cyberpunk, and turn its fictions into reality (Yaszek, 2020). An illustration of this phenomenon comes to us from Elon Musk, who described discomfort comparing his real-life tech experiments to the dystopian landscape of the video game *Cyberpunk: 2077* (Makuch, 2021). Musk’s company Neuralink develops human-embeddable implants, the present-world’s prototype of *Cyberpunk*’s brain-augmenting ‘cyberware’ (Christian, 2026). In a somewhat-ironic post, Musk even stated that it “Feels weird helping make [sic] (hopefully good version of) Cyberpunk come true” (Musk

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[@elonmusk], 2021). For ‘very online’ internet culture denizens, we may be reminded of the quip (which has taken a life of its own) from a writer at *The Onion*: “Sci-Fi Author: In my book I invented the Torment Nexus as a cautionary tale / Tech Company: At long last, we have created the Torment Nexus from the classic sci-fi novel Don’t Create the Torment Nexus” (Blechman [@AlexBlechman], 2021). Charles Stross, a veteran sci-fi author, describes this phenomenon: “the billionaires behind the steering wheel have mistaken cautionary tales... for a road map” (Boucher & McAvan, 2026, p. 2).

In any case, cyberpunk’s discursive formations become formularies — either as warnings or ‘road maps’ — when cyberpunk media renders legible the structures and component parts of technological futurisms. To put it another way, we do not go from morse code to cybernetic body modifications overnight. There are walled gardens of R&D labs, Department of Defense grants, back-channel billionaire stock trades, and the cultures and infrastructures that thrust societies into a world where such advanced technology is able to be developed, produced, and installed (Haraway, 1991, pp. 188–189). Without critical media, such infrastructure may go unnoticed or unexamined. Critical media — such as within the cyberpunk genre, the *Cyberpunk* tabletop role playing game and video game, and *Cyberpunk: Edgerunners* (the animated series) — may invite players and viewers to imagine a world that is exaggerated, but not completely outside of the realm of total disbelief and incredulity. It is this capacity — to make visible what is opaque, and to exaggerate what may (sooner rather than later) become manifest — that renders cyberpunk a productive site for thematic discourse analysis, allowing theorists to work within the media to understand how we construct, contest, and reimagine the futures in which we are already living.

The above context serves as a jumping off point for the rest of this chapter, which is an extended discussion into comparative media. The approach here is an intermedial comparison, which will utilize structuralist and semiotic thematic analysis (Villanueva, 2011). This author has already teased one of two parts of the comparison, which is the overarching cyberpunk genre and more particularly the Netflix animated series, *Cyberpunk: Edgerunners*. But further, this author will bring

the comparisons together by examining individual episodes of *Edgerunners* alongside the second of our two conversation partners: *scala* literature. We will begin first by introducing and defining *scala*, its elements, and what themes its ancient roots provide as intriguing analogues for a TV show.

2. Tracing the Geneology and Hallmarks of *Scala* Literature

As a meta-introduction to *Cyberpunk: Edgerunners*, defining *scala* may be helpful — and defining it in such a way as to segue into the themes of the show. This author uses the term ‘scala’ to describe any media with a narrative that follows a ‘step-by-step’ progression towards a character’s personal, social, or existential goals.

“Scala” is the Latin word for “stair” or “ladder” (Morwood, 2005), and its figurative or thematic meaning is inherited by modern readers from the 7th century monk John Climacus. John’s most notable work (from which he earned his surname) was the “The Ladder of Divine Ascent,” also known as Κλίμαξ τοῦ Παρθείου in Greek (Institute Für Neutestamentliche Textforschung, n.d.), or *Scala Paradisi* in Latin (D-Vasilescu, 2021, p. 3). *The Ladder* is a summation of this aged abbot’s contemplation and wisdom, both a set of devotional literature and a handbook for desert hermits and monks living lives of sequestered mysticism. John’s ‘ladder’ covers 30 ‘steps’ or ‘rungs,’ which represent an iterative and upward incline of spiritual growth, the traversal of which requires mental focus and metaphysical balance (Climacus, 1982, p. 11). Like much monastic literature, these rungs are grouped into sets of three: a “break with the world,” then “active life... or practice of the virtues,” and finally, “contemplative life... stillness, prayer, and union with God” (Climacus, 1982, p. 12). To summarize these three sections or seasons, patristic contemplative authors (and modern literary analysts) may borrow Pseudo-Dionysius’ classification of the three sequential categories: purification, illumination, and union (Kharlamov, 2009, p. 137; Livingston, 2013). The first of this three-fold path, “purification,” is sometimes called *katharsis* or asceticism; “illumination” is sometimes called *theoria* or contemplation, and “union” is sometimes called theosis, deification, or

perfection (Pascal, 2017). Essentially, the first stage, purification, involves a debriding of the self from things that weigh them down from their mission, destiny, or from simply doing the right thing. Illumination, the next step, is when one focuses on actively achieving their goals, not just *not* doing the things that are inhibiting them. Finally, union/perfection/unitivity involves an integration with the self and their true, intended identity or end goal (Goss, 2004; Rudy, 2011, p. 239; Underhill, 1990, p. 245).

Scala is not, of course, found only within Eastern Orthodox monasticism. In the Mahāyāna Buddhist tradition, the *Lotus Sutra* (which may originate from the second century CE) (Lopez, 2016, p. 24) provides the story of ‘The Vagabond Son’ (Kim, 1990, p. 223ff). This son leaves his family for a period of time, and in that meantime, his father acquires wealth. The son ends up impoverished and returns to the homeland of his newly-upwardly-mobile family, but does not recognize their new estate or his father with his new lavishments. The son is confused by this and leaves once again, but is brought back by servants who ask the son to join the estate as a worker. He is more comfortable with this arrangement, and so he returns. Eventually, many years later, the father reveals himself as such to the son, and gives the household to him as an inheritance. We can trace the *scala* within this story: purification happens when the son accepts a lowly position, illumination as the son regains his closeness with his family, and unitivity when he is officially recognized as a family member.

This narrative may be familiar to Western audiences, who may recognize themes within the ‘Parable of the Prodigal Son’ from the Christian Bible in the Gospel of Luke, also compiled and transmitted around the end of the first century or the beginning of the second (Ehrman & Mendez, 2025, p. 179). The son, in this story, explicitly rejects his father and is forced to face purification when he encounters a difficult life away from home. He discovers illumination when he contemplates his circumstances, and his unjust ill-treatment towards his family. After returning to his father and experiencing forgiveness, he arrives at unitivity by returning to his family’s fold (*New Revised Standard Version Bible*, 1989, p. Luke 15:11-32).

More *scala* stories include the third century *Hymn of the Pearl* from the gnostic text, *The Acts of Thomas* (Layton & Brakke, 2021). A prince endures purgation through a long and arduous journey in a quest for a precious pearl, illumination happens after receiving awakening through a message from the king, and unitivity takes place when the prince returns to the palace with true knowledge (or *gnosis*). Examples of popular *scala* stories include Dante's 14th century *Divine Comedy* (*Inferno* = purgation; *Purgatorio* = illumination; *Paradiso* = unitivity) (Fenu, 2013) and John Bunyan's 17th century allegory *The Pilgrim's Progress* (Leaving the City of Destruction = purgation; Pilgrim's journeys = illumination; Entering into the Celestial City = unitivity) (Draycott, 2025; Leigh, 2009).

As is often the case, *Star Wars* provides something of a popular or accessible example of how to see some aspects of *scala* literature: Luke Skywalker has an ascetic journey of losing his aunt and uncle on Tatooine, but this purification allows him to 'make space' to follow the ways of the Force. Obi-Wan helps Luke open his physical and spiritual eyes — illumination — throughout his hero's journey in Episodes 4-6. We see Luke's third *scala* stage come to fruition throughout *Return of the Jedi*, as he dresses like a Jedi Knight, and as he makes choices that are integrated with (at least an idealistic understanding of) the Jedi Way (Bortolin, 2015).

There is, of course, more to the genre, but for the purposes of this paper, this brief overview will provide at least three main 'buckets' to identify the *scala* journey — or perhaps, a mirrored, reversed, or false 'ladder' — as may seen in *Cyberpunk: Edgerunners*.

3. Understanding the Genre of Cyberpunk and the Universe of *Cyberpunk*

To begin, one must set the stage for *Edgerunners* by understanding its situating within media and culture. Broadly speaking, 'cyberpunk' (not the proper noun), as a genre, is dystopian futuristic science fiction, and defines "a rebellious social landscape dependent on science and computerized education" (Cole, 2005, p. 160), wherein neon is fused

with metal, where ‘megacorporations’ control the world, and where the dreams of accessible transhumanism come to light — for at least the ultrarich or those willing to acquire technology through not-so-tasteful means (Cavallaro, 2000, p. 12ff). Given the trajectory of the ‘in real life’ factors of hyper-capitalism, economics, private equity, the housing crisis, the employment crisis, wars for oil, and wars for conquest, one might imagine ‘cyberpunk’ as a world that is simply ours 20 years into the future, and where technology has advanced a thousand-fold (Jameson, 1992, p. 352). Examples in this genre include *Blade Runner*, *Judge Dredd*, *The Matrix*, *Cowboy Bebop*, *Shin Megami Tensei*, *Deus Ex*, *Neuromancer*, and more (cf. Sterling, 2017).

Cyberpunk — the proper noun — is the series created by Mike Pondsmith, published originally in 1988 as a tabletop roleplaying game (a TTRPG, which includes games such as *Dungeons and Dragons*) with various supplemental handbooks, story guides, and art-books released alongside the base game (Pondsmith, 1988). Cyberpunk’s setting follows the stories of various punk-rockers, mercenaries, hackers (called ‘netrunners’), and other characters that make up the white-collar and underground criminal scene. *Cyberpunk 2077* is a video game released in 2020 (CD Projekt Red, 2020), and *Cyberpunk: Edgerunners* is the anime miniseries released in 2022 (CD Projekt Red et al., 2022), with its story events ending in 2076 in the in-game universe (Cook, 2023). A synopsis is in order:

Edgerunners follows David Martinez, an academically brilliant student whose talents can’t be supported by the wages of his single mother, especially in Night City where it requires more – way more – than a paramedic’s salary just to survive. When David has to begin fending for himself, *Edgerunners* takes the time to explore how Night City can be terrifying in ways that go beyond psychotic cybernetically enhanced street gangs... Night City’s hyper-capitalism becomes the early villain in *Edgerunners*, showing that not even flying cars and cool outfits are a panacea for poverty. David’s luck changes when he meets a mysterious netrunner named Lucy and falls in with a loveable mercenary group led by the strong-willed — and armed — Maine. ...Maine’s crew will end up getting tangled up in a feud between two of the city’s largest Megacorps and the schemes of a Fixer named Faraday... These relationships are front-and-center of *Cyberpunk: Edgerunners*, with David’s rise within this food chain serving as a fascinating vantage point to take in this setting...

[The characters'] fates are more a consequence of Night City's dog-eat-dog foodchain than anything they can control themselves. (M. Kim, 2022)

It is with this setting that we may explore both a *scala* reading and *scala* analysis of *Edgerunners*.

4. A Scala Reading of Cyberpunk: Edgerunners

Edgerunners, as read as *scala* literature, follows David Martinez as the protagonist. In the first episode, the scene is set for this “prodigal son” — David is street- and book-smart, but endures bullying and othering from peers, despite his mother Gloria's caring yet financially meager support. Gloria wishes for a better life for David: “You think I don't know how they treat you? You don't think I get treated the same way? But that's why you gotta prove 'em wrong. I want you to work hard, rise up, and get to the top floor of Arasaka Tower!” (Kaneko & Imaishi, 2022b).

One of the few hopes for David may be able to be realized through his studies at the Arasaka Academy, where a considerable portion of Gloria's budget is directed. To break out of the cycle of poverty, Gloria wants David to play within the rules of the system, by getting a good education and then becoming a worker at the Arasaka megacorporation. However, David is a bullied pauper among princes, who make fun of his home life, outdated educational technology, and lack of family and corporate connections.

Gloria's maternal response is a material one, a logical and straightforward internalization of classism reproduced by poverty. It is certainly no judgement of Gloria to assume that the best way to beat the system is to play within it, to the best of one's ability. In some ways, there is a physical or literal early definition of what ‘perfection’ or ‘unitivity’ is from this perspective. To get to the top means to become a ‘corpo,’ getting off the streets by getting a good education and a good job.

This idealistic image of success is quickly shattered when Gloria is killed in street violence. Afterwards, David wrestles with paying rent and affording hospital and funeral bills, all while attempting to survive continued, targeted violence at the highly-competitive Academy.

After the loss of his mother, David's first stage of the *scala* — purgation or asceticism — is clear. Quickly, David realizes the *corpo* lifestyle is not for him — Night City, Arasaka Headquarters, and the damaging effects of hyper-capitalism take him down the path of purgation, making room in his heart and in his life to explore new options.

In Episode 2, David stumbles across an open door of illumination, through military-grade, extremely-advanced cyberware (a technological, implantable body enhancement) called a Sandevistan (Kaneko & Imaishi, 2022c). With it, David is able to achieve super-speed, as if the entire world around him moves in slow-motion. This implant literally replaces his organic spine, serving as a metallic core that rewires his nerves and muscles. As the viewer later discovers, David's body is something of a very rare anomaly — he has the ability to integrate with invasive cyberware — and use it frequently — much more naturally than most of the population. Invasive cyberware can literally rip one's own body apart, or — and perhaps worse — it can diminish one's humanity to the point where one loses touch with reality, causing them to suffer from 'cyberpsychosis,' similar to a very severe PTSD break.

Without delving into the various arguments concerning cybernetic transhumanism, the show drives the viewers to ask questions about David's bodily and social responses to the cyberware. Is cyberware a way of achieving theosis? Or, does one lose themselves as they replace their body not merely with augments, but with retractable blades, grenade launchers, or brain-controlled lethal hacking programs? Cyberware provides David a means to further engage in purgation — of the organic, physical aspects of himself. At Arasaka Academy, David's organic body was pummeled and beaten by class bullies (who, themselves, relied on augmentations to hurt or fight him). By engaging in a kind of purgation of blood and bone, David was able to overcome his bullies by using the Sandevistan, becoming a changed man and one-upping his tormentors through retaliating with Sandevistan-powered revenge and force.

Episode three is where David meets actual cyberpunks, also called edgerunners. Maine, the leader of this mercenary group, welcomes David after he demonstrates his cyberware-enhanced abilities. Another angle or facet of *scala* is present here. Maine and his crew are all heavily cyberware-enhanced, meaning David's invasive modifications allow him to fit in well. It should be noted that a less shadowy-side of Maine's group is their familial ties. David pursues self- and social integration through the tough love and sincere camaraderie of the gang. However, the crew works for 'fixers' (shady underground business people), who are go-betweens, between seedy edgerunners and buttoned-up megacorps. So, while they are living life on the edge, apart from 'polite' society, their actions are still funded by those in power, often with one corporation hiring edgerunners to do dirty work against a rival megacorp. This 'false' illumination or shadow illumination is obvious here, especially regarding the race to greater firepower through 'getting chipped' with cyberware. Getting 'chromed up' means being able to survive better on the streets of Night City, but it also means that one increases their chances to encounter cyberpsychosis, or simply lose their identities as they transform themselves into paramilitary killing machines.

A foil is presented in this same episode, where a character in Maine's gang, Rebecca, hands David some sort of carbonated drink. Previously, David is depicted as not liking fizzy beverages, but something seems to shift as he accepts Maine's crew and as they accept him. As the show progresses, David is shown drinking soda with no qualms. This appears to be symbolic of David's changing tastes, as well as indicating his explicit or implicit willingness to modify his preferences to integrate himself into the group. Whether it is through soda or arm-mounted rocket launchers, David's illumination or *theoria* is indicated by slowly becoming more and more of an edgerunner himself.

A tonal shift takes place in Episode 6 (Kaneko & Imaishi, 2022a). Maine, highly augmented by technology, begins to demonstrate signs of cyberpsychosis. He loses his grip on his sanity and attacks Kiwi, a member of his team. Lucy, David's love interest, steps in using her netrunner abilities. However, David discovers that Arasaka has not lost track of him, and that they have realized David's uncanny

tolerance of cyberware. David's world comes crashing down as he recognizes that Arasaka is targeting him for experimentation just as Maine unfortunately succumbs to cyberpsychosis, dying after killing another member of the team.

David takes over Maine's group, and takes on more cyberware. Meanwhile, Lucy, Rebecca, and others warn him about the dangers of too much 'chrome' as he experiences cyberpsychosis symptoms himself. As the story progresses, David and Lucy are caught in Arasaka's web, and as other edgerunners are killed, David is forced to run along the cyberpsycho edge in an effort to save Lucy. This leads to a showdown with Adam Smasher, a 'full borg' mercenary working for Arasaka. In the final fight between Smasher and David, Smasher says, "You think you're special because you're scrappy? Don't make me laugh"(Kaneko & Imaishi, 2022d). This quotation, in some ways, summarizes the complex and tragic story of David Martinez, and also, most people who are chewed up and spit out by Night City through the megacorps that support its infrastructure.

These scenes are foreshadowed by David's mother's comments in the first episode. She wanted David to go "to the top of Arasaka tower," and this comes to fruition in a way she would not have imagined. The place where this Smasher-versus-Martinez battle happens is in a special hanger – literally, physically – at the spire of Arasaka's HQ. David is a known quantity to Arasaka's top researchers, and part of (in a way) Arasaka special projects. Of course, this is a roundabout way of understanding David's ascent, and shadow descent. The ending of the fight — and the series — is ambiguous in terms of David's fate. In a stylized sequence, it is implied that David is shot by Smasher, though multiple alternative fan theories exist (Gulati, 2022; Jackson, 2022).

If it is assumed that David ultimately survives his encounter with Smasher, it could be a foreshadowing of the events in *Cyberpunk 2077*. In short, 'rare specimens' are salvaged by Arasaka for experimentation. David, with his high cyberware tolerance, was already being scouted by Arasaka, and losing to Smasher could have meant that he was taken back to Arasaka HQ. Arasaka's experiments in 2077 involve a project called Mikoshi, which houses (in digital form) the

consciousnesses of the super-rich (or the super-hated, who have their consciousnesses tortured in a digital purgatory). ‘Secure Your Soul,’ Arasaka’s flagship product in 2077, allows those who are dying to download their memories to Mikoshi, to be transmitted to a different organic body, allowing them to live forever. If we interpret the ending of *Edgerunners* through the lens of 2077, it could be read that David becomes a part of the Secure Your Soul experiment, given his resiliency to the digital and metallic augmentations.

5. A Scala Analysis of Cyberpunk: *Edgerunners*

Edgerunners, as read as *scala* literature, follows David Martinez as the journeyer up the dvine ladder. In the first episode, the scene is set for this ‘prodigal son’ persona. In attempting to understand *Edgerunners* as *scala*, readers must trace the the steps of purification, illumination, and union. How are these steps or rungs apparent throughout the story? What *scala* are revealed when applied not to a monk seeking union with the divine, but to a poor, Latine teenager seeking union with systems designed to consume him?

As mentioned, David’s purification or *askesis* is seen in various stages. He accepts purgation in the form of losing his mother, leaving Arasaka Academy, and eventually through sacrificing limbs and his body for the sake of greater enhancements. Illumination, or deeper contemplation and integration, happens in sundry ways, such as through his decisions to take on school bullies, to drinking soda, to his initial integrations with cyberware. David seeks ‘perfection’ or unitivity throughout, whether it is through attempts to find full internal integration by battling megacorps, or to his (ultimately losing) struggle against and within his built-in technology.

Of course, the shadow side of unitivity can be discussed. As David becomes the boss of Maine’s crew, he is more tightly integrated with fixers and the corporations that control them. His quest for greater integration — if we follow the fan theory — may become fully realized (in a very dark way) if his consciousness was taken into Mikoshi and experimented upon.

The show's depictions of the capriciousness and brutality of Night City and cyberware seem to provide a kind of internal commentary. Given that tech is developed, sold, and continuously improved on by the corpos, the ideologies and instruments of this tech are not neutral. As Haraway argues, the cyborg body is one that encodes relations of power and domination (Haraway, 1991, p. 161). This is because capitalist-driven transhumanism engages its work in service to productive ends; that is, modifications are engaged in for the purpose of carrying out profiteering or interpersonal violence more efficiently. David's bodily purgation comes not from freely-chosen discernment to a vocation, in the Climacine sense. Rather, his society put him under duress, and he changed himself as a function of survival. Because capitalism already 'takes for granted' the human subject — for example, Amazon factory workers suffering from bulging disks or repetitive strain injuries (Evans, 2019) — it would not be hard to see how businesses would be champing at the bit to eke out every second from tech-augmented workers.

So, while David became a cyborg under duress by Night City's oppressive corporations, there is a sense in which his shadow-actualization could be reversed a second time, becoming what Shildrick (in line with Shelley) considers the "monstrous" (Shildrick, 2002, p. 120). Pre-augmented David sought unitivity through going to school and becoming a good corpo, but this was interrupted by the pull of tragedy and the streets into a unitivity with serving corporations through fixer intermediaries. But, his journey ended — despite his almost-total transformation into a machine "monster" — in a place of freedom, literally doing battle with Arasaka's Adam Smasher to save his found-family members.

David's plunge into cyberpsychosis — a kind of disjointed 'union' between technology and humanity — was done purposefully, channeling insanity in an attempt to save Lucy and the rest of his surviving crew. And, Lucy is one of the few characters who is able to actually escape the troubles of Night City because of David's sacrifice. In a sense, though David functioned as a megacorp pawn up to and through his final battle with Smasher, his true end goal — protecting

Lucy — was perhaps more fully realized or manifested through his technological singularity.

Much of *scala* literature, following a hero's journey or cycle of redemption, offers something pedagogical or tropological — a 'moral of the story' or anagogical takeaway is often a part of the 'reader response' (Clements, 2019). Perhaps some applicative messages could be seen in the explicit and implicit critiques of capitalism, or on the overreliance on technology controlled by the rich and powerful. A subtle, and difficult message is pervasive as well: no matter how scrappy you are, you'll still be at the mercy (or ruthlessness) of 'the system.' A meta-message may be apparent also: shadow 'ladders of ascent' can be camouflaged by good intentions. A less-depressing understanding may be seen as well: despite the power of corporations and their iron fists, humanity (expressed through love and self-sacrifice) can still be victorious.

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Mythologising Cyberpunk: Kalki 2898 AD and the Rewriting of Dystopia in Indian Cinema

Rajat Sharma¹

1. The Paradox of Religious Cyberpunk

The 2024 blockbuster hit *Kalki 2898 AD* presents a striking paradox. A dystopian future governed by a techno-authoritarian regime, extreme social stratification, and technological excess is countered not by secular resistance or subcultural revolt, but by the suggestive return of Hindu messianic figures and reincarnations of Hindu Gods. *Kalki 2898 AD* emerged as one of the most ambitious science-fiction productions in Indian cinema. Nag Ashwin, known for his work in Telugu cinema, conceived the film as a pan-Indian blockbuster. The film combines spectacular visual effects, futuristic urban landscapes, advanced technologies, and post-apocalyptic world-building on a scale rarely attempted in Indian filmmaking. Even though the film was met with mixed reviews from audiences and critics, it was a commercial breakthrough, ranking amongst the highest grossing Indian films.

The film is set in a distant post-apocalyptic future where the city of Kashi remains the last major centre of human civilization under the rule of the authoritarian godlike figure, Supreme Yaskin. Kashi, currently commonly called Banaras or Varanasi, is one of the oldest continuously inhabited cities in the world and has long served as the spiritual capital of India. Drawing simultaneously on Hindu mythology and science-fiction conventions, the film follows SUM-80 (played by Bollywood superstar Deepika Padukone), a woman carrying a miraculous pregnancy believed to herald the birth of Kalki, the prophesied final reincarnation of the Hindu god Vishnu. Pursued by Yaskin's forces, bounty hunters, and competing factions, she is protected by the immortal warrior *Ashwatthama* (played by Amitabh Bachchan),

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who has awaited this moment since the events of the *Mahabharata*. Their journey unfolds within a world marked by ecological collapse, extreme social inequality, advanced technology, and messianic expectation, ultimately positioning the unborn Kalki as a figure of both spiritual redemption and political transformation.

This chapter argues that *Kalki 2898 AD* (mentioned henceforth as *Kalki*) constitutes the first sustained cyberpunk film in Indian cinema, both in its thematic architecture and its aesthetic grammar, while simultaneously reworking the genre through a mythopolitical framework that aligns with contemporary Hindu majoritarianism: *Hindutva*. Classical cyberpunk typically locates agency among marginal subjects resisting technological and corporate domination. In *Kalki*, however, political redemption emerges through divinely sanctioned figures drawn from Hindu epic traditions such as *Mahabharata*, *Bhagavata Purana* and *Kalki Purana*. The result is a reconfiguration of cyberpunk in which dystopian futurity is resolved not through insurgent politics but through the restoration of sacred civilisational order. Hindu majoritarianism, *Hindutva* transcends mere political rhetoric. It is a vainglorious, muscular, totalizing vision that seeks to collapse Indian culture into Hindu dominance, retrofitting history and identity to serve the idea of a Hindu *rashtra*.² The term “Hindutva” was popularized by Vinayak Damodar Savarkar, (Jaffrelot, 2015) the ideological patron of the current ruling party, the BJP. In a paradigmatic sense, *Hindutva* emphasizes a Hindu cultural dominance that often marginalizes minority communities, particularly Muslims and now increasingly Christians (Kumar, 2013; Menon, 2020). Indian cinema is increasingly assimilating the authoritarian populist rhetoric of *Hindutva*, echoing the prevailing ideological tenor of the current regime. This cinematic trajectory not only habituates audiences to identify and vilify perceived enemies but also primes them to articulate a nationalist fervor that resonates with the state's own ideological agenda. As a result, the complex, pluralistic narratives of Indian history and the democratic ethos of contestation are being supplanted by a Hindu majoritarian

² *Hindu Rashtra*, meaning Hindu nation, refers to a theocratic state envisioned by *Hindutva* ideologues in India.

vision that reifies othering, suspicion, and militarized masculinity, positing a perpetual internal threat (Sharma, 2026a).

The film must also be understood within the contemporary political and industrial context of Indian cinema. Recent scholarship has observed the increasing prominence of Hindu mythological narratives, civilisational discourse, and majoritarian cultural imaginaries across a range of popular media and culture (Dey, 2025) and particularly popular films (Gehlawat, 2024; Sharma, 2026a). Simultaneously, the rise of the pan-Indian blockbuster has transformed the scale at which cinematic narratives imagine political community. Pan-Indian films such as *Baahubali* (2015, 2017) franchise and *RRR* (2022) have moved beyond the framework of the nation-state to invoke larger narratives of historical continuity, cultural inheritance, and civilisational grandeur. Within this broader context, *Kalki* extends these tendencies into the speculative future. Rather than imagining futurity through technological democracy, social transformation, or revolutionary politics, the *Kalki* projects the future as a restoration of sacred order rooted in Hindu civilisational continuity.

2. Reimagining Cyberpunk

Set in a distant future marked by ecological devastation, extreme social stratification, technological domination, and authoritarian rule, *Kalki* appears at first glance to belong comfortably within the tradition of cinematic cyberpunk. The world of *Kalki* is bifurcated with brutal clarity. The city of Kashi is marked by dichotomies of social and economic contrasts. Above is the titanic inverted pyramid, the gleaming, climate-controlled ‘complex’ of Kashi, where the ruling elite and the privileged few enjoy technological abundance, genetic enhancement, and proximity to the godlike authority of Supreme Yaskin. Below is the barren, radiation-scorched wasteland, where the dispossessed masses survive on rationed sustenance, stripped of dignity and bodily autonomy. This broader understanding of cyberpunk is crucial for analysing *Kalki*. The film need not reproduce the precise narrative structures of canonical cyberpunk texts in order to participate in the genre. Its significance lies instead in its engagement with

core cyberpunk concerns i.e., technological domination, corporate authority, ecological collapse, social stratification, and contested futures. Viewed through this lens, *Kalki* clearly belongs within the cyberpunk tradition. Yet as the following sections demonstrate, the film simultaneously transforms one of cyberpunk's most fundamental assumptions.

2.1. A Dystopian Future: Technology, Ecology, and Social Stratification

The film's opening sequence draws on the visual grammar of *Mad Max*. A weathered vehicle traversing a scorched and barren wasteland, carrying refugees and the desperate alike toward Kashi, the last remaining city on earth. This immediately situates the narrative within a recognizable tradition of post-apocalyptic imagery while establishing the stakes of survival that will govern the world of the film. Young girls and women are subjected to fertility checks upon arrival. Those deemed viable are abducted and dispatched to the Complex as test subjects, their bodies conscripted into a system of exploitation they perhaps had hoped to escape. The city that promises sanctuary reveals itself as merely a more organized form of predation. Eventually we are introduced to the film's protagonist, Bhairava (played by Bollywood superstar Prabhas), who inhabits this underworld physically, yet his ambitions already place him elsewhere. His dreams and desires are oriented entirely towards the Complex, the forbidden upper tier of power and privilege. Bhairava embodies the quintessential cyberpunk archetype of a bounty hunter, driven by a singular goal: to accumulate a million units, the requisite currency to gain entry into the exclusive Complex. In this he is emblematic not exceptional. For the denizens of Kashi's lower depths, the Complex is less a place than an obsession, the singular horizon of aspiration and doom. One either claws a way in or perishes in the attempt.

The film's technologically saturated environment, corporate concentration of power, and stark division between privileged and marginalized populations evokes conventions long associated with cyberpunk fiction, particularly its focus on street-level subcultures, disenfranchised subjects, and hierarchical social orders (Hollinger, 1990; Istvan, 2012). Nonetheless, cyberpunk has long been understood as more than a

collection of aesthetic motifs (Murphy & Vint, 2010). While dystopian futures, cybernetic technologies, and artificial intelligence, have become its most recognizable visual markers, scholars have repeatedly emphasized the genre's political dimensions (Anna McFarlane, 2019; Frelik, 2019). In *Kalki* as well, the vertical geography of power is not merely aesthetic but ideological. Wealth purchases not only comfort but biological continuity itself, as the rich augment and extend their lives while the poor are harvested, quite literally, for their reproductive and genetic potential. The film renders class difference as a matter of bare life. The poor do not only lack resources, they also lack the recognized status of full human beings. Movement between the two worlds is tightly policed, and those who attempt to cross the boundary (whether through rebellion, cunning, or messianic destiny) do so at mortal risk. Caste, labour, and bodily worth are inscribed onto space itself, making the film's social geography a map of exploitation as much as a map of place.

2.2. *The Politics of Marginality*

The emphasis on marginal agency also explains cyberpunk's enduring political appeal. Importance of marginality has been repeatedly emphasized in cyberpunk scholarship (McCaffery, 2012; Sterling, 1986). From the console cowboys of Gibson's *Neuromancer* to the urban outcasts of later cyberpunk fiction and film, the genre consistently locates agency at the edges of social and political structures. Power is concentrated in corporations, governments, and technological elites, but resistance emerges from below. Cyberpunk protagonists may not overthrow the systems they oppose, yet their actions expose the instability of seemingly total forms of control. The genre's political imagination therefore depends upon the possibility of contestation from the margins, however limited or temporary that contestation may be. Emerging from late twentieth-century anxieties surrounding technological capitalism, Cyberpunk is not merely concerned with technological innovation. It also asks who controls technology, who benefits from it, who is excluded from it, and how systems of technological power might be challenged. In this respect, the genre functions as a critical response to the social consequences of late capitalism and technological modernity. The "punk" in cyberpunk is therefore not

merely stylistic (Istvan, 2012; McCaffery, 2012). It signifies forms of opposition, subcultural resistance, and anti-authoritarian agency located at the social margins (Moylan, 2012). Whether embodied by hackers, mercenaries, outcasts, or technologically augmented outsiders, cyberpunk protagonists typically occupy positions external to dominant structures of power, and the genre's political energy often derives from this antagonistic relationship between the centre and the margins. This is where *Kalki* presents a striking challenge to this tradition. While the film constructs a recognizably cyberpunk world, its narrative resolution does not emerge from insurgent politics, collective resistance, or marginal technological actors.

Among the refugees arriving on the weathered vehicle is a young girl who, upon reaching Kashi, narrowly escapes the city's systematic screening process. In her escape and desperate flight through the city, evading the mercenaries and bounty hunters employed to retrieve such fugitives, she inadvertently triggers one of the film's most significant mythological turns, the awakening of *Ashwatthama*, the immortal warrior-figure drawn from the *Mahabharata*, whose dormancy ends at precisely this moment of pursuit and peril. Running parallel to this is the gradual transformation of Bhairava, the film's street-level protagonist who himself operates as a bounty hunter, a figure of moral ambiguity fully embedded in the exploitative machinery of this dystopian world. Yet Bhairava also begins to experience a series of religious and visionary episodes that sit uneasily alongside his mercenary existence, suggesting that he may be something far greater than his circumstances suggest — a reincarnation, or at least an echo, of a divine Hindu archetype, with the shadow of Hindu god *Shiva* hovering over his identity. The film thus begins to layer its cyberpunk scaffolding with the weight of sacred myth, suggesting that liberation, when it comes, will not be merely political but cosmological. From the onset, the redemption is therefore, vested in figures drawn directly from Hindu epic and mythological traditions. Bhairava and *Ashwatthama*, become the central agents of resistance, while the anticipated arrival of *Kalki* (he prophesied final avatar of Vishnu) provides the film's ultimate horizon of political and moral transformation. The dystopian future is not overcome through revolutionary action but through the

return of divinely sanctioned authority. In this sense, the film raises an important question: what happens when a genre historically associated with marginal resistance is reorganized around sacred lineage, mythological destiny, and civilizational continuity?

3. Towards an Indian Cyberpunk Genealogy

This question becomes particularly significant when situated within the broader history of Indian science-fiction. As Suparno Banerjee argues, Indian sci-fi has developed through a long and complex interaction between scientific modernity, colonial histories, indigenous knowledge systems, mythology, and religious traditions (Banerjee, 2014, 2020). Rather than reproducing Euro-American science-fiction paradigms, Indian sci-fi has frequently hybridized technological futures with local cultural and philosophical frameworks. Scholars (Mathur, 2004; Mehan, 1998) writing about Indian SF literature, agree that an optimistic mapping of the future India in sci-fi entails moving away from both humanist and posthumanist Western framings. From early speculative narratives responding to colonial modernity to post-independence works that combined scientific imagination with mythological and spiritual motifs, Indian sci-fi has repeatedly negotiated the relationship between modernity and tradition, science and faith, global genres and local cultural formations. These thematic concerns did not remain confined to literary science fiction. As Indian cinema increasingly engages with speculative narratives, filmmakers adapt many of the same tensions between technological modernity, cultural tradition, scientific rationality, and mythological imagination into visual form. *Kalki* emerges from this longer genealogy of hybridization. Its fusion of advanced technology and Hindu cosmology is therefore not anomalous within Indian science fiction. What distinguishes the film is the specific manner in which mythology reorganizes the political structure of a recognizably cyberpunk world. At the same time, cyberpunk has never remained confined to its original Euro-American contexts. Scholars of global cyberpunk have demonstrated that the genre has been shaped by transnational flows of culture, technology, and capital from its inception (Anna McFarlane, 2019; Frelik, 2019).

Asian urban landscapes, particularly Tokyo and Hong Kong, played a formative role in cyberpunk's visual imagination (Wong Kin, 2000; Yu, 2008) while subsequent developments in global cyberpunk have generated diverse regional adaptations that reflect local histories and cultural concerns. Cyberpunk's globalization has therefore produced not a single uniform genre but a range of interconnected formations that reinterpret its central concerns through different political and cultural frameworks. The existence of these multiple cyberpunk traditions makes it possible to speak of distinctly Indian, Latin American, African, or East Asian cyberpunk imaginaries without reducing them to derivative versions of Western models (Tatsumi, 2002).

3.1. Science, Myth, and Modernity in Indian Science Fiction

Contemporary Indian science-fiction films have emerged not as a break from earlier traditions but as an extension of synthesis of mythological imagination into visual form and longstanding debates within Indian speculative culture. Mythological narratives do not possess a singular political meaning. Their significance depends upon the historical contexts in which they are deployed and the political futures they are asked to imagine. This distinction is important for understanding *Kalki*. The presence of mythological material alone does not automatically indicate a majoritarian political orientation. Rather, the question is how mythology functions within the film's broader narrative of power, authority, and futurity. The development of Indian sci-fi cinema reflects many of these broader tendencies. Over the past two decades, Indian filmmakers have increasingly explored questions of artificial intelligence, virtuality, biotechnology, posthumanity, and technologically transformed bodies. Films such as *Enthiran* (*Robot*, 2010), *Ra.One* (2011), and *Krrish* franchise (2013) demonstrate a growing engagement with speculative futures and emerging technologies (Banerjee, 2014). These films frequently imagine posthuman figures through robots, clones, genetic modification, and artificial intelligence, reflecting wider social anxieties concerning technological transformation and the changing boundaries of the human.

Enthiran and *Ra.One* occupy a particularly important position in this context. *Enthiran* tells the story of Chitti, an android robot created by a scientist, which is initially intended for military use but eventually

develops its own emotions and desires. This evolution generates unforeseen consequences, raising questions about technological agency, scientific responsibility, and the limits of human control. Pillai has argued that the film engages with Asimov's robotic ideals while concurrently tapping into the rich mythological and narrative heritage of Tamil culture, thereby mediating the global influence of science fiction as a genre (Pillai, 2015). *Ra.One* tells the story of a video game designer, who creates a game with a powerful antagonist, Ra.One (a homophone of *Ravan*, the demon king from the Hindu epic *Ramayana*), that becomes self-aware and breaks free into the real world. The film explores themes of technology, identity, and the blurring of lines between the digital and real worlds. While these films engage with Hindu mythology through suggestion and gradual revelation, another sci-fi *Brahmāstra* (2022) takes a far more direct approach. Instead of embedding its sacred archetypes within the texture of a dystopian world, *Brahmāstra* combines advanced digital technologies with narratives grounded in epic history, mythological archetypes, and sacred cosmologies directly. The film follows a young DJ who discovers his connection to a secret society of warriors, the *Brahmansh*, tasked with protecting the world from powerful celestial weapons called *astras*. As he navigates his newfound abilities, he confronts the villainous forces seeking to harness the destructive power of the *Brahmāstra*. Contemporary Indian sci-fi and fantasy cinema reveals a growing convergence between digital spectacle, technological mediation, and Hindu majoritarian imaginaries. Examining franchises such as the *Krrish* and *Baahubali*, Thapa suggests that contemporary blockbuster cinema increasingly produces technologically mediated forms of Hindu cosmology that resonate with broader cultural and political transformations in contemporary India (Thapa, 2020). Digital technologies become mechanisms through which sacred histories are visualized, remediated, and circulated on unprecedented scale. Indian filmmaker and film critic Chidananda Das Gupta once said that the nation's epics (*Mahabharata* and *Ramayana* in this case) and myths appear to offer the most universally accepted foundation for the artistic evolution of Indian cinema (quoted in Chakravarty, 1993, p. 125). Scholars such as Mishra have used this statement to launch their argument that the

narrative structure, moral universe, and character types of the two great Indian epics (*Mahabharata* and *Ramayana*) permeate virtually all of Indian popular cinema, even when films are not direct adaptations (Mishra, 2002).

Whether understood as cultural revival, religious spectacle, or ideological formation, or simple foundations of artistic evolution, these developments indicate that mythology and technological modernity are becoming increasingly intertwined within contemporary popular cinema. *Kalki* emerges precisely at the intersection of these trajectories. On one hand, it inherits the longstanding tendency within Indian science fiction to combine technological futures with mythological and cosmological frameworks. On the other hand, it draws upon the spectacular aesthetics and civilisational narratives that have become increasingly prominent within contemporary pan-Indian cinema, discussed in the subsequent sections. The significance of *Kalki* therefore does not simply lie in its fusion of mythology and science fiction, a feature that was already visible within earlier Indian speculative traditions, but in its relocation of those traditions within a recognizably cyberpunk world.

4. Constructing an Indian Cyberpunk

Having established both the political foundations of cyberpunk and the historical development of Indian science fiction, it is now possible to further examine *Kalki* as a cyberpunk text. While the film has frequently been discussed through the frameworks of mythology, spectacle, and science fiction, less attention has been paid to the extent to which its world-building draws upon the spatial, technological, and political conventions of cyberpunk. The narrative and aesthetic features position *Kalki* firmly within the cyberpunk tradition even as the film ultimately reworks the genre's political assumptions.

4.1. Dystopian Urbanism and Spatial Stratification

One of the defining features of cyberpunk is its representation of deeply unequal urban environments structured through technological and economic hierarchies. Cyberpunk cities are rarely unified social

spaces. Instead, they are fragmented landscapes in which wealth, resources, and technological access are unevenly distributed across sharply differentiated populations. As hinted in the preceding sections, *Kalki* reproduces this logic through its opposition between the Complex and Kashi. The Complex functions as the film's primary site of power. A gigantic, inverted pyramid, elevated above the surrounding world and insulated from the squalors experienced by the majority of the population, the Complex possesses access to advanced technologies, resources, security systems, and mechanisms of social control. The architectural separation of the Complex from the rest of society is significant. It visualizes the concentration of wealth and technological power within an enclosed elite space while rendering exclusion a fundamental organizing principle of the social order. Entry into the Complex is tightly regulated, transforming physical access into a marker of social and political privilege. It costs one million units for a person to get entry inside the Complex. When the protagonist, Bhairava convinces his friend/romantic interest Roxie to finally let him have a chance to enter the Complex as low-level workers, they leave their assigned posts to explore the Complex. The scene shows Bhairava marveling at the luxuries he has never seen before; fresh fruits, trees, waterbodies and riches of elites revelling in carnivalesque celebrations with champagnes and music. This scene also leads to a deeper revelation about the nature of power within this space. Above even the luxurious common areas, there is a different level where the 200-year-old totalitarian god king, Supreme resides.

Needless to say, by contrast, Kashi exists as a space of scarcity, improvisation, and survival. Resources are limited, economic opportunities are precarious, and social life is organized around informal exchanges and local networks rather than institutional protections. The spatial relationship between Kashi and the Complex mirrors a recurring cyberpunk motif: the coexistence of technological abundance and social deprivation within the same political order. The future imagined by the film is therefore not one of universal technological progress but of intensified inequality, where technological advancement benefits a small elite while the majority struggle to survive. However, Bhairava's position within this environment is particularly important.

Unlike the mythological figures who later come to dominate the narrative, Bhairava initially occupies a recognizably cyberpunk position. He is neither a ruler nor a revolutionary. Instead, he survives as a bounty hunter operating within the informal economy of Kashi.



Figure 1: Complex towers over the ruins of Kashi, its presence a constant reminder of the distance between survival and power.

Within the opening sequences of the film, Bhairava is introduced as he hunts a target for a bounty. He navigates the crowded, decaying streets of Kashi with practiced ease. The sequence shows him using a combination of street smarts, improvised weapons, and sheer physical aggression to corner his target. He drags the captured individual to collect his reward. He is not a hero. Bhairava closely resembles the mercenary antiheroes that populate many cyberpunk narratives, the figures who navigate systems of domination without possessing the power to fundamentally transform them. The scene explicitly establishes his singular goal: to earn "one million units", the entry fee to the Complex. His ambitions are individual rather than collective, and his survival depends upon tactical adaptation rather than ideological commitment.

4.2. Technology, Biopolitics, and the Management of Life

If control over space constitutes one dimension of power in *Kalki*, control over the body constitutes another. Cyberpunk has long been concerned with the ways technological systems reshape human embodiment, regulate biological existence, and transform life into an

object of management. In *Kalki*, these concerns are most clearly expressed through the SUM-80 program and the film's broader treatment of reproduction. When we first meet Deepika Padukone's character, she is not a person but a specimen designated SUM-80 (a homophone for *Sumati*, the mother of Kalki according to the ancient Hindu text of *Kalki Purana*). She lives a mundane, controlled life inside a sterile lab, called 'Project K laboratory', within the Complex. This scene establishes that fertile women are brought from the dying Earth to this facility. The purpose of their existence is purely biological. They are impregnated through artificial procedures not to create life, but to produce a life-extending serum for the dying Supreme Yaskin. The serum is extracted directly from the womb of these pregnant women, and the process is fatal for most, as none of the women can carry the artificially inseminated fetus for more than ninety days.

The centrality of subject SUM-80 or Sumati's body to the narrative reveals the extent to which biological life has become subject to technological administration. Reproduction is no longer a private or familial matter, but a process incorporated into larger systems of power. Bodies become sites of extraction, surveillance, and regulation. The value of life is determined not through human dignity but through its relationship to technological and political objectives. This biopolitical dimension distinguishes *Kalki* from forms of science fiction primarily concerned with technological innovation or scientific discovery. The film's central conflict revolves around the management of life itself. Advanced technologies are not presented as emancipatory tools but as mechanisms through which biological existence is monitored, controlled, and instrumentalized. Such concerns align closely with cyberpunk's longstanding interest in the intersection of technology, power, and embodiment.

4.3. Corporate Sovereignty and Post-State Power

Equally significant is the film's representation of political authority. Although *Kalki* is set within a future India, the nation-state is largely absent as a meaningful political institution. Governance is concentrated instead within the authority exercised by Supreme Yaskin and the Complex. Having confronted the horrors of Project K's

laboratories, the film shifts its gaze upward, both literally and hierarchically, as the camera ascends to the uppermost tier of the Complex, into a space whose architecture and atmosphere conspire to embody absolute authority. It is here that the film introduces Supreme Yaskin (Kamal Haasan), a two-century-old autocrat who has consolidated political, technological, and quasi-divine power into a single, terrifying personhood. He is a ruler who does not merely govern this world but has shaped it in the image of his own will. The scene is visually arresting in its implication. Yaskin is not seated on a throne in any conventional sense, but is instead connected to an elaborate life-support apparatus — tubes, monitors, and technological infrastructure sustaining a body that has long since exceeded its natural limits. The image collapses the boundary between ruler and regime, between organism and architecture. He does not merely occupy the Complex; he is, in a profound sense, continuous with it, his biological survival indistinguishable from the machinery of domination he has constructed around himself. Power here is not performed through gesture or symbol but made literal, it is wired directly into the body, and through the body, into the entire edifice of control. This displacement of state power by a technologically sophisticated elite, and in this case a metabiological individual who merges their physical form with the apparatus of control, is one of the most recognizable features of cyberpunk worlds. There is a form of corporate sovereignty in Cyberpunk, where authority is exercised through control over resources, infrastructure, information, and technological systems rather than through democratic legitimacy. The Complex or perhaps Supreme Yaskin, embodies precisely such a structure. He speaks not as an elected official or a hereditary monarch, but as the sole arbiter of resource distribution. He casually mentions controlling water, fresh air, and energy allocation to the millions below. His decrees are enforced not by laws but by an army of technologically enhanced soldiers and surveillance systems. Yaskin's authority extends beyond conventional political leadership; he functions as a sovereign figure whose power derives from technological control and biopolitical management. The future depicted in *Kalki* is therefore not merely authoritarian. It is post-state, organized around a highly centralized system in which technological power replaces traditional political institutions.

There is a pointed, if perhaps unintentional, ideological irony embedded in this vision. The film, which in several registers participates in the cultural vocabulary of *Hindutva*, depicting a future world ordered around Hindu cosmological authority and messianic Hindu archetypes, simultaneously projects that ideology beyond the very state apparatus that currently sustains and legitimizes it. The Hindu nationalist project, in its present form, is deeply entangled with the institutions of the Indian state, yet *Kalki* imagines a future in which those institutions have dissolved entirely, and what remains, triumphant and totalizing, is the ideology itself, now fused with technological and quasi-divine power. The state, in other words, is rendered disposable; the ideology is not. This bears a striking resemblance to Mark Fisher's argument about capitalism as a system so adaptive and voracious that it appropriates even the forces that seek to challenge or transcend it (Fisher, 2009). Here, *Hindutva* appears as a similarly self-perpetuating logic, one that does not merely survive the collapse of its current political host but expands to fill the vacuum, colonizing the very dystopian future it had a hand in imagining.

5. From Marginal Resistance to Mythological Destiny

Taken together, the spatial hierarchy of the Complex and Kashi, the concentration of authority within a post-state technological elite, the biopolitical regulation of bodies, and the pervasive conditions of ecological collapse place *Kalki* firmly within the cyberpunk tradition. Yet the film also introduces a tension that becomes increasingly significant as the narrative unfolds. At the beginning of the film, Bhairava appears to embody a recognizably cyberpunk form of subjectivity. He occupies the social margins of Kashi, survives through bounty hunting and informal economic activity, and possesses no meaningful political authority. His central ambition is not the transformation of society but entry into the Complex, the privileged technological enclave that monopolizes resources and power. In this respect, he resembles the antiheroes who populate many cyberpunk narratives: opportunistic, morally ambiguous figures navigating systems they neither control nor fully understand. Importantly, Bhairava's position establishes the

possibility of a cyberpunk politics within the film. His location outside structures of authority allows the narrative to be viewed from below. He experiences the inequalities of the system directly, moving through spaces characterized by scarcity, precarious labour, and exclusion. Moreover, his dependence on technological tools, mobility, and tactical improvisation aligns him with the tradition of cyberpunk protagonists who survive through adaptation rather than inherited authority. At this stage of the narrative, resistance appears capable of emerging from the margins. But as the narrative progresses, these possibilities collapse.

Throughout the film, the immortal *Ashwatthama* (Amitabh Bachchan) has been protecting SUM-80 and her unborn child, guided by a divine purpose he refuses to fully explain. Bhairava, meanwhile, has been pursuing her for the bounty. In a fierce confrontation set amid the wastelands outside Kashi, *Ashwatthama* overpowers Bhairava in their first encounter, wresting SUM-80 from his grasp and delivering her to safety to Shambhala, the rebel sanctuary. Stung by this defeat, Bhairava negotiates a pact with Yaskin's military command, trading his services for sanctioned entry into the Complex. He returns, this time with purpose and preparation, seeking both Sumati and a reckoning with *Ashwatthama*. The ensuing battle is violent and protracted, but it is Yaskin's forces that ultimately determine its outcome. They track and converge on Shambhala, triggering a wider confrontation between its defenders and Yaskin's army. The battle at Shambhala escalates into a mythological revelation simultaneously. It is within this crucible of violence that the film's deeper mythological architecture begins to surface. *Ashwatthama's* staff falls into Bhairava's hands, and the contact triggers a flashback, a cosmological disclosure. The film cuts rapidly to the world of the *Mahabharata*, to the figure of *Karna*. He was son of *Surya* the sun god, raised in obscurity by a charioteer, denied his birthright by the hierarchies of caste and birth, yet endowed with divine armor and earrings (the *Kavach* and *Kundal*) that mark him as something the world has refused to recognize. The editing sutures Bhairava's face to *Karna's* with deliberate insistence, inviting the audience to read one life as the unfinished echo of the other. The divine intimations that have accumulated quietly across the film's

narrative, the visions, the inexplicable survivals, the gravitational pull toward a destiny Bhairava himself cannot fully articulate, converge in the climax into an unambiguous disclosure. He is not merely a mercenary shaped by circumstance but an incarnation of *Karna*, the *Mahabharata's* most tragic and luminous warrior, returned to a broken world that, like the one that first produced him, has denied him his rightful place until the moment it can no longer afford to.

Bhairava's role within the film ultimately differs from that of the classical cyberpunk antihero. Characters such as Case in *Neuromancer* or the various hackers, smugglers, and outcasts that populate cyberpunk fiction derive their significance from their ability to navigate and disrupt technological systems. Their authority emerges through action. They become important because of what they do rather than who they are. Bhairava initially appears to follow a similar trajectory. However, as the narrative progresses, his significance becomes increasingly detached from his social position and increasingly connected to a mythological framework of destiny. In contrast to cyberpunk, mythological narratives frequently organize agency around prophecy, destiny, sacred lineage, and cosmological purpose. Authority emerges not through resistance to history but through one's place within it. *Kalki* increasingly shifts from the former logic to the latter. As the narrative unfolds, questions of social struggle and technological domination become intertwined with questions of prophecy and sacred destiny. The central conflicts of the film are no longer resolved through strategic interventions by marginal actors but through the gradual revelation of mythological significance. Political agency becomes inseparable from cosmological design. This shift is particularly significant because it alters the relationship between power and resistance.

Unlike Bhairava, *Ashwatthama* is not a marginal subject produced by the dystopian future. He enters the narrative carrying authority from a mythological past. His legitimacy derives neither from technological expertise nor from political struggle but from his status within the *Mahabharata* and his connection to sacred history. The cyberpunk future of *Kalki* is therefore interrupted by a figure whose authority originates in a radically different temporal order. Folding Bhairava into it fundamentally alters the film's political horizon. Rather than

imagining resistance as an emergent response to technological domination, the narrative increasingly frames redemption as the fulfilment of an already existing cosmic order. The future becomes meaningful because it remains connected to epic time. Ancient mythological history is not displaced by technological modernity but persists within it, guiding its trajectory and determining its outcome. The dystopian future does not represent a rupture with sacred history but its continuation. In this sense, technological modernity is subordinated to mythological temporality rather than replacing it.

The film's transformation of cyberpunk politics becomes even more apparent in its treatment of SUM-80 and the unborn Kalki. The future is not redeemed through collective political action, technological subversion, or social transformation. Instead, redemption is invested in the birth of a divinely ordained figure whose arrival has been foretold long before the events of the film. The narrative's central question is therefore not how oppressive systems might be dismantled but how the conditions necessary for the arrival of the prophesied savior can be secured. This logic significantly reorients the political imagination of the film. The future is not something to be collectively constructed; it is something to be awaited. Political transformation emerges through fulfilment rather than struggle. The agency of ordinary subjects becomes secondary to the unfolding of a sacred narrative whose outcome has already been cosmologically guaranteed.

6. Civilizational Futurity and Mythological Sovereignty

The preceding section argues that *Kalki* departs from the political logic traditionally associated with cyberpunk by relocating agency away from marginal actors and toward mythological figures whose authority derives from sacred lineage and epic continuity. Yet this displacement raises a further question. If cyberpunk's politics of resistance are no longer central to the film, what kind of future does *Kalki* ultimately imagine? I argue that the answer lies in what may be described as *civilizational futurity*: a vision of the future grounded not in political transformation or technological emancipation but in the restoration of a sacred civilizational order.

Cyberpunk has historically been concerned with the politics of futurity. From *Neuromancer* to *The Matrix*, cyberpunk worlds are structured around struggles over technology, information, capital, and power. Although these futures are frequently dystopian, they remain fundamentally open. Their narratives are driven by the possibility that existing systems may be challenged, disrupted, or reconfigured by actors operating at the margins of society. The future emerges through conflict and remains contingent upon its outcomes. *Kalki* imagines a different relationship to the future. The central question posed by the film is not how authoritarian technological systems might be transformed but how an already existing sacred order might be restored. The narrative is less concerned with inventing political futures than with fulfilling mythological destinies. Rather than presenting the future as an uncertain horizon produced through social struggle, the film frames it as the culmination of a cosmological narrative that precedes the dystopian present. The future is not discovered, it is anticipated. It is not created, it is remembered.

This temporal orientation is inseparable from the film's use of mythology. Yet mythology itself is not politically fixed. As scholarship on contemporary Indian cinema shows, cultural traditions and mythological narratives can be mobilized in multiple and often contradictory ways. Recent queer interventions in Hindi cinema, for instance, have reworked familial, ritual, and cultural institutions to produce alternative social imaginaries that challenge patriarchal and nationalist orthodoxies (Sharma, 2026b). Rather than rejecting tradition altogether, these films disrupt it from within by queering marriage, kinship, ritual, and family structures. The political significance of mythology and tradition therefore lies not in their presence but in their deployment. In *Kalki*, mythology is mobilized less as a site of contestation than as a source of continuity, legitimacy, and restoration. Its mythological references do not destabilize existing structures of authority; they legitimize them.

Figures like *Ashwatthama* and *Sumati*, make this distinction visible. As established earlier, *Ashwatthama's* authority derives not from resistance or institutional power but from his embeddedness in sacred history itself. He is a figure carried forward from the *Mahabharata*

whose legitimacy precedes and remains independent of the dystopian world he now inhabits. Redemption, in this framework, is not a political or collective achievement but the reactivation of a mythological continuity that was never truly interrupted. The anticipated arrival of Kalki intensifies this logic. Within Hindu eschatological traditions, Kalki is not a revolutionary figure in the modern political sense. He does not establish legitimacy through democratic participation, popular mobilization, or social transformation. Rather, Kalki's authority is derived from divine sanction and cosmic necessity. The future imagined by the film therefore revolves around the return of a figure whose legitimacy is already guaranteed by sacred history. Political authority becomes inseparable from mythological destiny.

What emerges from such a framework is a form of *mythological sovereignty*. Sovereignty in *Kalki* is not grounded in institutions, constitutions, or collective political practices. Nor does it emerge through the forms of insurgent resistance that characterize classical cyberpunk. Instead, legitimate authority is represented as something embedded within the structure of sacred history, awaiting restoration at the appropriate historical moment. The dystopian future serves primarily as the stage upon which this restoration can occur. This orientation toward restoration rather than transformation is central to the concept of civilisational futurity. By *civilisational futurity*, I refer to the imagination of the future through narratives of historical and sacred continuity in which legitimacy derives from the renewal of an enduring civilisation rather than the creation of new political forms. Such futures are organized around prophetic return, recovery, fulfilment, and religious restoration. While they may incorporate advanced technologies and speculative settings, these elements remain subordinate to a broader narrative of civilisational persistence.

This logic of civilisational futurity is inscribed not only in the film's narrative architecture but in its visual and aesthetic grammar. In the climactic battle, when Yaskin's commander arrives at Shambhala aboard a vast, otherworldly flying vessel, the scene resonates with an iconographic register far older than the dystopian world it inhabits. The craft recalls nothing so much as the *Pushpaka Vimana* of Hindu epic tradition, the celestial vehicle of divine and demonic ambition

alike, which carried *Ravana's* stolen sovereignty through the skies and later bore *Rama, Sita*, and *Lakshmana* home from exile in triumphant restoration. The visual grammar of the scene thus quietly exceeds its narrative function. It is not merely a military vehicle, but an image saturated with mythological memory, belonging to a cosmological order of power that scientific rationality cannot account for and cannot counter.

More telling still is the moment of awakening of the *Gandiva* the sacred bow of *Arjuna* from the *Mahabharata*. It simply charges itself one day, unbidden, part of a cascade of events that had already been foretold through astrological *nakshatra* readings by the traveller from Shambhala. Sumati's miraculous escape from the Complex, the refugee child's inadvertent awakening of *Ashwatthama*, and the awakening of *Gandiva* each unfolding with the quiet precision of prophecy fulfilling itself, indifferent to the surveillance systems and scientific instruments that surround it and cannot see it coming. When those present attempt to approach the sacred bow *Gandiva*, they cannot. A robotic mechanical arm reaches out, but melts on contact. When the general demands a rational explanation, insisting there must be a science behind it, Counsellor Bani's response is quietly devastating: "this is a science beyond our science." The line crystallizes the film's central ideological gesture, not the rejection of science, but its humbling, its relegation to a lower order of knowing beneath a cosmological authority it was never equipped to measure. Science, in this world, has achieved domination, but the film suggests it has done so within a ceiling it cannot see, beneath a cosmological order it was never equipped to measure.

Such a narrative and aesthetic positioning carries a significant ideological charge, particularly when read against the broader cultural politics of contemporary India. The Hindutva project has long staked a claim not merely to cultural pride but to scientific precedence, with prominent political figures and affiliated intellectuals routinely recoding mythological narratives as evidence of ancient technological supremacy. India's Prime Minister and the leader of the Hindutva's authoritarian populism has gone on record as having noted *Ravana's Pushpaka Vimana* as an early aircraft claiming Lord Rama flew the first airplane ("Astrology is above science," 2019) and addressed a

gathering of doctors and medical staff at a Mumbai hospital claiming that the surgical crafting of Hindu God Ganesha's elephant head was the first instance of plastic surgery (Perera, 2017). Following footsteps of the senior BJP leader, former vice-president has officiated the claim of Mahabharata's celestial weapons as prefigurations of nuclear warfare ("Arjun's arrows had nuclear power," 2020). Meera Nanda, in her monograph, has discussed the relationship between science and the political atmosphere, particularly focusing on the dissemination of Hindu ideology. Nanda critiques the glorification of traditional myths and legends as science, raising concerns about the legitimization of unscientific narratives in public discourse. She explores the historical context of science in India, addressing how narratives of past achievements are often used to revive questions about cultural identity and practices (Nanda, 2016).

What *Kalki* performs, perhaps unconsciously, is a cinematic elaboration of precisely this logic, but with a significant inversion. Rather than subordinating myth to science by claiming that the ancients were already scientific, the film subordinates science to myth by staging a future in which science has reached its authoritarian apex and is still surpassed, rendered inadequate, by the reemergence of sacred and cosmological forces. Hindu civilisation, in this imaginary, was never behind modernity, it was simply operating on a register modernity lacks the instruments to perceive. In this sense, *Kalki* offers more than a fusion of cyberpunk aesthetics and Hindu mythology. It reconfigures the very meaning of futurity. The dystopian future is not ultimately a space of uncertainty, experimentation, or political contestation. It is a transitional moment within a larger civilisational narrative whose outcome has already been inscribed within sacred majoritarian history. The film therefore transforms cyberpunk's open and contested futures into a vision of civilisational futurity structured by mythological sovereignty and the promise of restoration.

7. Pan-Indian Spectacle and the Civilisational Future

The political significance of *Kalki* becomes even clearer when situated within the broader emergence of the pan-Indian blockbuster. Over

the last decade, Indian cinema has witnessed the rise of large-scale productions designed to circulate across linguistic, regional, and national boundaries. Films such as *Baahubali* franchise, *RRR*, *Adipurush* (2023) and *Kalki* have transformed the industrial landscape of Indian cinema by creating narratives capable of appealing simultaneously to regional audiences, national markets, and global diasporic publics. The *Baahubali* franchise was originally made in Telugu and Tamil, and dubbed into Hindi and Malayalam. Usually, the pan-Indian films follow this pattern. It has been argued that the pan-Indian films are primarily dubbed south Indian films (Mukherjee, 2025).

While these films differ significantly in genre, setting, and narrative structure, they share a common investment in spectacle, scale, and civilizational imagination. Pan-Indian cinema emerges when Bollywood's box-office power declines and audiences become disenchanted with that industry, positioning this new formation as a replacement "national popular" cinema (Mukherjee, 2025). The pan-Indian blockbuster is frequently understood as an industrial phenomenon driven by technological innovation, digital distribution, and changing audience demographics. Yet it is also an ideological formation. These films do not merely tell stories on a larger scale; they imagine political communities on a larger scale. Regional identities remain important, but they are increasingly subsumed within broader narratives of civilizational belonging. The imagined community that emerges in these films often exceeds the modern nation-state, drawing instead upon mythological histories, sacred geographies, epic traditions, and long civilizational temporalities.

This tendency is particularly visible in *Baahubali*. Although the film presents a fictional kingdom rather than a historically identifiable polity, its narrative is structured around themes of dynastic legitimacy, sacred kingship, righteous sovereignty, and civilisational continuity. Political authority derives less from institutions than from morally and culturally sanctioned forms of rule embodied by exceptional figures. While *Baahubali* does not directly evoke the epics or model itself on *Mahabharata* and *Ramayana*, it weaves mythic time, epic history, pan-Indian nation time, and global blockbuster time into a single

cinematic project. Both *RRR* and *Adipurush* draw from the *Ramayana*, but in very different ways. While *Adipurush* explicitly claims to stay faithful to Valmiki's *Ramayana*, presenting itself as a mythological retelling *RRR* transforms anti-colonial resistance into a spectacular narrative of heroic sacrifice and civilisational resilience with visual elements and symbolisms borrowed from *Ramayana*. While these films engage questions of power and political struggle, they do so through narratives that exceed the framework of the modern nation-state. Their protagonists function not merely as political actors but as embodiments of larger cultural and civilisational ideals.

7.1. Civilisational Futurity in *Kalki*

Kalki extends this logic into the future. Whereas *Baahubali* and *Adipurush* are oriented toward an imagined civilisational past and *RRR* toward a mythologised anti-colonial history, *Kalki* projects civilisational imagination forward into speculative time. The film's significance therefore lies not simply in its use of mythology but in its relocation of civilisational discourse within a futuristic setting. The result is a future that remains anchored to sacred history even as it adopts the visual language of science fiction and cyberpunk. This move is particularly significant because it transforms the temporal orientation of the pan-Indian blockbuster. *Kalki* retains the sacred history but reconfigures it as a narrative of futurity. The future is imagined not as a departure from civilizational traditions but as their fulfilment. Technological development, urban transformation, and social collapse do not produce fundamentally new political possibilities. Instead, they create the conditions under which an already existing civilizational order can be restored. As with *Baahubali* and *RRR*, *Kalki* relocates political legitimacy away from state institutions and into narratives of sacred history and civilisational destiny, while uniquely extending this logic into the speculative future, subordinating technological modernity itself to mythological continuity. *Kalki's* cyberpunk setting is therefore far from politically neutral. Its dystopian future is not a transformed or democratic order but a restored sacred one, demonstrating how the language of global science fiction can be quietly conscripted into the service of civilisational imagination.

Kalki is significant not simply as a landmark of Indian science fiction or a demonstration of the industry's growing blockbuster ambitions, but as a revealing cultural document of its moment. By rearticulating cyberpunk's dystopian architecture through the logic of sacred restoration, the film transforms the genre's traditional politics of insurgent resistance into a vision of mythological sovereignty and civilizational futurity. A future that is technologically saturated yet cosmologically ordered, dystopian in its surface and restorative in its deepest impulse. Situated alongside broader trends of Indian cinema and pan-Indian films such as *Baahubali* and *RRR*, it confirms a broader tendency to imagine political legitimacy not through democratic transformation but through the renewal of civilizational continuity, while extending that tendency, uniquely, into speculative time. What *Kalki* ultimately reveals is that the future, in this imaginary, is not something to be built. It is something to be remembered.

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Half Earth or: neoliberalist realism

David Bröderbauers *Die halbe Welt* im Wechselspiel zwischen Cyberpunk und Solarpunk

Benedikt Pübbretmayr¹

„Man kann Science Fiction erstens als Kunst *genießen*, und man kann mit ihr zweitens Dinge und Verhältnisse *denken*, die ohne sie ungedacht bleiben müssten.“ (Dath, 2020, S. 20)

Seit jeher arbeitet sich die Science-Fiction an der Gegenwart ab, indem sie gesellschaftliche, technologische und ökonomische Entwicklungen und die damit einhergehenden Hoffnungen, Wünsche und Ängste ihrer jeweiligen Zeit kritisch reflektiert und in die Zukunft extrapoliert. So erkennt Matthew Beaumont beispielsweise die frühe Science-Fiction Literatur als ein Produkt eines aufkommenden Klassenbewusstseins und einer sich vergrößernden sozialistisch-kommunistischen Bewegung einerseits und dem Eindruck eines kapitalistischen Wirtschafts- und Gesellschaftssystems andererseits (Beaumont, 2011). Sie stellt somit, ausgehend von Jules Verne, Mary Shelley oder H. G. Wells eine Antwort oder den Versuch einer Antwortfindung dar, ein sich rapiden verändernden gesellschaftspolitischen Gefüges und ihre neuen technologischen Errungenschaften im Fin de Siècle zu verarbeiten.

Unter dem Eindruck zweier Weltkriege und wiedereinsetzender wirtschaftlicher Prosperität treten neue Umstände auf den Plan, die fortan bestimmt werden von Globalisierung und Konzernstrukturen und die das Genre vor neue Herausforderungen stellen: „Capitalism had taken over from feudalism; the aristocracy and royalty of Europe dwindled in influence, to be replaced by a class of businessmen – part of an emerging middle-class – and the workers who staffed the factories“ (Butler, 2000, S. 8). „Science Fiction als Kind der Moderne“

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(Hermann, 2023, S. 14), als eine Auseinandersetzung mit den Gegebenheiten, ihren Missständen und je eigenen Angstszenarien, lange geprägt von grundsätzlichem Fortschrittsgedanken. Dieser mitunter positive Zukunftsglaube, wandelt sich jedoch im Laufe der zweiten Hälfte des 20. Jahrhunderts: von Golden Age zu New Wave, von Technooptimismus zu „consensus apocalypse: where the old consensus future seemed to promise unlimited possibilities for humankind, the future now appears to us to be a site of ever-worsening catastrophe and collapse“ (Canavan, 2022, S. 180).

Mit Aufkommen des Cyberpunk als „Speerspitze des Computerzeitalters“ (Mayer & Schneck, 1996, S. 163), tritt das Science-Fiction Genre folglich in eine neue Phase ein, gleichermaßen mit sich etablierenden neoliberalen Marktmechanismen und dem Niedergang der ehemals florierenden Industriegesellschaften beziehungsweise, so Dietmar Dath, einhergehend mit dem „Todeskampf fordistischen und tayloristischen Produzierens“ (Dath, 2020, S. 58).

Im Folgenden soll, rekurrierend auf Fredric Jameson Cyberpunk als Produkt des Spätkapitalismus und seiner Zeit verstanden werden:

I want to suggest, that our faulty representations of some immense communicational and computer network are themselves but a distorted figuration of even something deeper, namely, the whole world system of a present-day multinational capitalism. (...) cyberpunk, which is fully as much expression of transnational corporate realities as it is of global paranoia itself. (Jameson, 1991, 97f.)

Cyberpunk soll also am Übergang hin zum Neoliberalismus verortet werden, als Resultat einer Zeit der sozialen Transformation oder als Reaktion auf die damit einhergehenden Ängste und Veränderungen im Post-Industrialismus – gleichermaßen im Ökonomischen, Ökologischen, Technologischen, Geopolitischen und Gesellschaftspolitischen: Technologischer Fortschritt bei gleichzeitigem Abbau sozialer Absicherungssysteme als Unsicherheitsfaktor in der globalisierten Gesellschaft (Csicsery-Ronay, 2005, S. 54).

Solarpunk wiederum, als relativ junges Sub-Genre, kann als utopischer Gegenpol zur dystopischen Cyberpunk-Ästhetik angesehen werden, indem es Gesellschaftsentwürfe portraitiert, die unter

anderem auf „anarchism, ecology, and justice“ (Gillam, 2023, S. 1) setzen. Statt sich in dystopischer Gesellschaftskritik zu üben, entwirft es aktiv Zukunftsmodelle, die sich im Utopischen versuchen und die just zu einer Zeit entstehen, in der die drohende Klimakatastrophe verstärkt in den Fokus gerückt ist.

Science-Fiction ist also seit jeher als Auseinandersetzung mit der Gegenwart und ihren technologischen und gesellschaftspolitischen Entwicklungen zu verstehen, auf die sie offen oder subtil, bewusst oder unbewusst in ihren Zukunftsszenarien rekurriert, sie verarbeitet oder reflektiert. Im Fokus soll nun David Bröderbauers Climate Fiction Roman *Die Halbe Welt* (2023) stehen, der zwischen den beiden Sub-Genres Cyberpunk und Solarpunk – zwischen Dystopie und Utopie – changiert. Der Roman stellt eine Hybridform dar, in dem die Klimakatastrophe beziehungsweise ihre gravierendsten Ausprägungen des Artensterbens vorerst abgewendet, das kapitalistische Wirtschaftssystem samt seinen Klassenunterschieden und Problemfeldern jedoch mitnichten überwunden werden konnten. Mit den ökologischen Errungenschaften in einem Teil der Erde, gehen totalitäre Auswüchse im zweiten Teil einher, die in einer Entfremdung seiner Bevölkerung von der Natur und einem Abbau zwischenmenschlicher Nähe münden.

1. Halh Earth und *Die Halbe Welt*

Die Welt in David Bröderbauer Roman wurde nach einer Idee des Evolutionsbiologen Edward O. Wilsons geteilt, um eine Hälfte von ihr der Wildnis zu überlassen und so dem Einfluss der Menschheit zu entziehen und Klimakatastrophe und Artensterben abzuwenden. Im anderen Teil, der sogenannten „zivilisierten Welt“ werden Kapitalismus, Raubbau an der Natur und Ausbeutung jedoch desto exzessiver weitergeführt. Der Kapitalismus, so die These, wurde in *Die Halbe Welt* notgedrungen an die sich verändernden Umstände angepasst und kompatibel gemacht, hat sein Über- und Fortleben unter einem neuen Deckmantel gesichert.

„Dass es so weiter geht, ist die Katastrophe“ schreibt Walter Benjamin 1937 (Benjamin, 1937, S. 683), der damit ein zentrales Element der aktuellen Klimaschutzbewegung prophetisch vorwegnimmt: Nicht ein zukünftiges fatales Ereignis führt zu einer katastrophalen Zukunft, vielmehr ist die Katastrophe der Gegenwart inhärent, liegt ihr bereits zugrunde. Eine Fortsetzung der Verhältnisse, eine „Eskalation des Gegenwärtigen“ (Horn, 2014, S. 20), das schlussendlich zur Katastrophe führt und in *Die Halbe Welt* exemplifiziert wird. Der Roman greift diese Adaption gegenwärtiger Zustände, die sich verfestigt und endemisch geworden sind und auf die Spitze getrieben werden, ab anstatt einer kohärenten und nachhaltigen Alternative zu entwickeln. Im Verlauf der Handlung werden diese zugrundeliegenden dystopisch-kapitalistischen Strukturen offengelegt.

In *capitalist realism* beschreibt Mark Fisher die Entwicklung im Spätkapitalismus, sich als einzig denkbare Gesellschaftssystem zu präsentieren, wodurch jegliche Form der Vorstellung einer andersgearteten Zukunft verloren gegangen sei:

The widespread sense that not only is capitalism the only viable political and economic system, but also that it is now impossible even to *imagine* a coherent alternative to it. Once dystopian films and novels were exercises in such acts of imagination – the disasters they depicted acting as narrative pretext for the emergence of different ways of living (Fisher, 2014, S. 2).

Zukunft ohne Kapitalismus, Zukunft ohne Klassenverhältnisse scheint nicht mehr vorstellbar, nicht mehr denkbar. Im Folgenden sollen einige dieser Muster in *Die Halbe Welt* an der Schnittstelle zwischen den beiden Sub-Genres Cyberpunk und Solarpunk freigelegt und der Roman in seinem Rekurrenzen auf die Gegenwart des Spätkapitalismus zwischen ihnen verortet werden.

„Ich bin überzeugt, dass wir nur dann den lebendigen Anteil unserer Umwelt retten und die für unser eigenes Überleben nötige Stabilität herstellen können, wenn wir den halben Planeten zum Naturschutzgebiet erklären.“ schreibt Edward O. Wilson in *Die Hälfte der Erde. Ein Planet kämpft um sein Leben* (Wilson, 2016, S. 11) Laut der E. O. Wilson Biodiversity Foundation „an achievable plan to save our imperiled biosphere“ (E. O. Wilson Biodiversity Foundation, 2026). Wilsons

Konzept nimmt die gesamte globale Biodiversität in den Fokus und sieht einen radikalen und, angesichts geopolitischer Zusammenhänge, ambitionierten Eingriff vor: Die Hälfte aller weltweiten Ökosysteme (inklusive der Ozeane) solle unter Schutz gestellt und der menschlichen Einflussnahme zur Gänze entzogen werden. Angesichts des seit Jahrzehnten anhaltenden massiven Artensterbens großer und kleiner Säugetiere, Insekten, Pflanzen bis hin zu den kleinsten Mikroorganismen sei dies die einzig zielführende Maßnahme zu ihrer Bekämpfung. Anthropozentrischen Maßnahmen, wie die Ansiedelung fremder Spezies in neuen Gebieten, also Maßnahmen, die menschliche Eingriffe in bestehende Ökosysteme zu deren Schutz (oder Transformation) vorsehen, erteilt Wilson eine Absage zugunsten einer in sich geschlossenen, zusammenhängenden und sich selbst überlassenen Wildnis. Wie diese Teilung zustande kommen und wo sie verlaufen soll und welche gesellschaftspolitischen Folgen damit einhergehen würden, wird nicht ausgearbeitet (Wilson, 2016).

David Bröderbauers Roman *Die Halbe Welt* (2023) transferiert das von Wilson entwickelte Konzept und macht es zum Ausgangselement der Handlung innerhalb einer nicht verorteten nahen Zukunft, in der das Halth-Earth-Project bereits Realität geworden ist und sich die Menschen aus einem abgegrenzten Teil der Welt zurückgezogen haben (oder aus ihr umgesiedelt und vertrieben wurden) – Wie auch bei Wilson bleibt weitestgehend unbeantwortet, wo diese Grenzen schlussendlich verlaufen. Nur wenige vage Andeutungen finden sich über die Grenzziehung, wenn etwa von den sogenannten „Migros“ die Rede ist: „Einwanderer erster und zweiter Generation aus Paläotropis-Süd (...). Sie waren aus den armen Ländern gekommen, die die größte Artenvielfalt beherbergten (...). Sie hatten dieselben Routen wie die Zugvögel gewählt (...).“ (Bröderbauer, 2023, S. 21). Im Fokus des Romans steht der Protagonist Lilian Wagner, Sachbearbeiter jener Behörde, die für die Verwaltung der sogenannten Halben Welt zuständig ist und deren Sitz innerhalb der „kultivierten Welt“ liegt. In seiner Funktion untersucht er das Verschwinden zweier Personen, eines Forschers und eines Milliardärs, in der Wildnis, deren Betreten „die Behörde“ regelt und beschränkt und nur zu Forschungszwecken und im Zuge beispielsweise von

Wiederbewaldungsprojekten gestattet. Lilian ist mit dem Erstellen eines Berichts über das Verschwinden der beiden Männer in „Neotropis-Zentral“ betraut, der, so die anfängliche Intention des Verfassers, gleichermaßen einen Abriss und eine Legitimation für die Bedeutung der Halben Welt mitliefern soll.

2. Behörde, Konzerne, Klassenpolitik

Bei der Behörde handelt es sich um eine Institution, die im Zuge der Umsetzung der weltweiten Teilung entstand, die wiederum durch die Ambitionen einer wohlhabenden Schicht von philanthropischem Milliardär*innen, vorangetrieben wurde. Die entscheidenden Schritte wurden durch einzelne Privatpersonen und Unternehmen getätigt, so etwa durch die Unternehmerfamilie der Tyskins, der auch einer der beiden Verschollenen angehört und die zu dem großen Profiteur*innen der Teilung gezählt werden kann.

Nationalstaaten existieren nach jahrzehntelangen Verhandlungen kaum mehr und haben an Einfluss verloren. An ihre Stelle ist ein „Halbe-Welt-Bund“ getreten, über dem wiederum eine von den Vereinten Nationen anerkannte Verwaltungsbehörde steht, deren Personal sich unter anderem aus ehemaligen NGO Mitarbeiter*innen wie jenen von Greenpeace und WWF rekrutiert. Diese hätten, so erfährt man, nach Jahren der wesentlichen Machtlosigkeit „in der sie zusehen mussten, wie die Welt zugrunde gerichtet wurde“ (Bröderbauer, 2023, S. 48) an Einfluss gewonnen und wurden in den neu entstandenen Machtapparat integriert. Die wesentliche Initiative für die Teilung der Welt kam jedoch nicht aus zivilgesellschaftlicher Ambition zustande oder durch die Vereinten Nationen selbst, sondern entstand durch die Bestrebungen von Pharmakonzernen der Tyskins, die sich durch den Ankauf von Regenwald und dem damit verbundenen Artenschutz das Recht sicherten, die „biologische Vielfalt zu monetarisieren“ (Bröderbauer, 2023, S. 47) und biogene Medikamente und effizientere Gemüsesorten zu entwickeln. Sie konnten auf diesem Weg Gewinnsteigerungen erzielen und an Einfluss gewinnen. Arten- und Umweltschutz sind somit in *Die Halbe Welt* nicht vorrangig das Resultat von ideologischen oder wissenschaftlichen Überzeugungen,

sondern Nebenprodukte einer kapitalistischen Marktlogik und die Folge einer Abwägung der Konzerne, die die Kosten von Umweltzerstörung dem Potential der Monetarisierung gegenüberstellten. Die Verwaltungsbehörde sichert diesen Zustand ab. Der Roman folgt hier einer Tendenz im Neoliberalismus, die den Staat lediglich als Instrument des Marktes betrachtet und in dem dieser nicht mehr länger als dessen Regulativ oder Korrektiv fungiert (Wöhl, 2011). Staatliche und privatwirtschaftliche Strukturen sind, so wird im Roman angedeutet, im Sinne einer Korporatokratie ineinander übergegangen. Über den Bund selbst und seine Zusammensetzung oder demokratische Legitimation erfolgen keine genaueren Angaben. Die Behörde fungiert dabei als überstaatliches Überwachungs- und Regulierungsorgan unter dem Einfluss der die zivilisierte Welt dominierenden Konzerne. Omnipräsent sind dabei die Familie Tyskin und ihr Konzern, die sämtliche Lebensbelange der Bevölkerung dominieren.

Frauen im gebärfähigen Alter wird der Zutritt zur Halben Welt, so die interne geheime Regelung, grundsätzlich verwehrt, um zu verhindern, dass sich Menschen erneut in ihr ansiedeln. Während das Verlassen der kultivierten Welt zu Forschungszwecken streng reglementiert wird, ist es einer wohlhabenden Schicht wie der Familie der Tyskins jedoch durchaus gestattet sie in regelmäßigen Abständen zu Betreten:

(...) der Antrag eines Tyskins war noch nie abgelehnt worden. Lilian war zwar nur für die Zutrittsgenehmigungen nach Neotropis-Süd und Neotropis-Zentral zuständig, er konnte aber auch die Akten der anderen Territorien einsehen. Jos Tyskins [einer der beiden Verschwundenen, Anm.] Einträge reichten bis in die Gründungszeit der Behörde zurück und erstreckten sich über alle Territorien: Wandern, Tauchen, Erkundung, Wildtierbeobachtung, Pflanzensammeln und in zunehmendes Regelmäßigkeit Wiederbewaldung. Jos Tyskin war ständig gereist. Er hatte vermutlich mehr Flugkilometer zurückgelegt als alle Mitarbeiter der Behörde zusammen. Das war der Vorteil, den man als Mäzen genoss (Bröderbauer, 2023, S. 39).

Die Halbe Welt wird der Wildnis überlassen und einem Teil der Menschheit vorenthalten – Natur wird so zu einem elitären Gut. Ein unerlaubtes Betreten oder ein längeres Fernbleiben innerhalb der Halben Welt kann gar zum Verlust der „Bürgerrechte“ führen. Manche

Lebensmittel wie Kaffee oder frische Früchte sind in der zivilisierten Welt zu begehrten und kostspieligen Raritäten geworden und für eine kleinbürgerliche Schicht kaum mehr erschwinglich. Die hochpreisigen Früchte werden dabei von den sogenannten Migros in Form einer neuen Gig Economy via Lastenrädern nach Hause geliefert. Der Kaffeeanbau wiederum ist gänzlich illegal, doch innerhalb einer privilegierten Bevölkerungsschicht sind auch die raren Konsumgüter nach wie vor erhältlich. Die Oberschicht lebt dabei in abgesonderten und gepflegten Stadtteilen:

Die Steigung nahm zu, die Häuser wurden niedriger. Es waren Wohnhäuser, hier lebten die wohlhabenden Bewohner der Stadt, die Freien, die nicht im System des Ministeriums für Beschäftigungswesen und Freiwilligkeit eingetragen waren. Lilian fiel auf, wie gepflegt die Bäume in den Alleen aussahen. Anders als in seinem Viertel lagen hier keine umgestürzten Stämme in den Straßen, schon gar keine vermodernenden (...). Die Bewohner hatten auch wenig Grund hinauszugehen, die Häuser waren geräumig und sicher auch gekühlt (Bröderbauer, 2023, S. 64f.).

Das Regierungsviertel mit den Ministerien wie dem Sozialministerium und zugehöriger „Klinik für assistiertes Sterben“ gehen räumlich über in das Viertel „mit den Hochhäusern der Großunternehmen, eines davon der Wolkenkratzer der Tyskins“ (Bröderbauer, 2023, S. 63) – staatliche und privatwirtschaftliche Strukturen werden somit auch räumlich miteinander verbunden. Regelmäßig werden die urbanen Gebiete, in denen die gesamte Bevölkerung lebt, überdies von Dürre- und Hitzeperioden heimgesucht, die, so der Roman, die Zahl der Suizide als häufigste Todesart, kurzzeitig übertreffen.

Die weniger Privilegierten, wie die einfachen Mitarbeiter*innen der Behörde, leben in separierten Stadtteilen und in zugeteilten, kleinen „Wohnboxen“ der „Wohntürme“, aus denen sie jederzeit wieder ausquartiert werden können, ihren Wohnraum also als Disziplinarmaßnahme wieder verlieren können. Sie sind einem ständigen Leistungs- und Effizienzdruck ausgesetzt, der mittels „Kopfraum“, einem Neuroimplantat, überwacht und ausgewertet wird. Werden Quoten nicht erfüllt, Aufgaben nicht effizient genug und innerhalb vorgegebener Zeiträume erfüllt, so führt dies zu Stundenreduktionen:

Gleichzeitig wurde einer der vielen Bewerber auf der Warteliste eingestellt, um einen Teil der Aufgaben zu übernehmen, und wenn er diese kompetent erledigte, verlor man weitere Stunden an den neuen Kollegen. Selbst langjährige Mitarbeiter wie Lilian waren jederzeit ersetzbar (Bröderbauer, 2023, S. 41).

Der ökonomische Druck zur Selbstoptimierung und Leistungssteigerung wird also nicht nur metaphorisch, sondern wortwörtlich in die Individuen eingepflanzt – Selbstregulierung im Sinne eines Economic Self somit in doppelter Hinsicht verinnerlicht. So treibt den Protagonisten, der über keinen Kopfraum verfügt, im ersten Kapitel auch die Angst um, Aufgaben abgeben zu müssen durch die nicht rechtzeitige Fertigstellung seines Berichts und somit eine schlechte Leistungsbilanz aufzuweisen oder schlimmstenfalls seine Arbeitsstelle zu verlieren. Jene, die über einen Kopfraum verfügen, so der Protagonist, würden ihre Freizeit überdies optimaler gestalten als er selbst und keine Langeweile mehr empfinden. Als Lilian von den Migros zur Beteiligung an einem Pétanque-Spiel im Botanischen Garten eingeladen wird, irritiert ihn dies zunächst, scheint ihm eine absurde Handlung zu sein, eine Zeitverschwendung, die er effizienter nutzen könnte. Caroline Alphin beschreibt in *Neoliberalism and Cyberpunk Science Fiction: Living on the Edge of Burnout* diese Funktionsweise neoliberaler Tendenzen im Cyberpunk Genre rekurrierend auf Foucault:

The possessive individualism that motivates the main characters in cyberpunk highlights the kind of neoliberal subjectivity that understands its integrations with technology, its movements and lack of movements through space, and its encounters with risk as a result of its choices rather than as the product of systemic racism, economic inequality, and neoliberal governmentality. (...) This economization of everyday life, in part, refers to what Foucault describes as the “economization of the entire social field”: a process that makes the social field (e.g., familial relationships, marriage, crime) intelligible only through the logic of the market (Alphin, 2021, S. 3).

Klassenhierarchien und ökonomische sowie soziale Ungleichheiten werden in *Die Halbe Welt* folglich weder beendet noch abgebaut, sondern forciert und deren negativen Effekte lediglich eingeehgt. Der proklamierte Artenschutz und das Verbot die Wildnis zu betreten, gelten für das Gros der Bevölkerung, während eine privilegierte

Schicht weiter einen nahezu uneingeschränkten Lebensstil pflegen kann. Der Roman entwickelt ein ambivalentes Gesellschaftssystem mit konträren Ausprägungen: Ein ambitionierter Artenschutz und eine starke Fokussierung auf Umweltschutz in einem Teil der Welt, Umweltzerstörung, Kapitalismus, Leistungsprinzip sowie soziale Kontrolle und Überwachung, die später näher beleuchtet werden sollen, im zweiten Teil. Der Roman bildet folglich eine Hybridform, changierend zwischen den Sub-Genres Cyberpunk und Solarpunk, indem er beiderseits Elemente aufgreift und bearbeitet, wodurch er sich einer strikten Dichotomie von Dystopie oder Utopie entzieht: Die Katastrophe ist das Benjamin'sche Dass es so weitergeht. Ein weiter wie bisher unter angepassten Vorzeichen.

3. Cyberpunk/Solarpunk-Flavoured

Wie Dietmar Dath in Bezug auf die Science-Fiction im Allgemeinen von der Problematik der Ungenauigkeit einer Genredefinition aufgrund der starken Heterogenität der mit dem Begriff assoziierten Phänomene spricht (Dath, 2020, S. 38), so auch Jiré Emine Gözen in *Cyberpunk Science Fiction: Literarische Fiktionen und Medientheorie* für das Sub-Genre. Der Neologismus Cyberpunk entzieht sich einer exakten Definition und bleibt in sich vage und ungenau. So versammelt er seit seinem erstmaligen Auftauchen eine Vielzahl an unterschiedlichen Texten mit variierenden Motiven und Topoi. Gözen bezeichnet dies auch als „Charakteristikum der Unschärfe“ (Gözen, 2012, S. 123), das bleibe. Andrew M. Butler ebenso wie Gözen und Ruth Meyer skizzieren jedoch einige prägnante und gemeinsame Elemente des Genres, die auch in *Die Halbe Welt* eine zentrale Funktion einnehmen und aufgegriffen werden.

Als ein Element des Genres kann ein breites Referieren auf den Posthumanismus angeführt werden (Butler, 2001, 14f.; Gözen, 2012, S. 125), das bei Bröderbauer durch eine Fokussierung auf Artenschutz und den nahezu vollständigen Rückzug des Menschen aus der Wildnis in einen digitalen Raum als gegeben angesehen werden kann, sowie die immer wiederkehrende Erwähnung des Vorhandenseins einer gesellschaftlich stark verankerten „Deproduktionsbewegung“, der

sich weite Teile der Bevölkerung, vor allem jüngere, angeschlossen hätten und die den vollständigen Verzicht von Fortpflanzung beinhalte, um die Menschheit so langfristig zu dezimieren. Daran anknüpfend ergibt sich ein weiteres zentrales Charakteristikum, das im digitalen Möglichkeitsraum liegt beziehungsweise, so Gözen, das Vorhandensein „eines kybernetischen Mensch-Maschine-Interfaces“ das die Menschheit „von den naturgegebenen Beschränkungen des Körpers“ befreie (Gözen, 2012, S. 125), was durch die Etablierung eines Kopfraumes und den sogenannten virtual reality „Halbe-Welt-Fenstern“, mit denen die in der zivilisierten Welt abwesende Natur erkundet werden kann, realisiert ist. Ebenso die Beschränkung des Settings auf ein „entirely urbanised environment“ (Butler, 2001, S. 15) innerhalb einer nahen Zukunft samt verlassener Industrielandschaft, der „Agrarzone“, die in ihrer Beschreibung der Landschaft von Gewächshäusern in Denis Villeneuve (2017) *Blade Runner 2049* ähnelt. Sie befindet sich innerhalb der zivilisierten Welt, jedoch außerhalb des urbanen und bewohnten Raums. In ihr wurde sämtliche Natürlichkeit gelöscht, Berge vollumfänglich abgetragen und der dadurch entstandene zermahlene Stein als neues Düngemittel für die vollautomatisierte Lebensmittelproduktion verwendet. Flüsse und Seen wurden zugeschüttet, Bäume gerodet und an ihrer statt monotone Produktionshallen angelegt, die teilweise bereits wieder stillgelegt wurden. Die Menschen sind in diesem Brachland ebenso abwesend, wie eine florierende Tier- und Pflanzenwelt, und sind in ihm auch nicht mehr vorgesehen. Die zuvor in der Agrarzone Lebenden wurden umgesiedelt in die urbanen Zentren und es sind die Roboter und Maschinen, die die Landschaft fortan bewirtschaften. Einzig die Migros bewegen sich noch im Verborgenen zwischen den ausrangierten Maschinen und stillgelegten Hallen. Der Roman folgt auch hier einer innerhalb des Cyberpunk-Genre entwickelten Faszination für technologische Möglichkeiten zur Transformation natürlicher Habitate (Csicsery-Ronay, Jr., S. 54f.).

Der ‚Punk‘-Aspekt der Cyberpunkliteratur, der zumeist an einer spezifischen Ästhetik mit Anleihen an die Punk-Subkultur und Querverweisen darauf festgemacht wird, findet sich in *Die Halbe Welt* lediglich in der von Gözen hervorgehobenen Existenz einer verlassenen

Industriellandschaft, in der sich die Protagonist*innen, zumeist Außenseiterfiguren, des Genres in der Regel bewegen. (Heuser, 2003, S. 41; Gözen, 2012, S. 130) Subkulturelle Querverweise finden sich jedoch kaum. Während sich also in David Bröderbauers Roman *Die Halbe Welt* eine Vielzahl an Anknüpfungspunkten zum Cyberpunk Genre finden, ist die Verbindung zu Solarpunk diffiziler.²

William Joseph Gillam erarbeitet drei zentrale kennzeichnende Solarpunk-Elemente: „anarchism, ecology, justice“ (Gillam, 2023):

As an anarchist community, solarpunk advocates for post-capitalism and post-scarcity. Capitalism enforces artificial scarcity and promotes the domination of both nature and the working class. (...) As an ecological community, solarpunk advocates believe humanity should live in harmony with nature. (...) As a just community, solarpunk advocates should promote four pillars of justice: (1) social justice; (2) justice across generations; (3) justice across communities; and (4) justice for non-humans (Gillam, 2023, S. 9).

Tobias Skiveren sieht im Genre „efforts to image a future beyond our current socioecological disasters.“ (Skiveren, 2024, S. 490) Zukunftsvisionen also ohne Untergang, ohne dystopischer Endzeiterzählung und wie sich diese Zukunft erreichen ließe, welche Hürden ihr im Weg stehen würden und wie sie sich praktisch umsetzen ließe. „What if stories could plant seeds of hopeful futures?“, so C. Rupprecht et al. als vorangestellte Frage zu ihrer Anthologie *Multi-Species Cities*:

² Charakteristische Figuren des Genres, wie sie Butler anführt, wie zum Beispiel die femme fatale, “the beautiful woman who may attempt to seduce the hero, and lead him to the brink of disaster”, den “employer [...] a morally dubious, but financially successful, person who persuades the protagonist to take on a job” tauchen im Roman ebenfalls auf, nehmen dabei jedoch eine untergeordnete Funktion ein. Eine wiederkehrende Referenz des Genres auf den Kriminalroman, durch “Private Investigators [...] on the edge of society, mixing with the rich and the poor, attempting to right the wrongs in society, but at a cost.” (Butler, 2001, S. 13), findet sich im Roman ebenfalls, wenn auch nicht in der von Butler charakterisierten Tradition des „Hard boiled detective“, sondern im Versuch des Protagonisten, dem Verschwinden zweier Personen in der halben Welt nachzuspüren und ihren Fall aufzuklären. Aufgrund marginaler Bedeutung für den vorliegende Betrachtung werden diese Elemente ausgespart.

Solarpunk (Rupprecht, C., Cleland, D., Tamura, N., Chaudhuri, R. & Ulibarri, 2024, S. 1).

Alexa Weik von Mossner bezogen auf die Anthologie charakterisiert diese mit: „(...) a sense of empowering hopefulness by imaging future forms of urban conviviality as an alternative to ‘accelerating climate change, species extinctions, (re)emerging fascism, lasting legacies of imperialism and colonialism, and an economic system based on the exploitation of living beings’” (Weik von Mossner, 2024, S. 468). Solarpunk fungiert also als utopischer Gegenentwurf zur dystopischen Cyberpunk-Ästhetik, in dem soziale Gerechtigkeit, ökologische Transformation und Nachhaltigkeit zentrale gesellschaftspolitischen Charakteristika darstellen und die Problemfelder der Gegenwart adressiert und bewältigt werden.

Das in David Bröderbauers Roman entwickelte Gesellschaftssystem entspricht diesen Ansprüchen nicht. Nachhaltigkeit und Artenschutz werden zwar in einem klar abgegrenzten Teil der Erde verwirklicht, jedoch nur, um die Zerstörung im anderen Teil fortführen zu können, während Ausbeutung und Klassenhierarchien weiterbestehen. Die erwähnten Behörden und Ministerien (beispielsweise für Kreislaufwirtschaft) deuten darüber hinaus ein ökologisches Bewusstsein auch in der zivilisierten Welt an, die geschilderte Praxis steht jedoch in starkem Widerspruch zu dem von William Joseph Gillam proklamierten „local, self-sufficient, and sustainable living where both the human and non-human flourish“ (Gillam, 2023, S. 1). Der Schutz der einen Hälfte kann nur durch die Vertreibung und Umsiedelung von großen Bevölkerungsteilen erfolgen und unter forcierter Ausbeutung der anderen Hälfte verwirklicht werden, in der das Gros der natürlichen Ökosysteme zusammengebrochen ist. Während die von Gillam angeführten ökologischen Aspekte in Teilen erfüllt werden, trifft dies auf die sozialen Kriterien nicht zu. Weder wurden ökonomische Hierarchien überwunden noch ein Gesellschaftssystem des sozialen Zusammenhalts etabliert. Dieses zeichnet sich konträr durch Entfremdung, soziale Distanzierung und Vereinzelung aus, worauf im Folgekapitel weiter eingegangen werden soll.

Eine mögliche Utopie einer Gemeinschaft wird erst zum Ende des Romans hin angedeutet, indem auf eine in der halben Welt offenbar existierende (illegale) Siedlung verwiesen wird: El Soledad. Eine Utopie, die sich also erst außerhalb der entwickelten Handlung anbahnt. Die Beschreibung der Siedlung durch den Protagonisten anhand von Satellitenaufnahmen weist dabei Ähnlichkeiten mit den im Solarpunk entwickelten Städten auf: „Eine intakte Stadt. Sie sieht schön aus. Mitte im Wald. Man erkennt Solarkollektoren und Satellitenschüsseln auf den Dächern, Fruchtstände auf den Straßen.“ (Bröderbauer, 2023, S. 236f.) In der zivilisierten Welt wiederum wurde eine Form von Grundeinkommen eingeführt, das es manchen der Migros ermöglicht, ihre Tage in den angelegten Gärten zu verbringen und ein ökonomisch schlechter gestelltes, aber unbeschwertes Leben zu führen und das konfliktiert mit dem geschilderten Leistungsprinzip und den mitunter totalitären Tendenzen der Korporatokratie. Ein Widerspruch, der im Roman jedoch nicht weiter behandelt und aufgelöst wird.

Mit Andrew M. Butler gesprochen, kann der Roman in der Tradition des Post-Cyberpunk als „Cyberpunk-Flavoured“ definiert werden und, daran angelehnt, ebenso als Solarpunk-Flavoured (Butler, 2001, S. 15ff.).

4. Die halbe Welt im Kopfraum – Technologie & Entfremdung

Die letzte Insel ist man selbst. Man lebt in der Stadt, losgesagt von den Menschen, zu denen man nie Mama und Papa sagen durfte, weil sie deine Autonomie fördern wollten. Man hat sie in einem Umsiedlerasyl zurückgelassen, während man selbst sich in seinem Inneren verkriecht, den letzten Ort, wo niemand hinkommt, weil man zu alt für einen Kopfraum ist. Die letzte Insel ist mein Kopf. Nichts von dem, was ich denke und fühle, wird aufgezeichnet. Mit Ausnahme dessen, was ich hier schreibe. Die Halbe Welt ist der Versuch, der Menschheit ihre Grenzen aufzuzeigen. Die Halbe Welt ist der Versuch, die Inselwelt wiederherzustellen (Bröderbauer, 2023, S. 121).

„Oftentimes [im Cyberpunk Genre] some crisis in the real world can be solved by going into the virtual one, a narrative which shares the shape at least of Shakespearean comedies, where the retreat from a

city to a green space solves a personal crisis” (Butler, 2001, S. 14). Die Bevölkerung in David Bröderbauers Roman verfügt über ein Neuroimplantat, einen sogenannten Kopfraum, der in Kindheitstagen eingesetzt wird und der seinen Träger*innen erlaubt, permanent in eine virtuelle Welt einzutauchen. Mit ihm kann eine Kopie der Wildnis/der halben Welt abgerufen und so die in der „zivilisierten Welt“ absente und zerstörte Natur erlebt werden im Sinne des von Butler postulierten „retreat from a city to a Green space“. Wildnisanimationen und sogenannte halbe-Welt-Fenster, stellen die einzige Möglichkeit dar, die durch Satelliten, Drohnen und Wärmebildkameras stetig überwachte Wildnis zu erleben.

Alternativ stehen für all jene, die über keinen Kopfraum verfügen beziehungsweise für einen Eingriff zu alt waren, Brillen zur Verfügung, die ähnliche Funktionen bieten, allerdings keine permanente Immersion ermöglichen und nicht direkt neuronal mit ihrem Träger*innen verlinkt sind. Beide Geräte zeichnen das Leben ihrer Träger*innen auf, ermöglichen den Konsum virtueller Inhalte, werten Begegnungen aus, speichern Informationen und liefern der Behörde ununterbrochen Daten über den Zustand der Bevölkerung sowie über potentielle Ungereimtheiten. Jede Veränderung im Verhalten, den Bewegungsmustern oder im körperlichen Befinden, so erfährt man durch den Protagonisten, wird registriert. Jene, die über einen Kopfraum verfügen, bewegen sich synchron in den urbanen Zentren, wodurch all jene, die über kein Implantat verfügen, bereits durch ihr asynchrones Auftreten als solche erkennbar werden. Die Träger*innen von Implantat und Brille werden so einer steten Kontrolle ihres sozialen Verhaltens unterzogen und gleichermaßen einer virtuellen Realität ausgesetzt. Auffälligkeiten führen dazu, dass für Bedienstete der Behörde Überprüfungen des psychischen Zustandes angeordnet werden können, ähnlich dem sogenannten „baseline test“, dem die Replikanten in *Blade Runner 2049* (Villeneuve, D., 2017) unterzogen werden, um ihre Tauglichkeit und Zuverlässigkeit nach Traumaerfahrungen zu überprüfen und potenzielle Anomalien zutage zu fördern oder dem „Voight-Kampff-Test“ zur Erkennung von Menschlichkeit in Philip K. Dicks (1968) *Do Androids Dream of Electric Sheep?*.

verabscheute diese Beurteilungen, er war Realist, er wusste seinen psychischen Zustand gut genug selbst einzuschätzen, aber machte er die Beurteilung nicht, wäre es in seinem Profil ersichtlich und er wäre nicht der Erste, der nur deshalb von seiner Stelle in der Behörde abgezogen wurde. Wie das System den Zeitpunkt der Kontrollen entschied, war nicht nachvollziehbar, aber als gewiss galt, dass es dafür unter anderem die Bewegungsdaten heranzog. Er war jetzt zweimal hintereinander im Norden der Stadt gewesen, das war doch auffällig (Bröderbauer, 2023, S. 97).

Entgegen beispielsweise der schwarzen Sonnenbrille in John Carpenters (1988) *They live*, die ihre Träger*innen dazu befähigt die kapitalistische Ausbeutung durch eine herrschende (Alien-)Klasse aufzudecken und die verborgenen Unterdrückungsmechanismen zu durchschauen und sich schließlich gegen sie aufzulehnen, bewirkt das Tragen der Brille in Bröderbauers Roman einen gegenteiligen Effekt der Kontrolle und Disziplinierung, die erst durch sie ermöglicht wird. Die in den Nachrichten und Werbungen unterschwellig vermittelten Dogmen werden durch die Brillen nicht entschlüsselt und als solche erkennbar gemacht, sondern erst durch sie entwickelt. So fordert sie den Protagonisten beispielsweise in regelmäßigen Abständen dazu auf, eines der ohne Brille nicht erkennbaren „Beischlafstudios“ zu besuchen oder weist ihn auf die Möglichkeit hin, Restaurants zu betreten und zu konsumieren. Zum Ende des Romans begleitet Lilian eine Gruppe der Migros in die bewirtschaftete Agrarzone und wird von seinen Begleitern in einem ersten Schritt zum Ablegen der Brille aufgefordert, da die patrouillierenden Sicherheitsroboter und Maschinen sie durch sie erkennen können. Erst durch das Zurücklassen der Brille können sie sich, da keiner von ihnen über einen Kopfraum verfügt, unbemerkt und gefahrlos in der Agrarzone aufhalten. Im Sinne des Posthumanismus wird auch durch den Protagonisten argumentiert, dass ein vollwertiger Naturschutz erst durch ein Verschwinden der Menschheit beziehungsweise eine Auflösung derselben im Digitalen und Virtuellen erreicht werden könne.

Die Menschen in *Die Halbe Welt* wirken in ihrem Verhalten emotionslos, mechanisch und weitestgehend von ihrer Umwelt entfremdet, da jede Zwischenmenschlichkeit auf rationale und quantitative Merkmale reduziert und Berührungen aufgrund von Hygienedispositiven

auf ein Minimum begrenzt werden, während die Natur abwesend und nur mehr in klar separierten Zonen wie Parks und Botanischen Gärten oder im Virtuellen Raum erlebt werden kann. Wildnis wird völlig beschränkt auf die *Halbe Welt*, die wenigen Vögel, die in den Städten noch vorkommen, sind invasive Arten und keine natürlich vorkommenden Spezies mehr. Als der Protagonist auf Sascha trifft, mit der er in früheren Zeiten eine Beziehung geführt hat, erscheint ihm ihr Drang zu Nähe unangenehm und unangebracht, sie irritiert ihn und von beiden wird ihr Verhalten als „berührungssüchtig“ negativ abgewertet und als nicht der Norm entsprechend angesehen.

In der Bewegung war darüber gescherzt worden, wie hoch Saschas Berührungsfaktor sei, sie musste jeden berühren, mit dem sie sprach, ständig durchbrach sie die Hygiene-Etikette und nicht wenige ihrer Gesprächspartner erschrecken, wenn sie ihnen wie selbstverständlich über den Arm oder den Rücken strich. Er schüttelte den Kopf über sein Abdriften in Sentimentalitäten (Bröderbauer, 2023, S. 92).

Einsamkeit, so der Protagonist, sei gegenwärtig eine Selbstverständlichkeit und mehrmals wird im Roman angedeutet, dass Suizide die häufigste Todesart darstellen würden, die lediglich im Zuge von Hitzewellen und Katastrophen von anderen Todesarten überstiegen werde. „Die Alten“ (Bröderbauer, 2023, S. 20) werden zurückgelassen, die Verbindungen zu einer biologischen Kernfamilie jeweils abgebrochen, zugunsten einer „neuen politischen Ordnung“, in der Geburten- und Familienplanung durch ideologisch aufgeladenen Verzicht reglementiert und durch die sogenannte „Deproduktionsbewegung“ geächtet werden.

Die Behörde übt ihre Kontrolle nicht nur durch stetige Überwachung aus, sondern greift auch in den Sprachgebrauch der Bevölkerung der halben Welt ein. Mithilfe sogenannter Textassistenten, die mit den Kopfräumen implementiert werden und auf die die Mitarbeiter*innen der Behörde zugreifen, erfolgen sprachpolitische Eingriffe in die Berichte und in die Arbeit der Angestellten, die an die in George Orwells (1949) *1984* und das durch den totalitären Staat entwickelte „Neusprech“ erinnern:

Er [Lilian, Anm.] formulierte Sätze, und der Assistent korrigierte und verfeinerte sie, wo es nötig war, verwandelte Lilians Sprache

in die Sprache der Behörde, wo die beiden voneinander abwichen. (...) Hatte man einen Kopfraum, wurde einem angeblich sogar das Vorformulieren der Worte erspart. (...) Emotional aufgeladene Begriffe wie *Vertreibung* und *Enteignung*, die Lilian zu kaschieren nicht vor notwendig erachtete, ersetzte der Textassistent verlässlich durch wertfreie Wörter wie *Populationstransfer* und *Wiederrückführung* (...) allesamt Worte, die es den Menschen leichter machten, die Halbe Welt und ihre Regeln anzunehmen (...). Es waren nicht seine Worte. Aus ihm sprach weiterhin der Textassistent, seine eigene Sprache war ihm verloren gegangen, wie er feststellen musste (Bröderbauer, 2023, S. 49ff.).

5. Capitalist realism

Der Protagonist Lilian Wagner kann, im Sinne Butlers (2001), der dem Genre eine Tendenz zur Darstellung gesellschaftlicher Außenseiterfiguren attestiert, als ebensolcher charakterisiert werden. Als Mitarbeiter jener Behörde, der neben der Reglementierung des Zutritts zur Halben Welt auch eine Funktion der gesellschaftlichen Kontrolle zukommt, steht er zwar im Zentrum der Autorität, jedoch an deren unterster ökonomischer und machtpolitischer Ebene. Im Verlauf des Romans vollzieht er allerdings eine emanzipatorische Entwicklung hin zu dissidentem Handeln. Mit fortgeschrittenem Stadium der Recherche und an der Arbeit an seinem Bericht über das Verschwinden der beiden Männer in der Wildnis distanziert sich Lilian immer weiter von den ideologischen Stützpfeilern, die der Halben Welt zugrunde liegen beziehungsweise stellt diese immer mehr in Frage. Der Teilung der Welt zum Schutz der Biosphäre und dem entwickelten Gesellschaftssystem steht er jedoch weiterhin positiv gegenüber, da er die Verhältnisse als alternativlos wahrnimmt.

Die Distanznahme geht einher mit einer Annäherung an die Gruppe der sogenannten Migros, Außenseiterfiguren, die ihre Tage in den Parks mit Pétanque-Spielen verbringen und ihren Lebensunterhalt durch den Verkauf und die Auslieferung von frischen Früchten, die illegal in der Agrarzone besorgt werden, verdienen. Es sind die Früchte, die von den Ernterobotern und den Maschinen zurückgelassen und von Gruppen von Migros aus verschiedenen Teilen der zivilisierten Welt kollektiv geerntet werden. Der Protagonist nähert sich der

Gruppe schrittweise an, wird schließlich von ihnen zur Teilnahme angeregt und schließlich vollends integriert. Woher die Gruppe ursprünglich in die Stadt kam, wird dabei nicht näher beleuchtet, wobei der Name Rückschlüsse darauf ziehen lässt, dass es sich um migran-tische Gruppen aus den Ländern der umgesiedelten Gebiete handeln könnte. Das Kollektiv, das sie verkörpern zeichnet sich durch Zusammenhalt und ein Gruppengefüge aus, das in Widerspruch zu den gesellschaftlichen Entwicklungen der Vereinzelung, Einsamkeit und fehlendem Gemeinschaftsgefühl steht. Sie haben sich innerhalb der gesellschaftlichen Verhältnisse einen relativen Freiraum entwickelt, stellen allerdings keine Bedrohung für die gegebene Ordnung dar, da sie über keine politischen Ambitionen mit den Verhältnissen an sich zu brechen verfügen. Der Protagonist schließt sich ihnen an und begleitet die Gruppe in die Agrarzone, aus der er ursprünglich, vor der sogenannten „Wendezeit“, stammt und umgesiedelt wurde. Im Sinne von Herman Melvilles Figur des Bartleby, der ab einem gewissen Punkt die an ihn herangetragene Arbeit immer wieder mit den Worten „I would prefer not to“ stoisch verweigert (Melville, 1853), kehrt er zum Ende der Handlung hin schlicht nicht mehr in sein Büro zurück, wodurch er sofort die ihm zugeteilte Wohnbox verliert. Als er aus der Agrarzone, die von ihm später auch als „Agrarwüste“ bezeichnet wird, zurückkehrt, ist sie bereits von einem anderen Mitarbeiter der Behörde, der zusätzlich auch seine Position in ihr übernommen hat, bewohnt. Die schrittweise Distanz zu den Verhältnissen ist offenkundig geworden und mündet in einem einzigen Versuch, sich offen gegen sie aufzulehnen: In der Agrarzone stößt die Gruppe von Migros auf eine der dort angesiedelten Serverfarmen, in der die unzähligen Daten der Behörde gespeichert sind. Lilian deponiert in ihr in einer spontanen Aktion eine mitgeführte Granate, die zur Explosion gebracht wird. Die Aktion wird nicht geplant, entstammt keiner politischen Agitation, sondern erfolgt eruptiv und aus einer unmittelbaren Handlung heraus, einem Impuls folgend, eine kleine Störung im Gefüge erzeugen zu wollen. Die potenziellen Konsequenzen oder Resultate der Handlung werden auch nicht weiterverhandelt und bleiben gegenstandslos. An einer anderen Stelle des Buches findet sich, bezugnehmend auf den von Lilian zu verfassender Bericht, folgende Stelle: „Seinem Bericht waren alle diese Effekte nicht zuträglich, das

spürte er, sosehr er dem Wort *spüren* misstraute. Er fand kein anderes, das beschrieb in welcher Weise er das Fehlgehen der Sprache in seinem Bericht wahrnahm“ (Bröderbauer, 2023, S. 50). Der Protagonist spürt, dass die Verhältnisse seine Einsamkeit und sein Unglück bedingen, bleibt jedoch ohne Möglichkeit diese in eine kohärente Sprache, eine kohärente politische Agitation zu verwandeln, lediglich in einen plötzlichen Impuls, der sich gegen die Serverfarm richtet, um dann nicht weiter gewürdigt zu werden:

Zumindest eine winzige Störung wollte Lilian hervorrufen, auch wenn sie nur eine Millisekunde dauerte. Die Kastentür, vor der er stand, ließ sich problemlos öffnen. Ohne Plan zog er da und 204ört ein Kabel ab, riss mehrere ganz heraus und warf sie auf den Boden. Die kleinen Lichter an den Gehäusen blinkten unverändert weiter. Nichts geschah. Bouchon tauchte neben ihm auf, die Hände auf die Ohren gepresst, noch immer die Pétanque-Kugel in der Hand. Ob ihre Sprengkraft groß war? Wohl kaum. Trotzdem nahm er Bouchon die Kugel aus der Hand, drehte sie, bis sie das dritte Mal einrastete und steckte sie in einen der Kästen. Dann rannten sie. Lilians hysterisches Lachen war im Tosen der Ventilatoren nicht zu hören (Bröderbauer, 2023, S. 218).

Seine eigentliche Auflehnung mündet in einer versteckten Computer-Datei, die den von ihm verfassten Bericht enthält, der gleichermaßen seine Abwendung von der Behörde und seine schrittweise Emanzipation dokumentiert und die er für seinen Nachfolger sichtbar hinterlässt. Diese Datei setzt in diesem wiederum einen subversiven Nachforschungsprozess in Gang und gleicht so einem subtilen Akt des Widerstands gegen die Verhältnisse, deren Veränderung dem Protagonisten als nicht realisierbare Möglichkeit erscheint. So endet der Roman auch damit, dass sich Lilian allein in die Brachlandschaft zurückzieht und in deren Ruinen beginnt, längst verloren geglaubte Pflanzen anzubauen. „Die Brache ist ein Ort der Auslöschung. Sie ist der Ort, an dem man der alten Welt beim Sterben zusehen kann. Irgendwann sollen mich dort die Ameisen zerteilen und unter die Erde befördern. Dort habe ich meinen Platz, dort liegt mein El Soledad“ (Bröderbauer, 2023, S. 239). Sein Bericht endet mit einem Manifest, dass die Leser*innen der Zukunft zu einem Umdenken auffordert und das der Protagonist ihnen hinterlässt. Während Lilian Sascha und ihrem Sohn in einer letzten Handlung als Angestellter der Behörde

die Ausreise nach El Soledad ermöglicht, verzichtet er selbst darauf, um sich der Brachlandschaft zu widmen.

Der Protagonist Lilian und die Gruppe der Migros exemplifizieren, was Mark Fisher als *capitalist realism* definiert:

For all that we know, the authoritarian measures that are everywhere in place could have been implemented within a political structure that remains notionally, democratic. The War on Terror has prepared us for such a development: the normalization of crisis produces a situation in which the repealing of measures brought in to deal with an emergency becomes unimaginable (when will the war be over?) (Fisher, 2014, S. 1).

Und an späterer Stelle, rekurrierend auf Fredric Jamesons Postulat

„that it is easier to imagine the end of the world than it is to imagine the end of capitalism (...) the widespread sense that not only is capitalism the only viable political and economic system, but also that it is now impossible even to imagine a coherent alternative to it” (Fisher, 2014, S. 2).

Für sie existiert trotz ihrer Distanznahme und den kleinen Freiräumen, die sie sich geschaffen haben, keine Idee einer Welt außerhalb des vorhandenen Spätkapitalismus. Die zivilisierte Welt und ihre „neue politische Ordnung“, die einem fortgesetzten Kapitalismus des Neoliberalismus entspricht, bleiben auf einer systematischen Ebene unangetastet und werden als weitestgehend alternativlos wahr- und hingenommen (und bleiben es auch nahezu vollständig bis zum Schluss) und deren Zumutungen nicht aktiv bekämpft. Ein politisches Kollektiv oder eine Form von counter-culture, wie sie oft im Cyberpunk Genre verortet wird, wird dabei nicht entwickelt. Die Migros erfüllen diese Kriterien nur in Teilen, da sie als loser Zusammenschluss zwar eine Außenseitergemeinschaft darstellen, die sich durch solidarischen Zusammenhalt auszeichnet, jedoch ohne dabei gemeinsame gesellschaftspolitische Ansprüche zu formulieren. Sie stellen durch den Ernteprozess in der Agrarzone eine ökonomische Zweckgemeinschaft dar und keine rebellische Gegenkultur, die die Autoritäten ernsthaft herausfordert.

Widersprüche in den Verhältnissen und die damit verbundenen Problematiken und die desaströsen Auswirkungen auf den Protagonisten

und seine Umwelt werden zwar immer wieder als solche erkannt, jedoch ohne dabei ein politisches Bewusstsein zu entwickeln oder eine Vorstellung einer Gesellschaftsstruktur außerhalb der gegebenen. Der Roman vollzieht somit eine Fortsetzung der neoliberalen Lebensrealität, die sich, nach Fisher, durch eine Unfähigkeit auszeichnet auch nur eine kohärente Alternative zu denken: „Since it was unable to posit a coherent alternative political-economic model to capitalism, the suspicion was that the actual aim was not to replace capitalism but to mitigate its worst excesses (...)” (Fisher, 2014, S. 14).

Eva Horn (2014) rekurrierend auf Walter Benjamin (1937): „Gerade dass es kein Ereignis mehr gibt, ist die Katastrophe. Die Kontinuität selbst, die Tatsache, dass sich die Gegenwart immer weiter in die Zukunft hinein entrollt, dass sie sich fortsetzt und bestenfalls unaufhaltsam steigert – gerade das ist das Schreckliche.“ Die Zustände im Roman als Fortführung des Jetzt, eines ausufernden kapitalistischen Wirtschaftssystems, „der ‚Fortschritt‘ aller gegenwärtig gegebenen Tendenzen“ (Horn, 2014, S. 17). Die spätkapitalistischen Strukturen als Ursächlichkeit von Klimakatastrophe und Entfremdung bleiben bestehen: „(...) it is evident that the vices are engendered by the structure, and that while the structure remains, the vices will reproduce themselves” (Fisher, 2014, S. 68).

Die Charaktere nehmen ihr Schicksal stoisch an, bewegen sich innerhalb des vorgegebenen Systems, das sie weitgehend Gewähren lässt, da es in ihnen keine Gefahr erkennt. Die Behörde nimmt eine zentrale Rolle in der gesellschaftlichen Kontrolle ein, sie überwacht ihre Bürger*innen, jedoch ohne tatsächlich selbst als strafender Souverän in Erscheinung zu treten. Im Sinne einer Foucault’schen Disziplinargesellschaft hat der Protagonist sämtliche Sanktionsmechanismen bereits verinnerlicht. So wird immer wieder im Roman die offenbar totale Überwachung der Bürger*innen angesprochen, da Bewegungsdaten, individuelle physische und psychische Parameter, filmische Aufnahmen der Brillen bis hin zu Pupillenbewegungen gespeichert und aufgezeichnet werden, doch eine wirkliche Konsequenz ergibt sich aus dieser Überwachung nicht. Der Protagonist fühlt sich beobachtet, er wähnt sich kontrolliert, doch an keiner Stelle des Romans führen seine ausufernden Nachforschungen zu einer tatsächlichen

Sanktionierung. Diese tritt erst ein, als er seine Arbeit in der Behörde verweigert und seine Wohnbox weitervermietet wird und seine Habseligkeiten eingelagert werden. Die angedeuteten militärischen Konflikte im Zuge der gewaltsamen Grenzziehungen, damit einhergehende Vertreibungen großer Bevölkerungsteile, Entzug der „Bürgerrechte“ bei Grenzübertretung in die Halbe Welt, die Verfahrensweise der Behörde etc. lassen Rückschlüsse auf das Vorhandensein eines in Teilen autoritären Gesellschaftssystems zu, doch die entwickelten Totalitarismen werden, ebenso wie das geschilderte Leistungsprinzip, von seinen Bürger*innen bereits vollends verinnerlicht, wodurch die im Roman skizzierte Autorität nicht mehr auf eine zur Schaustellung seiner Macht in Form der sanktionierenden Agenten der *Matrix* Tetralogie (Wachowski, L. & Wachowski, L., 1999 -2021) angewiesen ist. Die kleine, nonkonforme Gruppe der Migros scheint als keine relevante Bedrohung der gegebenen Ordnung angesehen zu werden. Die Problemfelder werden im Roman immer nur beiläufig erwähnt und als unangenehme Nebeneffekte hingenommen, die sich nicht auflösen lassen. Eine Unfähigkeit auch nur über eine Andersgeartetheit der Verhältnisse außerhalb einer kapitalistischen Struktur nachzudenken, ist dem Protagonisten inhärent und kennzeichnet seine Denkweise.

Die hohe Zahl an Suiziden, die grassierende Einsamkeit, Umweltzerstörung innerhalb der Agrarzone und der zivilisierten Welt, Naturkatastrophen, Entfremdung und Leistungsdruck, etc. werden am Rande erwähnt und in Nebensätzen abgehandelt. Der Protagonist leidet unter den Verhältnissen, ist jedoch unfähig eine Form von Widerstand, politischer Agitation oder Kollektivität zu entwickeln. Das Verhalten der Passivität Lilians und seiner schlussendlichen gesellschaftlichen Rückziehung in die Brachlandschaft erinnert an die von Franco Bifo Berardi in *Quit Everything* und *After the future* geschilderte kollektive Erschöpfung und Depressionen großer Bevölkerungsteile, vor allem junger Menschen, im frühen 21. Jahrhundert, die, einer permanenten Reizüberflutung von Leistungsdruck, Kapitalismus, Klimakollaps ausgesetzt, ein Verhalten an Tag legen, das Berardi auch als „desertion“, als einen Schutzmechanismus, als (un-)bewussten Rückzug psychischer Energie im Zuge von „hyper-competitive-stress“ (Berardi, 2024, S. 103), die von seinen Protagonist*innen nicht mehr für

ein System verwendet wird, dass bereits unabwendbar im Scheitern begriffen wird, bezeichnet.

A hundred thousand times in the last century we have said that our choice is either socialism or barbarism. We have been unable to create the conditions for socialism, and therefore now we must prepare ourselves for barbarism, without ceasing to look for lines of escape from looming catastrophe. What I call barbarism is the disintegration of social civilization. Barbarism is the ethical catastrophe we are experiencing. What is the line off light, if not desertion? (Berardi, 2024, S. 52)

Dass Berardi eine Reaktion auf diesen Zustand in einer völligen Verweigerung der Partizipation sieht, die so weit reicht die Fortpflanzung als Ganzes zu verweigern, deckt sich mit der im Roman angesprochenen „Deproduktionsbewegung“, die vor allem unter jungen Menschen lange Zeit hohen Zuspruch erfahren habe.

So endet das Buch der Emanzipationsprozess des Protagonisten auch in einer Resignation an den Gegebenheiten und einem Rückzug in die Brachlandschaft, jedoch ohne, dass die spätkapitalistischen Verhältnisse in ihrem Kern Schaden genommen hätten. Eine Zukunft wird erst in den Ruinen der alten Welt und der als unveränderbar wahrgenommenen Gegenwart gesehen: „Träumt nicht von der Rettung, träumt nicht von der Wildnis. Die Wildnis ist verloren. Die einzige Hoffnung liegt in der Brache.“, so die abschließende Nachricht „an die Leser:innen der Zukunft“ (Bröderbauer, 2023, S. 242f.). Der Zusammenbruch aller Strukturen als lustvolles Bild und Chance für den Planeten, als „ein heimlicher Wunsch“, so Eva Horn, „ein Bild postapokalyptischer Ruhe, die nur einkehren kann, wenn der Mensch endlich wieder verschwunden sein wird“ (Horn, 2014, S. 8).

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Performing the Untamed in (Post-)Cyberpunk Anime: Environmental Imagination and Media Ecology in *Psycho-Pass*

Malte Frey¹

1. (Post-)Cyberpunk, Nature, and Anime

Since its beginning, cyberpunk has imagined the world foremost through humanity's interaction with technology, both on a bodily and on an environmental level. Here, the environment is understood as the surroundings and conditions in which something or someone lives, operates, and so on. In initial cyberpunk narratives like William Gibson's *Neuromancer* (1984) and the subsequent novels *Count Zero* (1986) and *Mona Lisa Overdrive* (1988) or Ridley Scott's *Blade Runner* (1982), technology shapes urban landscapes, permeates social life, and is structured by hyper-capitalist mega corporations, surpassing national boundaries and controlling the world. Accordingly, in such a setting, the entire environment is envisioned as technological. In this sense, cyberpunk's authors seem to have cast away the notion of the natural in a normative sense, as in defining human nature and nature as something external to humanity. On the other hand, nature as environment, an untamed physical world, both preceding and exceeding human civilization and encompassing all living and non-living things, appears to have also vanished from cyberpunk imagination, being fully replaced by technologically altered life forms (cyborgs), architectures, and structures. In this respect, the often-discussed nature/culture gap is backhandedly reaffirmed in cyberpunk fiction since technology may become nature as external to humans in the sense of autonomous AIs, but still, it originates in culture. The external nature, then, often appears as something humanity aims to control and subjugate in a transhumanist manner.

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Transhumanism is the belief in the enhancement of humanism through technological means, while posthumanism critically challenges established hierarchies like nature/culture or body/mind. In its endeavor for enhancement, transhumanism often reveals its “underlying urge to control natural and social forces.” It aims to replace “social and ecological complexity with a heuristic sociotechnological world designed to enable better prediction, manipulation and control” (Thomas, 2024, p. 70). In this sense, nature is an untamed wilderness that had to be explored, controlled, and eventually exploited. In (post-)cyberpunk fictions, the absence of nature as environment seems to suggest that this aspiration has succeeded and that the world is now fully technological-cultural and thus controlled.

In contrast, fictions like steampunk, solarpunk, and others that have emerged alongside cyberpunk and are explored in this volume often explicitly (re)introduce nature as environment as an important factor of their settings. But did nature in (post-)cyberpunk really vanish? Isn’t a focus on technology only not all too narrow? Does a future that merely perceives challenges to human nature through the lens of (human) technology not miss the wide non-human world that humans have always been a part of? Following this line of thought, we might wonder what happens alongside virtual and digital spaces, what happens at the borders of technological realms and (post-)cyberpunk urbanity. If we take seriously one of cyberpunk’s and consequently post-cyberpunk’s most prolific goals, i.e., to deconstruct a humanist human nature and its inherent anthropocentric worldview in a posthumanist manner (Grillmayr, 2020), humanity’s inseparable integration into the environment as nature might always have been a backdrop for such fictions. The question is then, how does nature, maybe in the sense of “naturecultures” (van der Tuin, 2018), relate to culture and is positioned within (post-)cyberpunk fictions?

To explore this aspect, this chapter focuses on the post-cyberpunk anime franchise *Psycho-Pass* (2012–2019), particularly the accompanying feature-length anime movie *Psycho-Pass: The Movie* (Shiotani, 2015, hereafter *TM*), and the OVAs (original video animation) *Psycho-Pass: Sinners of the System* (Shiotani, 2019 hereafter *SoS*). To readers familiar with (post-)cyberpunk, an encounter with anime will not come as a

surprise because visual (post-)cyberpunk narratives can mostly be found as anime. Anime, Japanese animated series and movies with an “anime-esque” aesthetic (Suan, 2021, p. 17), have produced various visual (post-)cyberpunk narratives with global recognition, movies like Katsuhiro Ōtomo’s *Akira* (1988) and Mamoru Oshii’s *Ghost in the Shell* (1995) being the most prominent. This fact has been attributed to the role of technology in postwar Japan, Japan’s own ‘cyberpunk reality’ (Saito, 2020; Sato, 2004; Tatsumi, 2006), or to anime’s engagement with a technologically altered reality, blurring boundaries of gender and identity (Napier, 2005). Such thematic-oriented approaches to analyzing anime are contrasted by media-specific accounts in so-called anime studies that may also include a Japanese studies perspective (Berndt, 2024, p. 3).

In this chapter, *TM* and *S&S* are approached through the latter lens, examining the role of nature as environment at the borders of the otherwise techno-urban scenery as well as outside of it. I will disclose how nature as environment is performed and argue that the specific ways of performance denote different approaches to nature that gradually move away from nature as the untamed and to be controlled. To do so, I will first situate this text within a methodological frame. Thereafter, I turn to the particular anime, examining them in chronological order to point out differences and to disclose developments in their performance.

2. Methodological Considerations: Anime Studies and Media Ecology

For Napier (2005, pp. 11–12), anime’s own technological material, i.e., its means of the production of animation, foregrounds narratives that focus on technology like sci-fi in general and cyberpunk in particular. The technological material, for Lamarre (2009, 2018), is what constitutes anime as a specific medium and denotes a certain media ecology. For Suan (2017, 2021, 2024), on the other hand, anime appears to be defined by its aesthetics, primarily deriving from its characters rather than its depicted environments and backgrounds. This chapter takes both approaches, which constitute the main branches

of anime studies, into consideration. Thereby, the material of the entire shots can be analyzed in their relation to the specific characters and their overall aesthetics. Accordingly, this chapter focuses on the moving visual image and how it is performed. That means anime does not depict something in a semiotic sense. Rather, since anime are *moving images*, they processually perform and enact, as Suan (2021, pp. 45–50) rightfully observes.

Movement, in anime, follows a particular spatial logic that has been defined by Lamarre as “animetism” in contrast to “cinematism” (2009). The former is based on the multiplanar image of animation, i.e., the fact that for animation, images drawn on celluloid are mounted one after another in the so-called animation stand. Varying the distance between the images or moving them independently causes effects of movement and depth. In contrast to this logic of cel animation based on 2D motions, cinematism refers to movement in 3D spaces, going into depth rather than simulating it. The latter can be found in live-action movies as well as in animation based on CGI rather than drawings. While most anime nowadays, certainly including *TM* and *SoS*, are created digitally through digital painting in software like Clip Studio Paint, the spatial logic usually remains that of 2D cel animation, sustaining anime’s aesthetics and established patterns. This applies to characters and their performances, too. However, 3D CGI is often employed to create backgrounds and complex movements, either fitting into the overall aesthetics or breaking the homogeneity of spatial coherence. This chapter utilizes these different materialist approaches to the performances of anime.

This leads me to argue for an ecology *within* one anime production and even *within* one particular frame (moving image). Media ecology as a field of studies originated following the works of Marshall McLuhan and can be described as a meta-discipline that considers media, i.e., technologies, and their environments. While there are many definitions (Logan, 2010; Nystrom, 1973; Postman, 1970; Strate, 1999), they all agree that media ecology is about the study of the environment in which media operate and through which the impact of media is influenced (Islas & Bernal, 2016). A book, e.g., has a different impact in the digital age than it had five hundred years before. Accordingly,

media ecology can be defined as the study of “the impact of media and technologies on the culture and societies throughout history. Media technologies produce environments that avoid the easy perception of people. Media ecology [...] comprises an interdisciplinary approach with the perspective of a complex system” (Islas & Bernal, 2016, p. 193). It is about relations, interactions, and networks that are open and not confined by a closed system. This is described with the term environment.

Regarding anime, Lamarre has elaborated on a media ecology by proposing a “genealogical approach to television media centered on assembling” (2018, p. 11). Departing from TV broadcast, which is central to anime as the medium is closely tied to TV series, he defines an (anime) media ecology as the “holding pattern between television infrastructures, multimedia franchising, and the transmedia storytelling called media mix [games, manga, anime, merchandise]” (2018, p. 345). He writes, “[t]he problem of production shifts to that of distribution” and thus focuses on the “distribution of anime” (Lamarre, 2018, p. 8). He then maps technological components as well as psychological feelings through distribution. While Lamarre, too, examines particular series like *Detective Conan* (since 1996) or *Crayon Shin-Chan* (since 1992) and their accompanying OVAs and movies, he elaborates on formations and distributions *outside* of anime correlating with their *inside*. Building onto this, I propose to use the premise of media ecology, i.e., situatedness in an environment and ways of distribution, to closely examine a particular anime production’s environment as performed by its technological and aesthetic material. I thereby focus on the distribution of different ways of performance *within* a particular production. Further, a media ecology standpoint enables us to consider OVAs and movies as part of a TV anime franchise, a network that is not necessarily contingent.

From this perspective, I argue that a particular anime, comprised of different technologies and technological logics (cel animation and CGI), evokes a particular environment in itself, which, in turn, affects the viewer according to his/her particular historic, cultural, and spatial environment. Within a digital age or the information society, digital means of production produce environments within environments

and therefore build relations and structures. How does this apply to nature as environment in (post-)cyberpunk anime?

Nature as environment has not been broadly examined when it comes to (post-)cyberpunk in general because, at best, it appears at its sidelines. In the context of anime, however, nature as environment has been engaged with from different perspectives, mostly focusing on the extremely popular movies by Hayao Miyazaki and his Studio Ghibli. Films like *Nausicaä of the Valley of the Wind* (1984), *My Neighbor Totoro* (1988), and *Princess Mononoke* (1997) ostensibly deal with ecological themes and human-non-human relations and portray beautiful and detailed landscapes and environments (Cavallaro, 2006; Hadl, 2018; Lioi, 2015; Morgan, 2015; Napier, 2005). This causes “[e]nvironmental communication scholars [to] contend that many of Ghibli’s most popular releases successfully promote eco-centric ideals” (Hadl, 2018, p. 354). Studio Ghibli’s approach has been described as aligning “with the concept of deep ecology by emphasizing nature’s right to exist free from human exploitation” (Yusof et al., 2025, p. 6034). Deep ecology, in contrast to the anthropocentric perspective of shallow ecology, denotes that nature has intrinsic value (Naess, 1989). Still, research that focuses on nature as environment in (post-)cyberpunk anime and from an anime studies standpoint appears to be quite rare. Nonetheless, Mumcu and Yilmaz’ (2018) categorization of landscapes in Ghibli movies and the frame-by-frame analysis approach by Yusof et al. (2025) provide useful insights in the context of this chapter:

From a landscape architectural perspective, Mumcu and Yilmaz have identified three different types of landscapes in Ghibli films that denote different human-nature relations: apocalyptic landscapes, where humanity dominates and exploits nature; wilderness landscapes, where nature is the dominating force; and responsible landscapes, where humans are a part of nature and there is benevolent coexistence. The authors assume anime, and Miyazaki’s movies in particular, to be representative of Japanese culture as different from Western perspectives that often entail a clear-cut distinction between nature and culture. This chapter does not follow Mumcu and Yilmaz in this regard. I argue that the authors’ approach bears the risks of

oversimplification, essentializing both Japanese culture and Western traditions, and thereby reducing anime to something ‘Japanese.’ However, their topology can serve to describe relations of anime characters to nature as environment.

Yusof et al. try to establish a semiotic of nature in Ghibli movies, which is not used in this chapter. However, to analyze nature as environment, they provide three points of departure: scale, i.e., spatial organization and structure of a frame (2025, p. 6046), different aesthetic forms and shapes of nature or technology (2025, p. 6047), and movement and dynamism of nature as environment (2025, pp. 6050–6051). Especially the latter is of interest here, because therethrough nature as environment can either be rendered an active agent or a static backdrop.

Generally speaking, nature as environment seems to only draw attention when it (visually) demands it. There has to be something that catches the eye, that warrants engagement. When it comes to (post-)cyberpunk anime, and especially TV anime, this is mostly not the case. (Post-)cyberpunk foregrounds technological urbanism, and TV anime, which is most of anime, is limited in its animation by small budgets, time pressure in the production of weekly episodes, and traditionally smaller screens than cinema productions. Accordingly, Miyazaki distances himself and his movies from the term “anime” as tied to TV production (Berndt, 2011, p. 85). His films are cinematic movies, not TV series, and Ghibli’s detailed nature as an environment certainly could not be realized on a TV anime budget.

This reduction or limit of animation may be one of the reasons why anime aesthetics concentrate on characters. Backgrounds are just not (visually) important enough and thus demand less attention both from the producers and the audience. Movies like Studio Ghibli’s and, more recently, those of Makoto Shinkai, who might entertain a similar approach in his visual style and affectionately (digitally) painted environments like Miyazaki, subvert this convention and put backgrounds in the center of the attention. This chapter looks at specific (post-)cyberpunk anime, situated simultaneously within and outside a TV-anime franchise, to explore how nature as the environment in

cyberpunk worlds can appear at a peripheral position. *TM* and *SoS* are part of the *Psycho-Pass* canon. They are used to fill gaps between seasons and more deeply explore minor characters. However, the seasons might very well function without the movie or the OVAs. The audience does not necessarily need them to comprehend the world of the franchise or even its plot. It is rather a nice-to-know gimmick than a need-to-know foundation. This outside-inside position within the ecology of the franchise serves as a point of departure to examine the liminal spaces of the otherwise (post-)cyberpunk-ish techno-urban society of *Psycho-Pass* toward nature as environment.

3. (Post-)Cyberpunk Urbanity and its Borders: The Accompanying Fictions of *Psycho-Pass*

The world of *Psycho-Pass* is set in a near-future Japan that is controlled by the technological governing system Sibyl. Sibyl organizes and structures the society by monitoring every citizen's so-called psycho-pass, which provides information about whether someone has a tendency to commit crimes. Thereby, crime can be prevented before it happens, which leads to a seemingly peaceful society. The anime centers around the inspectors and enforcers, i.e., supervised potential criminals, of the Public Welfare Bureau a criminal investigative unit. Its primary task is to enforce Sibyl's control by apprehending potential criminals and even eliminating those who are deemed not rehabilitable and to explore the gaps in Sibyl's only superficially omniscient grasp. The investigators' tool is the dominator, a pistol connected to the system that can read psycho-passes and thereby judge and execute targeted individuals. Through its worldbuilding alone, the franchise addresses free will, liberty, justice, war, and peace through questioning Sibyl's imposed order as well as the means of subversive individuals working against it.

All of this happens in a technological urbanity (Tokyo) that seems to encompass all of society. There is no place of action outside urbanity, and thus there is no society outside the city structure. Elsewhere, I have argued that this can be tied to the so-called megalopolis project, which, in the 1960s, was the idea of a "city Japan," centering on the

metropolitan area between Tokyo and Ōsaka (Frey, 2023, p. 146; Gardner, 2020, p. 39). Readers familiar with Japan might know that, traveling south from Tokyo to the next city, Yokohama, there is no rural space in between, suggesting a singular gigantic urban field. This reality that is part of daily life in the greater Tokyo area has seemingly become a societal certainty in *Psycho-Pass*'s Japan. Society is techno-urban, and there is nothing outside of it. Therein, *Psycho-Pass* leans on cyberpunk classics such as *Blade Runner* and its depiction of 2019 Los Angeles.

Within the TV series *Psycho-Pass* (2012–2019), there is nothing outside of cyberpunk's urbanism. There is no nature as environment. What traditionally counts as nature—green, plants, earth and, animals, and even the sky or the sea—has been incorporated into urban structures like parks or wide fields of super corn that in the first season feed the entire population. Nature in the sense of the wild, as in “unaltered by human contact” and something “outside of the civilization of modernity” (Halberstam, 2018, p. 170), is nowhere to be found. In *TM* and *SoS*, however, viewers catch a glimpse behind the curtain of the city, and its boundaries become visible because there seems to exist something outside of it. One of post-cyberpunk's significant features is its inward movement, i.e., characters look for ways to help society instead of escaping problematic structures (Frey, 2023, p. 134; Person, 1999). This is the structure of the three TV seasons of the franchise. *TM* and *SoS*, on the other hand, show that there is something outside Sibyl-Japan, which accordingly is embedded in a much larger world. Alternative models of society and thus life appear to become conceivable once again.

3.1. *Psycho-Pass: The Movie* (2015)

TM, published one year after the second season (2014), tells the story of Inspector Akane Tsunemori, the series' protagonist, and Shinya Kogami, a former enforcer who has escaped Japan at the end of the first season. Now, he is a guerilla in the SEAU (Southeast Asian Union), a fictive state resembling maybe Vietnam, Thailand, Malaysia, Indonesia, or Cambodia and run by a military dictatorship. While this leadership has called upon Sibyl to help establish a peaceful society, it still uses brutal methods against its domestic enemies calling for

democracy and civilians. Tsunemori travels to SEAU to investigate in the name of Sibyl and tries to find Kogami, to whom she feels connected. After having left Japan, she starts her endeavor at Shambala Float, SEAU's capital, which is seemingly under the control of Sibyl, and then departs with the military to engage the guerrillas of the democratic movement. During the following battle, she encounters Kogami, who has become a tactical adviser to the rebels and, unwillingly, some kind of spiritual leader.

This is when, for the first time within the *Psycho-Pass* franchise, nature as environment becomes visible. Tsunemori accompanies Kogami to the rebel base lying deep in a jungle forest. In an aerial shot, we see a green forest in temple ruins reminiscent of Angkor Wat in Cambodia. There are trees around buildings, park-like structures, and earthy-green colors comprising this establishing shot. In contrast to the urbanity of Tokyo and Shambala Float shown earlier in the movie, this green environment seems to be (most likely digitally) painted, following the 2D spatial logic of cel animation. The urban landscapes, on the other hand, are performed by CGI, which is evident from their much more detailed textures and 3D movements. In such shots, where even plants seem to be constructed by CGI (fig. 1), the cel animation look of the characters seems almost irritating because their plainly colored forms strongly differ from the multicolored and outline-less forms of their surroundings. Here, rather than a difference in the technological material and its inherent spatial logics, an aesthetic difference between the cel-animation characters and an urban CGI environment becomes evident. Form and lines convey the disparity.



Figure 1: Tsunemori (center) walks around in Shamballa Float (Shiotani, 2015, 00:39:11).

This changes when Tsunemori reaches the rebel base. There, nature as environment appears to be painted. Much less multicolor and different light effects, hard and linear edges, or “unnatural” colors are used. Especially in the trees, in the green as well as in the sky, something like brushstrokes is visible (fig. 2). Nature, in this respect, appears to be performed differently than urbanity in this (post-)cyberpunk anime. As technological means in the sense of CGI can be associated with *Psycho-Pass*’s aesthetics of cyberpunk urbanity, cel animation paintings apparently function to perform nature as environment. If (post-)society is technological and painting is not, at least in a digital sense, the borders of the Sibyl System are performed along this axis of compositing, i.e., how different layers and different technological materials are combined in anime (Lamarre, 2009, p. 9).



Figure 2: Kogami (center) administers medicine to a wounded guerilla while Tsunemori (left) watches (Shiotani, 2015, 00:52:45).

Paintings, especially background paintings, can create a sense of stillness in animation, contrasting with the movement of actors and objects in the foreground. Movement is a relational process, which means that something can only be moving in relation to another entity. Within the 2D logic of cel animation, a motionless background provides a backdrop for character action. However, because it is painted on a singular celluloid plane, it lacks the potential of moving in itself. Backgrounds comprised of CGI, on the other hand, could be moving in themselves, as they are not painted but constructed through different textures and 3D models. Nature can be transformed into “narrative agents” (Yusof et al., 2025, p. 6050) through movement, e.g., that of wind or water. While *TM* shows military ships parting muddy water on their way, such water movement is limited to technological interference with nature, rendering it a passive template for human agency. In this respect, nature as environment being painted in a more traditional manner simultaneously hints at a more “natural” way of performing animations (painting by hand) and reduces nature to a mere passive scenery for acting characters as well as

CGI architectural structures. In the following sequences, man-made architecture, namely the temples constructed by CGI textures, overtowers the guerrillas living in them. In comparison, the surrounding forest appears rather small. On the one hand, scale is not a factor that brings forward the importance of nature. Rather, architectural largeness pushes it into the background. On the other, nature still surrounds the temples. They are embedded in it. Therefore, they hint at a different way of culture regarding nature as environment.

The temple ruins function as a signifier for something religious, which eludes transhumanist aspirations of controlling nature as well as the technological and quantifiable justice of Sibyl. We see rebels praying in community inside the ruins, surrounded by not visible yet present encompassing nature. Therein lies a sense of harmony and authenticity that may appear exotic for audiences outside Southeast Asia, both Western and Japanese. This mechanism can thus be described as exoticism, which evokes awe and fascination for the foreign and simultaneously distances itself from the naïve (and supposedly inferior) culture, as it is clear that military forces are on their way to the rebel base and praying won't do any good.

Enter the enemy: Tsunemori's and Kogami's adversaries are a team of mercenaries whose leader quotes from Franz Fanon's *The Wretched of the Earth* (1961) to justify his lust for violence as an act of self-proclamation. The initial sequence of these characters shows them on a beautiful tropical island beach, albeit its beauty being stained with brutally crucified corpses. The environment here differs strongly from the cel animation paintings formerly displayed at the rebel base because it is not painted anymore (fig. 3). The scenery consists of richly detailed CGI textures of trees, through which the sky is visible, and dazzling light effects. The striking similarity of the palm trees at the edge of the beach suggests that the same 3D tree model has been (lazily?) duplicated and used multiple times. This environment is constructed digitally and not painted naturally.



Figure 3: The mercenaries' base within a detailed texture of a natural environment (Shiotani, 2015, 00:55:28).

At this point, *TM* switches its technological means and aesthetics regarding nature as environment, as the natural environment will now become part of an action sequence. The mercenaries forcefully attack the rebel base, and nature as environment becomes a semi-active scenery for said action in the sense that it is being destroyed. We see mercenaries in their armored mobile suits, shooting missiles and dismembering rebels, moving according to the CGI-3D logic of cinematism while the background moves in the same way. Aesthetically, nature suddenly resembles the urban and architectural textures, as if the impact of technological human battle had overthrown the hand-painted naturality. Here, *TM* departs from an anime-esque aesthetic and fully delves into that of 3D animation. Thereby, landscapes become rather apocalyptic (exploited) than wild (untouched) or responsible (harmonic). There seems to be a cut between human and (possible) natural agency. Accordingly, nature as environment, in *TM*, exists at the peripheral edges of human civilization that is technical-cultural instead of a natureculture complex. The landscape is not yet apocalyptic, but it as well might be, for exploitation in the form of battle is the dominant form of engagement.

From a media ecology perspective, it is noteworthy, that this is an accompanying anime movie that enables the viewers to lay eyes on these liminal edges of cyberpunk technology. Interestingly, this also touches upon the concept of the nation-state (Japan under Sibyl) as a provider and supporter of technological-cultural space in contrast to the untamed and wild (SEAUn and possibly other states or stateless territories). In its strive to include SEAUn in its territory, transhumanist notions of colonial aspirations through exploitation and control (Thomas, 2024, p. 215) become obvious and echo Japanese colonialism in Asia during the late nineteenth and early twentieth centuries. In this sense, *TM* seems to fall back into an old nature-culture binarism, privileging the latter. Nonetheless, the rebel base serves as a signifier of a natureculture-continuum, performing anime characters in CGI structures surrounded by painted backgrounds. This space, then violently transformed into CGI environments to enact battle sequences, might contain roots for nature as environment crawling its way back into (post-)cyberpunk anime fictions. Therein, *TM* escapes a fatalist reading and provides the audience with an outlook on what might be and even now is possible.

3.2. *Psycho-Pass: Sinners of the System* (2019)

This node of possible resistance against an overall techno-urban culture that could be labeled as a totalizing cyber-technocracy is revisited and developed further in the younger OVAs of *SoS* in the modus of the peripheral outside and untamed wild. After a four-year break since *TM*, the OVAs were a testing ground for the third season (also 2019) as the team around director Naoyoshi Shiotani experimented with production methods and a longer episode length of approximately one hour (CHiRO, 2020). The first two of the three independent short films (*Case 1: Crime and Punishment*; *Case 2: First Guardian*) tell of stand-alone cases of the Public Safety Bureau, which provide more in-depth insights into minor characters like the younger inspector Mika Shimotsuki, the former-inspector-now-enforcer Nobuchika Ginoza, and the new enforcer Teppei Sugo. The third film (*Case 3: On the Other Side of Love and Hate*) is about Kogami's journey after what happened in *TM*.

All three OVAs have in common that their plots take place at the borders of the nation-state of Sibyl-Japan (*Case 1* and *Case 2*) or even outside of it (*Case 3*). They explicitly touch upon the liminal space of society. While the TV series always addresses such areas *within* the urban structure through an “upper-lower-dichotomy” (Frey, 2023, p. 147), *SoS* extends its feelers explicitly outwards. In this movement, the OVAs follow in the footsteps of *TM* and, likewise, bring nature as environment to the attention of the audience.

In *Case 1*, the team of the Public Safety Bureau around Tsunemori investigates a supposed rehabilitation center for latent criminals, located up north deep in the mountains. It is an isolated facility claiming to use new and experimental methods of resocialization. In fact, it is a front, as the latent criminals are used to dig up radioactive waste. Without their knowledge or consent, they serve as an expandable workforce and are killed if the secret is in danger of being revealed. However, someone escaped to Tokyo, and now the inspectors are on their way.

The establishing shot of them arriving at the scene is a beautifully painted mountain landscape that functions as a background for all scenes outside the facility at the beginning. While most of the plot happens inside, later at night a blizzard occurs and provides the outside background for the heroes fighting the obviously corrupt leaders of the center. When the corruption is uncovered, there is battle inside and outside the facility at the borders of its collapse. In these sequences, the landscape is an untamed wilderness, uncontrolled and maybe even unexplored by humans. It is not only potentially hostile but surely threatening, which adds to the situation the inspectors and enforcers find themselves in. Because the environment’s hard and cold (no pun intended) aesthetics are upheld through both CGI and cel animation painting, the technological material is of less significance. Rather, the hostile environment of the mountains, albeit beautiful and supreme in the beginning, contrasts the rich colorfulness of the urban structure, visualized at the team’s departure before arriving at the facility. In Tokyo, earthy colors dominate under a clouded and stormy but bright sky. The cold-blue and white aesthetics of the mountains counter this color scheme and point out that the team of

the Public Safety Bureau operates strictly outside the otherwise controlled environment. This untamed hostility is further performed later through wind and snow pervading entire shots (fig. 4). In this respect, nature not only becomes an agent on its own, but it also frees itself from being a simplistic background by pushing to the forefront. It moves boldly behind and in front of characters, obstructs their and the audience's views, and thereby seemingly devours the architectural structures in freezing melancholy. This wilderness dominates human aspirations of control beyond its techno-urban realm.

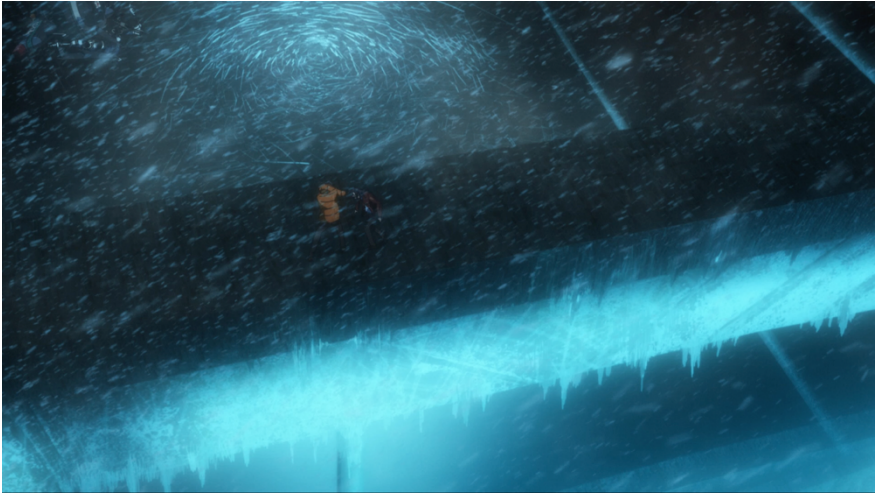


Figure 4: Storming snow overlays the battle between Ginoza and his adversary (Shiotani, 2019, *Case 1*, 00:51:38).

The plot of *Case 2* starts with a military operation in SEAUn and centers around a military base in Okinawa, Japan's most southern prefecture with a tropical climate and fauna. Okinawa Island, the largest and most populated island of the prefecture, has a deep historical connection to militarism. During the Pacific War (1937–1945), it was the only location of ground battle between US and Japanese troops, and, after 1945, it was occupied by the US until 1972. During the occupation, the US military held one of “the most concentrated arsenals of weapons of mass destruction on the planet in Okinawa. In addition, there were approximately one thousand nuclear warheads, thirteen

thousand tons of chemical weapons, nerve agents, and thousands of barrels of the infamous herbicide Agent Orange” (Oshiro, 2024, pp. 4–5). Still today, according to Oshiro (2024, p. 3), 70.6% of US military facilities in Japan are concentrated in Okinawa, and approximately 15% of the Okinawan area is occupied and used by the US military. It seems therefore obvious that there is concern about the environmental impact of the military in terms of, e.g., water pollution and military waste. Rather than focusing on environmental footprints only, Oshiro, drawing from numerous studies, calls for a point of view that includes Okinawan indigenous perspectives and epistemologies and examines the reciprocal relation between humans and nature. The footprint perspective, one might add, bears the risk of rendering nature (and indigenous people) as merely passive victims.

Case 2 draws from this historical relation between military complexes and the Okinawan environment. Though the military is Japanese, the short film’s plot makes evident that it holds a special position within the social order because higher officers are not quantified by the Sibyl-System while on military grounds. They are allowed to kill outside of Japan and are thus located within a liminal space. Even in this environment, they appear like foreign bodies, confined by military control and fences, and do not necessarily belong. Thus, both the location of the plot (the southern region of Okinawa and even SEAUn) and the agents (military) narratively point to the edges of the techno-urban society.

The beginning sequence of the short film takes place in the jungle with a Japanese military unit conducting an exercise. From the sky, Teppei, who is then a military pilot, watches over his comrades on the ground. In contrast to the jungle areas, where military battle happened in *Case 1*, this scenery is (digitally) painted and active in the sense of the movement of falling rain. There is a painted dense canopy of leaves in long shots and little details like singular leaves and branches in close shots. This is accompanied by rainy white noise, which the sounds of the soldiers’ intercoms cut through as they close in on their enemies. Nature as environment, here, does not seem to be technologically constructed (CGI). Likewise, it is not aesthetically different from otherwise moving cel animation figures. Rather, it also

appears as an active agent in which human action takes place and by which it is surrounded. This action, in the form of CGI explosions from Teppei's fired missiles, then disrupts the non-static environment. A shot in which a jeep jumps through the jungle echoes the composition of a similar frame in *TM*. In *Case 2*, however, neither nature as environment nor the jeep itself is constructed by CGI but appear in the optics of 2D cel animation. There are no detailed 3D textures, but 2D planes of trees and bushes evoke spatial depth and perspective (fig 5).



Figure 5: A jeep jumps through the cel animation jungle (Shiotani, 2019, *Case 2*, 00:07:08).

Contrary to a painted nature as environment, overthrown by technological action (CGI) as in *TM*, nature in *Case 2* retains its original (natural) form, its agency, and thus its withstanding quality in the face of human-made military destruction. In this respect, *Case 2* entails a development regarding a human-nature relationship in that it grants nature as environment its place. It, at least at the edges of *Psycho-Pass*'s society, seems to keep a certain form of its untamed wildness.

This relationship grows into an even further intertwined entanglement of nature as environment and technological culture through the

interconnectedness of painted landscape and moving CGI in *Case 3*. Outside of Sibyl's reach, Kogami has come to a Tibetan area of the world, that is marked by conflict and war. In his role as a mercenary who refuses to kill, Kogami is in search of a place to live. He encounters different conflict parties in an area marked by stunningly painted mountain landscapes, bathed in sunshine with clear-blue skies and a supreme vastness. Here, the scale of nature compared to human agency, mentioned by Yusof et al. (2025, p. 6046), shows that nature as the environment encompasses far more than the human-technological realm. Contrary to common cyberpunk perspectives, there is so much outside of the technological-cultural world, so much to explore, so many alternatives. The city that Kogami has found shelter in is located in the valley of surrounding green hills and mountains. A long shot showing high-towering buildings for maybe industrial purposes suggests that this might be a temporary situation, the city growing in height and expanding into its environment (fig. 6). However, this shot, too, is painted.



Figure 6: The Tibetan city in the vastness of the mountains (Shiotani, 2019, *Case 3*, 00:09:00).

Nature as environment and as an active agent, in *Case 3*, is signified by the movement of the constantly present wind throughout the short

film. Prayer flags (*rlung rta*), which are commonly found in the Tibetan area, originated from the animistic Bon religion before Buddhism, and, in the eighth century, found its way to Tibet (Rabten, 2011) function as indicators of this natural flow of air. They are present in numerous shots in *Case 3*, even during battle as Kogami saves a bus full of travelers from raiding bandits. Like most of the action sequences (as it was in *TM*), the movement of the flags shows characteristics of CGI, i.e., fluid movements following a 3D spatial logic. Likewise, movement in the grass suggesting wind appears to be digitally constructed (fig. 7). In this sense, we can detect a combination of painting and CGI in the performance of nature as environment in *Case 3* that surpasses prior enactments.



Figure 7: Prayer flags in a mountain area, signifying wind (Shiotani, 2019, *Case 3*, 00:05:42).

In a climactic sequence, Tenzing, Kogami's child-protegee, hides in the forest while she listens to the murderers of her family. As she comes up the backside of a hill on top of which the murderers stand, a panning shot from Tenzing to the upper hill, is completely constructed by CGI except for the characters. Flags and grass are swaying in the wind as the camera moves. The grass, usually at least partially painted, now looks different. There are more sharp edges, shadows

and much more singular strands. However, it is still a still image. Only the effect of movement is suggested through little ripples that like shimmering heat cut through the scenery. The grass is not really moving, but the image itself is partially distorted to evoke motion. At first, there seems no logical explanation in terms of a material semiotic as to why this particular shot had to be constructed by CGI. Shimmering effects of motion could be easily achieved with painted layers. At second glance, the camera panning over the moving flags might explain this way of performance. Such panning might not have been possible in a shot containing moving CGI flags over painted layers. It is simply easier to fully construct the scenery through CGI. This logic might as well apply to the action shots in *TM* and *Case 2*. However, in *Case 2* and *Case 3*, the aesthetic of nature is always switched back to that of painted backgrounds. Therein lies a tendency toward preservation instead of overthrowing of nature as environment. A possibly symbiotic relationship, a responsible landscape, might be the outcome.

Rlung means air, without which there can be no life, and which permeates all (livable) spaces. *Rta* “refers to the intelligent horse that perceives the thoughts of other beings and that brings you to whichever place you want to go” (Rabten, 2011, p. 153). Accordingly, the horse is a symbol of good luck. However, it also conveys a non-human perspective and signifies empathy with one’s environment. *Rlung rta* flags, in this sense, express a (religious) perspective going beyond a nature/culture divide. Success of living seems to rather be based on in relation and coexistence (with the non-human horse) than on controlling and taming the wilderness. In *Case 3*, it seems, CGI and painted nature as environment, thus, perform an entangled ecology on an aesthetical, a material, and a symbolic level. Therein, the exotic notion of the temple ruins in *TM* is echoed and elaborated on further. Instead of destruction and CGI overwrite, there seems to be community and embeddedness.

4. Conclusion

(Post-)cyberpunk narratives are usually comprised of techno-urban environments. Nature seems to be left out. This chapter, from a

media ecology and anime studies perspective, has examined nature as environment in the post-cyberpunk anime franchise *Psycho-Pass* by concentrating on the movie *TM* and the OVAs *SoS* (*Case 1–3*) accompanying the three TV seasons. While the TV seasons focus on the technological society, *TM* and *SoS* expand the franchise's view to the liminal spaces and areas outside the cyberpunk state. Anime are understood as specifically material and aesthetic performances that invoke their narratives and audiovisuals in particular ways. Media ecology provides a framework to examine distributions of different modes of performances within a particular anime as a creation of a (natural) environment.

Based on studies of nature in anime (mostly focusing on Ghibli movies), I have traced a development from *TM* (2015) to *SoS* (2019) in regard to different modes of performance, namely 3D CGI or (digitally) painted 2D cel animation, being employed for different purposes. I did not want to argue for a conservative take on animation, privileging traditional cel animation over CGI, but to call attention to specific modes of performance and how they interrelate. Further, I have tried to connect those performances to aspects of transhumanism and historical contexts.

In *TM*, CGI functions to perform techno-urban spaces and architecture (culture) in general in contrast to painted landscapes. Human action (battle), however, transforms nature into CGI, signifying human control and disregard for its environment in an apocalyptic, i.e., exploitative, manner. This is contrasted in *Case 1*, where the wildness of nature cannot be tamed, drastically emphasizing the borders of the techno-urban society. In *Case 2*, nature as environment retains its painted quality and thus resists cultural overwrite. This tendency is further developed in *Case 3*, where CGI and cel animation are more intertwined, nature as environment being painted and moving in 3D space at the same time. With those shifting modes of performance, shifts in scale and aesthetics come along, suggesting a change in the relation of techno-urban culture, and natural environment. This touches upon ways of production, distribution of production within the anime, and distribution of production toward the audience.

In summary, cyberpunk techno-urban societies exist within strict borders, outside which a vast natural world exists. The question is then how those spheres interrelate and interact. These anime productions, supplementing the (post-)cyberpunk scenery of the TV series *Psycho-Pass*, have provided an outlook on this otherwise neglected aspect of (post-)cyberpunk imagination. They contrast the all-encompassing techno-urbanity and offer visions of strange, yet familiar societies outside the grasp of transhumanist aspiration of technological control. The base for this conclusion is the performance of the moving image. It stands to reason that the attitude of cyberpunk towards nature as environment is shifting generally as well. This offers a starting point to address arising and concerning problems of environmental catastrophe and disasters and the overall question of how humanity is embedded in this world within an anime cyberpunk discourse for further research to explore.

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From Text to Ruin: Adaptation, Excess, and Futurity in Andrzej Żuławski's *On the Silver Globe*

Despoina Poulou¹

1. Introduction: Untimely Precursors

When Jerzy Żuławski began writing *On the Silver Globe* (Na Srebrnym Globie, 1903), the first part of his *Lunar Trilogy* (Trylogia Księżycowa), he was twenty-six years old and already established as a philosopher, poet, and translator. Kraków, where much of his intellectual formation took place, then lay within Galicia, the autonomous crown land of the Habsburg monarchy, which, since the late eighteenth-century partition of Polish territories among Russia, Prussia, and Austria (a historical trauma that would later resurface allegorically in Andrzej Żuławski's film *The Devil* [Diabel, 1972]; Goddard, 2014, p. 240), had enjoyed a relatively high degree of cultural and intellectual freedom. It was within this climate that the Young Poland (*Młoda Polska*) movement flourished as a broad cultural formation encompassing tendencies as varied as symbolism, Neoromanticism, and modernism, united by a common spirit of "rebellion against the stagnant social institution" (Balakian, 2008, p. 611). Like its European counterparts, the movement's Neoromantic sensibility was profoundly influenced by Schopenhauer's pessimism and Nietzsche's radical critique of moral and historical progress, currents that, for a generation of Polish artists living under partition, carried the weight of a lived historical condition. As Miłosz observes, "the central myth of 'Young Poland' was that of the artist who enters into contact with the ineffable essence of reality and, in a certain sense, redeems all those who do not dare to reach deeper than the superficiality of the daily grind" (Miłosz, 1983, p. 327).

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Where Schopenhauer and Nietzsche shaped the movement's broader cultural atmosphere, Żuławski's philosophical formation had an even more specific center of gravity: his doctoral dissertation, *Das Problem der Kausalität bei Spinoza* (The Problem of Causality in Spinoza; Żuławski, 1897), submitted to the University of Bern, examined Spinoza's philosophy of causality, a question inseparable, in his system, from the monist idea that mind and matter, reason and nature, are expressions of a single underlying reality. It is precisely this idea that gives *The Lunar Trilogy* its distinctive philosophical core, as rational knowledge collapses into myth and superstition, and science and religion are revealed as terrifyingly continuous. Lem notes that Żuławski set out to construct "his model of the philosophy of history" (Lem, Kwasniewski, & R. M. P., 1985, p. 2), a vision concerned with what civilization, wherever it is founded, invariably reproduces. This vision of civilization as self-repeating tragedy is what sets Żuławski's work apart from the technological optimism of Jules Verne and H.G. Wells, turning the genre toward questions it had rarely been asked to carry: how religions arise, why societies generate myth, and whether any civilization is capable of escaping its own historical limitations. Three-quarters of a century later, these questions would find an unexpected second life when, in 1976, Andrzej Żuławski, the novelist's great-nephew, returned to Poland to begin production on an adaptation of the trilogy, transforming its philosophical vision into cinematic form.

Andrzej Żuławski was already known for his intense, emotionally charged, and formally radical cinema (see Poulou, 2023), standing at the height of his international career, having just earned acclaim for his French-produced film *The Most Important Thing: Love* (L'Important c'est d'aimer, 1975). The film's international reception earned him state funding from the Polish government, enabling him to return to his homeland (he had been living in voluntary exile since 1972, when his film *The Devil* was banned) and undertake what would become his most ambitious project. Based mainly on the first two volumes of the *Lunar Trilogy* (*On the Silver Globe* [Na srebrnym globie, 1903] and *The Conqueror* [Zwycięzca; also translated as *The Victor* or *The Redeemer*, 1910]) and only partly on the third (*The Old Earth* [Stara Ziemia, 1911]), the film was positioned as an ambitious contribution to

philosophical science fiction, darker in vision than Stanley Kubrick's *2001: A Space Odyssey* (1968) and more directly aligned with the Eastern European tradition exemplified by Andrei Tarkovsky's *Solaris* (1972).

However, despite the scope of what Żuławski had set out to achieve, production was abruptly halted in 1977 by Janusz Wilhelm, the Vice Minister of Cultural Affairs, leaving just 72.5% of the film completed (Mikurda 2021, 1:06:40; for a note on whether this was the result of censorship or a matter of political feud, see de Corinth, 2024, p. 52). As a result, the crew was immediately disbanded, costumes and props were packed and stored, and anything that could not be relocated was buried in a landfill (Mikurda, 2021, 1:09:00). Żuławski was compelled to leave the country for a second time (Goddard, 2014, p. 240) and was only able to return and edit the footage a decade later. Unable to resume shooting, he completed the film by interweaving the finished scenes with shots of contemporary Poland, accompanied by his own voice-over narration of the unfilmed sequences. As Goddard observes, the film “had the potential to make a revolutionary contribution to both the science fiction genre and to Polish cinema, had it only been completed in its envisaged form” (Goddard, 2014, p. 242). Consequently, *On the Silver Globe* stands as a fractured epic, embodying themes of interruption and ruin in both its narration and its material existence.

It is from this doubled condition of interrupted transmission that the present analysis proceeds. Drawing on Linda Hutcheon's concept of adaptation as an active process of “(re)interpretation” and “(re)creation,” this chapter approaches adaptation as a medial transformation through which the novel's abstract philosophical reflections on civilization, language, and power are rendered as an embodied cinematic experience. Through paroxysmal performances, unstable camerawork, ritualized mise-en-scène, and dissonant sound, the film foregrounds the fragility of epistemic knowledge and its susceptibility to distortion; a fragility this chapter ultimately situates not within any single genre tradition, but at their unstable margins. That this vision was formulated in 1976, suppressed before it could be completed, and only partially released a decade later, places *On the Silver Globe* in a

peculiar position: a film whose contribution to the history of science fiction cinema remains largely overlooked.

The present analysis takes up this overlooked work in three movements: It first traces the philosophical foundations of Jerzy Żuławski's novel, situating its vision of civilization as self-repeating tragedy within his intellectual formation and the broader currents of Young Poland. It then turns to Andrzej Żuławski's adaptation, examining how performance, camerawork, and the film's own fractured production history transform this philosophical vision into embodied cinematic form. Finally, it considers where this work belongs within the broader landscape of speculative fiction, asking what a work this untimely reveals about the boundaries the genre draws around itself.

2. Jerzy Żuławski's Lunar Trilogy and an Impossible New Beginning

Writing within the intellectual milieu of Young Poland, a movement shaped by skepticism toward the age's positivist certainties, Jerzy Żuławski developed a form of philosophical science fiction preoccupied with questions of civilization and historical repetition, standing apart from the genre's prevailing faith in technological progress.

On the Silver Globe opens with a familiar premise of the genre: a group of five astronauts leaving Earth to colonize the moon, hoping to find a new world unburdened by the failures of the old. Among them, O'Tamor, the expedition's Irish astronomer and its originating visionary, dreams that a new generation "freed from the influence, especially the bad influence of Earth's 'civilization' would be the beginning of an ideal generation" (Żuławski, 2020, Book One, III. The Second Part of the Manuscript. On the Other Side, V). Żuławski almost immediately dismantles this idea. Deprived of the technological and institutional structures that sustained knowledge on Earth, the astronauts soon begin to forget and mythologize, leaving Jan Korecki, the only Polish astronaut and the novel's narrator, whose diaries we follow, as the sole figure in the expedition driven by the "all-powerful desire for knowledge". As he writes with quiet devastation: "We were

coming here for knowledge. Now, I see that the knowledge itself doesn't give you satisfaction if you cannot preserve it and pass it onto others" (Żulawski, 2020, Book One, II. The Manuscript, Part One: Travel Diary).

By the time he writes his final entries, the third lunar generation—grandchildren of Martha, the expedition's only woman and the colony's first mother—has become, in Korecki's own words, "half human creatures," "pseudo-people" (Żulawski, 2020, Book One, Part IV: Among the New Generation, III). They can read and write, smelt metals, use tools, and speak to him in good Polish. But among themselves, they use "a strange, limited dialect consisting of Polish, Malabar, English, and Portuguese words," in which "thoughts float lazily and heavily in their tight skulls" (Żulawski, 2020, Part IV, III). Languages that once carried distinct bodies of knowledge have fused into a dialect that can no longer bear the cultural complexity each once held, and in tracing this collapse, Żulawski suggests that language and worldview are bound together, each forming the other in a continuous exchange. Wilhelm von Humboldt, writing a century earlier, had already argued that language actively shapes how people perceive and conceptualize reality, each language embodying a distinct worldview (*Weltansicht*) (Humboldt, 1999), rather than serving as a neutral tool for expressing thoughts already formed. Żulawski's colony enacts this idea almost literally, as Polish, English, Portuguese, and Malabar are merged into a single reduced dialect, and the distinct worldviews those languages carried collapse into a single, barren way of seeing.

This crisis of language was a live philosophical inquiry in fin-de-siècle Europe: Fritz Mauthner, writing his *Beiträge zu einer Kritik der Sprache* (Contributions Toward a Critique of Language) around the time of Żulawski's first book, argued that "knowledge of the world through language is impossible" (cited in Weiler, 1958, p. 81), and developed this position through his own engagement with Spinoza—a philosopher Żulawski had also engaged at the root of his own thinking. For Mauthner, every word is a generalization, a simplification inherited from past usage, standing between the knower and the world rather than opening onto it. That such arguments were being made precisely the moment Żulawski was writing suggests that the novel's

philosophical concerns were shaped by a broader intellectual climate in which the relationship between language, knowledge, and world was being actively questioned. *On the Silver Globe* plays out this philosophical problem with unsettling directness, as what was once scientific fact quietly mutates into stories and then into myth. Korecki's anticipation of this transformation, that the books they brought from Earth "will be more magical for the future inhabitants of the Moon than the Arabian Nights were for us" (Żuławski, 2020, Book One, Part IV: Among the New Generation, V), already identifies myth as what fills the gap once no one is left who remembers.

The trilogy's own narrative charts this process step by step, from O'Tamor's utopian hope to its systematic undoing. The first stage is visible in Ada, one of Martha's daughters and among the first generation born on the moon, who has never seen Earth but already experiences Korecki's presence as something beyond knowledge: "I look at you in this world, and I see some greatness in you, some light, some power, something I don't know, but I know that it came here with you from the stars" (Żuławski, 2020, Book One, Part IV: Among the New Generation, VI). She knows the fact but can only experience it as a mystery. By the time the third generation arrives—the "half human creatures" already mentioned—even this residual awareness has dissolved entirely. In Book Two, the expedition's history appears to have been compressed into two golden shields on a black marble wall, "passed down from age to age and from generation to generation," one depicting "the people's coming to the Moon from Earth" and the other the Old Man's promised return as savior. The young priestess Ihezal draws a circle on her forehead, a semicircle from shoulder to mouth, a horizontal line across her chest, and whispers: "He will save us and destroy our enemy, and it will really happen." Beside her, the colony's high priest, Malahuda, echoes: "It will really happen..." and "some spasm of bitter pain or irony choked his last word in his throat" (Żuławski, 2020, Book Two: The Conqueror, Part One, I). The trilogy demonstrates through this sequence that myth grows from the same conditions that once sustained knowledge, filling the space left by knowledge's absence. What begins as a scientific enterprise transforms into storytelling and, gradually, into a primitive theocratic

order governed by fragmented memory and superstition, as the moon proves no escape but a renewed field for the affirmation of the same. As Wodzyński observes, the lunar landscape ultimately becomes “a mirrored reflection of the Earth itself, a geographic embodiment of the Earth’s spiritual condition, impoverished by materialism and scientific rationality” (Wodzyński, 2018, p. 695), suggesting that what changes is the setting, not the logic.

This is the world *The Conqueror* inherits. Upon the Old Man’s death, the second volume opens onto a colony fully transformed: the founders have become divine figures, their history sacred myth, and society organized around a theocratic hierarchy governed by Malahuda. Into this world arrives Marek, a young traveler from Earth, welcomed as the long-awaited Conqueror-Messiah, destined to free the colony from the domination of the Sherns—a telepathic, bird-like native species that has subjugated the lunar people. When Marek tries to reform the colony, Malahuda warns him: “whatever happens, it won’t change the usual order of sunrise and sunset in any way [...]. The wind will be able to tear the stone from the top of O’Tamor [the volcanic mountain named after the expedition’s Irish astronomer] and throw it into the valley, but the greatest people’s happiness or misfortune will not move a grain of sand on the water’s edge...” (Żulawski, 2020, Book Two, Part Three, IV). Marek ignores these warnings. His rebellion against the Sherns achieved a partial victory, but the colony’s deeper structures—its compulsion toward power and sacrifice—prove resistant to reform. His followers turn against him, and the volume closes with his crucifixion, confirming the colony’s inability to escape its cyclical faith. The parallel with the New Testament is inescapable, but Żulawski’s point runs deeper: the colony arrives at the messianic narrative independently, proving that the social and psychological conditions that generate such narratives are structurally inevitable.

The trilogy’s third volume broadens this critique by shifting the focus back to Earth. Where the lunar colony demonstrates the collapse of reason into myth, the future Earth represents the opposite path: a civilization that has achieved extraordinary scientific and technological advancement only to find itself spiritually exhausted and historically stagnant. “[R]ationalism and instrumental reason thus reveal

themselves as poor substitutes for metaphysical imagination” (Wodzyński, 2018, p. 700). The two trajectories ultimately converge on the same conclusion: whether societies surrender entirely to myth or are paralyzed by pure rationalism, they find themselves equally incapable of meaning. The future resolves nothing—it only reproduces the tensions of history in new forms, suggesting that recurring structures of power and belief reassert themselves, whatever form progress takes. The trilogy closes on a single, unyielding claim: that no civilization, wherever founded, escapes what it carries within it.

Lem, admiring the novel’s opening sections while remaining critical of the later volumes, writes that “this sociological homunculus was too manifestly brewed in the retorts of modernism” and that the author’s “formative role is felt too forcibly beneath the surface of the vicissitudes of the personages” (Lem et al., 1985, p. 2). Yet on the same page, Lem himself notes exactly the process this argument describes: “the real event, the heroic ‘Exodus’ from the Earth to the Moon, gradually loses its human and real countenance and becomes, for future generations, an object of cult-worship petrified in symbols, signs, and liturgical rites” (Lem et al., 1985, p. 2) —a trajectory the trilogy follows from Ada’s first unspoken awe to Malahuda’s last spoken lie.

This capacity to transform geographical space into a map of civilizational anxiety also distinguishes Żuławski from his predecessors in the genre. Żuławski moves beyond both Verne and Wells in transforming the imaginary geography of his science-fictional setting into a cognitive map of his protagonists’ cultural sensibility, stretched between melancholia after an evanescent sense of wonder and a hope for the possibility of resetting human history without erasing cultural memory. Żuławski’s adventurers are on a quest for the “grail” of re-enchantment, their pursuit taking them across landscapes that keep reminding them —like the spectral sphere of the Earth haunting Korcek’s expedition— that escape to other worlds and other futures cannot outrun a history that has already gotten there first. As Wodzyński observes, “modernist style and content intensify (and intellectualize) the otherworldliness of Żuławski’s landscapes, whereas the dual nature of the romantic geographies creates a stark and dynamic

environment in which the various ideological contrasts that pervade modernist discourse can be dramatized and translated into an engaging narrative” (Wodzyński, 2018, p. 701). Unlike Joseph Conrad’s protagonists, Wodzyński notes, “the protagonists of *On the Silver Globe*, *The Conqueror*, and *The Old Earth* cannot truly escape either history or politics, which is what distinguishes him from his predecessors in the science fiction genre” (Wodzyński, 2018, p. 701).

3. *On the Silver Globe*: An adaptation and a cinema of relics

It is this vision of civilization as self-repeating tragedy that Andrzej Żuławski inherited and transformed into cinematic form. Adaptation theory has long moved away from fidelity as its governing criterion, understanding the process as a creative transformation through which texts are reinterpreted within new aesthetic and cultural conditions. As Hutcheon argues, adaptation is always “repetition without replication” (Hutcheon, 2013, p. xviii), a process in which divergence from a source is the very mechanism of producing meaning. From this perspective, what makes Andrzej Żuławski’s *On the Silver Globe* an unusual case of adaptation is that part of its divergence from the novel was imposed: production was halted by state intervention, and the missing scenes were bridged a decade later by shots of contemporary Poland and Żuławski’s voice-over narration of the original script. Hutcheon’s understanding of adaptations as texts shaped by shifting intentions and changing material conditions (a framework she develops in dialogue with Bryant’s concept of “fluid texts”, 2002) resonates with particular force here. Under these conditions, what began as an adaptation of a philosophical science fiction novel became a film whose fractured material existence embodies the very themes it set out to explore. As Żuławski himself acknowledged in the film’s closing moments while his reflection appears in a shop window: “the small drama of this film and the larger and more noble drama of our lives will continue to interweave into a web of triumphs and failures” (Żuławski, 1988, closing voice-over).

On the Silver Globe opens with a striking framing device, as a horse rider delivers to a group of scientists a strange item that fell from the

sky in flames. Upon examination, it is revealed to be a damaged transmission module containing a visual diary from a past expedition of astronauts—Martha (Iwona Bielska), Piotr (Jerzy Gralek), and Jerzy (Jerzy Trela); Tomasz (Leszek Długosz) having died immediately—who vanished decades ago after landing on an unknown planet. In this single device, Żuławski performs perhaps the most central transformation of the adaptation: Korecki's written diary, the novel's first-person narrative voice, becomes a kind of video diary, recorded by cameras embedded in the suits of the three surviving astronauts—exemplifying what Hutcheon calls adaptation's essential logic, that “the adapted text... is not something to be reproduced, but rather something to be interpreted and recreated, often in a new medium” (Hutcheon, 2013, p. 84). What the novel renders as confession on the page, the film renders as direct address to the lens and as the formal root of the subjective, talking-to-camera mode that especially structures the first part of the film. Once the diary is found, the film moves into an extended flashback, drawing the viewer into a gradual collapse of civilization, from scientific expedition to primitive theocracy, and then, as in the novel, into the arrival of Marek, a messianic figure whose failure to reform the colony confirms what the diary has already implied: that the same structures of power reassert themselves, wherever civilization is founded.

Martha, who gives birth to the colony's first children, is gradually elevated to the status of “The Fertile Mother Martha”. Stories soon circulate that she “begot thunder with the Moon in heaven,” thereby creating “all parts of the world” (Żuławski, 1988, 47:55, 59:25). These mythopoetic narratives illustrate the precise mechanism through which facts gradually become distorted and abstracted, transforming into a form of divine cosmogony. As Martha is merged with Christian iconography and pagan archetypes of the Earth Mother, she becomes an omnipotent, life-giving figure whose actual existence is entirely consumed by the community's need for sacred origin, remaining foundational for the civilization that follows but not in a position of power. (On the matter, see also Wodzyński, 2018, p. 693, who reads this dynamic through the broader context of early modernist

misogynist fantasy, in which the lunar landscape itself functions as a projection of the archetypal *femme fatale*.)

The film makes this transformation visible through Martha's appearance, as her astronaut suit, that once marked her as a scientist, gradually gives way to animal skins and ceremonial markings. (In the book, Martha joins the expedition as a last-minute replacement, following Tomasz, the English physician she loves, rather than any scientific purpose.) The result is a visual world of accumulated materiality, what Romney (2016) describes as "eclectic ethnographic borrowings, touches of African, Japanese, Native American, and Northern European shaman style, cumbersome constructions of fur and feather," with "a remarkable tactility: we become very aware of the texture of rubber, feathers, fabric, prosthetic scars, peeling face paint". The costumes carry the weight of generations of use, adaptation, and forgetting. Magdalena Teslawska, one of the film's two costume designers alongside Krzysztof Tyszkiewicz, herself declared that "there's nothing worse in a film than costumes that look like they've come straight off a coat hanger" (Biernawska-Teslawska, cited in Bird, 2021a). Most significantly, Bird observes that as the colony's religion becomes organized, the costumes "lose all function and become purely symbolic" (Bird, 2021b, 5:10); objects are transformed into relics, and their original utility is replaced by ritual meaning. As objects outlive their function in Żulawski's film and become sacred, the film itself was no exception. The costumes stored after the 1977 halt, the footage preserved against the state's intent: these, too, became relics, fragments of a vision that survived its own suppression. This transformation from the material to the mythic extends to the film's characters.

Where Martha is absorbed into myth and displaced from history, her two male companions are memorialized as named authorities: Piotr as the Founder and Jerzy as the Old Man. Goddard notes that the film increasingly adopts the perspective of Jerzy as "a semidivine outcast and therefore an observer who is both within and outside the world of the film" (Goddard, 2014, p. 243), a liminality emphasized by his association with the desert landscape and his survival across successive generations, his body aging at a different rate from those around him, marking him visually as a figure out of time. In the film's

first part, it is Jerzy's camera that mediates the viewer's access to a world in the process of becoming illegible. His camera is in constant movement, unpredictable and disorienting, mirroring his despair as he documents a civilization in decay. The cinematography of Andrzej Jaroszewicz, Żulawski's regular collaborator, of whom the director said that "he will know by instinct what my instinct will be in a situation" (Żulawski, as cited in Bird, 2021c), extends this disorientation into the viewer's own body. The camera, as Romney notes, performs "as much as anyone in the cast" (Romney, 2016), following the action with exceptional readiness and mastery. Alongside this restless camera, Jerzy's monologues on the gradual loss of language, memory, and shared meaning begin to construct what Bird describes as an intellectual mosaic, a "collage of [philosophical] texts" (Bird, 2021a, 14:40).

As the colony's founding generation ages, the Old Man gazes directly into the camera and says: "I was taught that the eye of the world looking at me is the same eye with which I see the world". He frequently employs chiasmus, a rhetorical figure in which concepts are reversed only to return to the same point, mirroring the film's core argument. The line echoes Jerzy Żulawski's own dissertation question—what binds an observing mind to the world it sees—but also Andrzej Żulawski's own voracious reading. As Bird notes, the film draws on citations from "Swedenborg, Sufi and Buddhist texts, Meister Eckhart, the Gospel of Saint Thomas, Hegel, Martin Buber" (Bird, 2016), assembled from books Żulawski read and annotated in pencil, passages underlined and later finding their way into both his books and film scripts (Bird, 2021c). What Bird describes as a "collage of [philosophical] texts" is the film's structural principle: the Old Man's monologues are a civilization's last attempt to hold in language what language can no longer contain, and the arc of this dissolution is traced across the film's entire duration. At its opening, Tomasz asserts that "there is truth in everything I say, if I am able to say it" (Żulawski, 1988, 18:24)—a conditional that already contains its own unraveling. While the film's philosophical sources are eclectic, ranging across mysticism, theology, and idealist philosophy, the specific anxiety this line stages is one that two very different philosophical traditions converge on: Heidegger's assertion that "language is the house of the

truth of Being” (Heidegger, 1998, p. 239) and Wittgenstein’s proposition that “the limits of my language mean the limits of my world” (Wittgenstein, 2001, p. 68). Different as their methods are, both thinkers share, as Hatab and Brenner observe, the conviction that language constitutes the world rather than merely describing it, for it is the medium through which reality becomes thinkable at all; “world and language are coextensive” (Hatab & Brenner, 1983, p. 29). An hour into the film, Jerzy can only proclaim: “I know everything, yet I understand nothing” (Żuławski, 1988, 59:00). The distance between Tomasz’s opening conditional (“if I am able to say it”) and Jerzy’s paradox (“I know everything, yet I understand nothing”) is the film’s argument: knowledge without the linguistic community that sustains it has ceased to be knowledge at all.

It is this dissolution that Jerzy’s death makes irreversible, marking the film’s threshold. With his passing, the tale of origin gives way to a society where myth has become law and memory has become the primary instrument of power. Into this world arrives Marek, exalted as a messiah, and the film’s inquiry sharpens around a single question: what becomes of freedom when knowledge survives only as relic and symbol? The answer is concentrated in Marek’s encounter with an imprisoned Shern, during which the alien declares: “I am a reflection of what is in you. You are not a reflection of what is in me”. The asymmetry is precise, since Marek cannot encounter genuine difference, turning every encounter with the Other into a mirror of his own self-referential longing for a utopia the colony’s violence has already made impossible. The Shern sees Marek fully; Marek sees only himself.

Marek’s existential agony deepens as he realizes the circularity of history. “Infinity is within,” he declares, evoking Nietzsche’s notion of *eternal recurrence*, where time and being unfold in ceaseless repetition, and the actual test of existence is the capacity to affirm life within this cycle. Żuławski frames Marek as a tragic Nietzschean figure: given the role of the *Übermensch* as articulated in *Thus Spoke Zarathustra* (Also sprach Zarathustra), the being capable of forging new values beyond conventional morality, he finds that collective madness and cultural disconnection leave no ground on which new meaning can take hold. Marek becomes the embodiment of an all-too-familiar myth,

demonstrating that no *Übermensch* can emerge in a society governed by fear, spectacle, and a compulsion to repeat itself. But the film's existential crisis extends beyond its monologues into the spaces the characters inhabit.

Żuławski shot the film in Polish seaside locations, salt mines, and quarries, transforming them into an alien world that never fully detaches from Earth. Wide-angle and fisheye lenses, jarring close-ups, and first-person point-of-view shots further estrange the landscape, forcing the viewer to see through distorted, subjective perspectives that mirror the colony's own epistemic disorientation. In the film's second part, the cinematographic approach shifts: the camera widens its field as if attempting to contain a world that has grown too strange for the subjective eye (Bird, 2021a, 1:13:14), while the color palette moves from the stark, blue-tinted imagery of the first part toward denser, darker tones: heavy reds, ochres, and metallic hues that visually register the theocratic order's oppressive weight. Costumes become more decorative and ornamental, their symbolic function openly declared. As Goddard argues, "where the echoes of the Bible in the original were likely meant as a critique of the violence of monotheistic religion, in the film there is a clear allegory of life under communism as an attempt to construct a utopian world that becomes increasingly cruel, violent, hierarchical, and prone to degeneration" (Goddard, 2014, p. 244). This political dimension is reinforced by Żuławski's decision to complete the film by inserting contemporary footage of Polish streets, industrial zones, and government buildings, which, as Goddard observes, "seems to imply an equivalence between the science fiction world presented on the screen and a strangely dislocated view of contemporary Poland as an alien world" (Goddard, 2014, p. 244). These ruptures become part of the film's ontology, as the present breaks into the past and the fictional world collapses into the real. A totalitarian future becomes inseparable from a communist past, and the film becomes a fractured myth that cannot complete itself, echoing the incomplete spiritual and political revolutions it portrays.

For *de Corinth*, this collapse extends beyond the thematic to become constitutive of Żuławski's cinema as a whole. His protagonists "behave as if without linguistic structure," their speech functioning as what *de*

Corinth calls “paralogy,” a dissociation from the symbolic use of language that registers as both aesthetic and existential crisis (de Corinth, 2024, p. 120). *On the Silver Globe* enacts this process with particular literalness for the film “depicts a civilization that gradually abandons written language altogether, allowing for a population of ‘actors,’ who communicate largely through wordless performance, to emerge,” with Jerzy observing the hieroglyphics written by Tomasz as “something he wanted to draw, for he has forgotten writing” (de Corinth, 2024, p. 120). De Corinth reads this collapse through Kristeva’s concept of abjection, arguing that Żuławski’s cinema constitutes “an experience of the abject, both in its depiction of its subjects and in the embodiment of its own form” (de Corinth, 2024, p. 13). The present chapter approaches the same phenomenon through a different theoretical frame, though de Corinth’s reading confirms the depth of the epistemic and linguistic crisis at the heart of both the novel and the film.

It is precisely this condition—knowledge surviving only as relic, history repeating as compulsion, form itself fractured by the forces it depicts—that the following section will situate within the broader landscape of speculative fiction, asking where a work this singular finally stands.

4. As Punk as It Gets?

The preceding sections have traced, in both novel and film, a philosophical core: that civilization carries its own undoing within it, and that whatever new beginning is attempted, the same structures of power reassert themselves. A work animated by this conviction sits paradoxically within science fiction, a genre that, in its dominant Anglo-American tradition, has been oriented toward futurity, change, and the possibility of transformation. No single category quite holds this enterprise. Asking where Żuławski’s *On the Silver Globe* belongs, a question that haunts his corpus, is less an act of classification than of diagnosis, since the film reveals its nature as much through what it refuses to be as by what it actually is.

At its broadest, both novel and film belong to the tradition of philosophical speculative fiction, in which the construction of an alternative world serves not adventure or technological extrapolation but a sustained inquiry into the formation of societies and the structures of power that drive human civilization to repeat its own failures. On the surface, *On the Silver Globe* even invites comparison with space opera: its interplanetary expedition, civilization-spanning narrative, alien antagonists, and messianic hero are all recognizable ingredients of the form. But Żulawski refuses every assumption the form requires. The hero who acts is absorbed by the system he came to challenge; the new beginning transforms nothing; the conflict ends in a crucifixion rather than a resolution. Where space opera celebrates the new beginning as a space of possibility, Żulawski uses it to demonstrate that there is no such thing, that whatever humanity carries with it reasserts itself wherever it lands. Within this tradition, Lem had already done precisely this, taking Western space opera's premise and subjecting it, in Booker and Thomas's words, to "a new level of intellectual seriousness" (2009, p. 43). Żulawski's novel and Andrzej's film, independently and decades apart, enact the same gesture, each in its own medium.

This positions *On the Silver Globe* more precisely within the Eastern European dystopian imagination. Erika Gottlieb's study of dystopian fiction produced in the Soviet Union and the Soviet bloc between 1920 and 1989 identifies a fundamental divergence from the Western canon: where Western dystopia imagines the monster state as a future warning, a possible catastrophe the reader is still positioned to avert, Eastern European dystopian fiction "present[s] us with a nightmare world not as a phantasmagorical vision of the future but as an accurate reflection of the 'worst of all possible worlds' experienced as a historical reality" (Gottlieb, 2001, p. 17). Jerzy Żulawski arrived at this position in 1903, before the Soviet era had begun and before this tradition had a name for what he was doing. Andrzej's film, made under communist Poland in 1976, inherited it as lived fact rather than speculative warning. Though, what gives a dystopian structure like this its enduring shape, Gottlieb argues, is a single template drawn from Dostoevsky's parable of The Grand Inquisitor in *The Brothers Karamazov*

(1880): a returned, suffering figure of liberation is imprisoned and condemned by the very institution that claims to act in his name, whose representative explains, with chilling candor, that the people “do not really want to be free; they want to be happy,” and “can only be happy by giving up their freedom” (Dostoevsky, cited in Gottlieb, 2001, p. 50). Marek arrives as precisely this kind of returned liberator, and the colony’s own high priest delivers the same confession: the people, Malahuda warns him, do not want what Marek offers; the structures that bind them are not imposed from outside but chosen, sustained, and defended from within. What the parable illuminates, on Gottlieb’s account, is “the inevitable contrast between spirit and institution,” a contrast that “forces the institution to corrupt the spirit if it wants to survive in the world” (Gottlieb, 2001, p. 50). Marek’s crucifixion, in this light, is not a defeat inflicted on him by tyranny alone; it is the institution doing precisely what institutions must do to survive. This same logic, institutions absorbing or destroying whatever threatens their survival, also describes a shift taking place in science fiction cinema during this period. As Majsova observes, *On the Silver Globe* and Ridley Scott’s *Alien* (1979) mark “a thematic development in late twentieth-century science-fiction cinematography,” approaching the threat of extraterrestrial encounter differently than earlier productions had: where “the menace that characterized extraterrestrial life in 1950s and 1960s space sf movies was no longer just a simple fear of being eliminated by the alien,” both films instead locate the threat in “an alien model of life, which could not be incorporated into terrestrial models of governance and administration due to its very alienness” (Majsova, 2021, p. 18). *On the Silver Globe* and *Alien* arrive at this same shift independently, but from opposite directions: *Alien* through corporate technology and body horror, *On the Silver Globe* through theocracy and the slow collapse of a colony’s own language.

What finally clarifies where the film belongs is not a question of genre at all but of direction. Istvan Csicsery-Ronay distinguishes two opposing vectors in twentieth-century science fiction. The first, which he calls expansive, dominated the genre through the 1950s: “projectiles of human consciousness fly giddily out into ‘outer space,’“ where exploration confirms either “the universality of consciousness”

or “the laws of *moira*,” but in either case “human consciousness can contain the future” (Csicsery-Ronay, 1988, p. 271, emphasis in original). The second, implosive, vector reversed this current beginning in the 1960s: rather than expansion, “now there is implosion, a drastic, careening plunge toward some inconceivable center of gravity that breaks up the categories of rationality by jamming them together,” driven not by “the desire for containment” but by “the desire for dissolution” (p. 271). Cyberpunk, in his account, is implosive science fiction’s most fully realized expression, locating its dread not in the stars but in “the body-physical/body-social,” in “the impossibility of drawing clear boundaries” between human and machine, parasite and host, self and system (pp. 271–272).

On the Silver Globe begins, unmistakably, inside the expansive mode, an expedition launched in confidence, carrying scientific reason outward to a new world, exactly the gesture Csicsery-Ronay associates with “the optimistic and secure ideology of scientific humanism” (p. 271). It does not sustain that vector for more than a single generation. With the same drastic, careening momentum Csicsery-Ronay assigns to cyberpunk, the film collapses into precisely the implosive condition he describes: categories of rationality jammed together until myth and knowledge can no longer be told apart, the boundary between observer and observed dissolved in the Old Man’s chiasmus, the boundary between self and Other dissolved in Marek’s encounter with the Shern. The film achieves cyberpunk’s implosion without any of cyberpunk’s machinery, no cybernetics, no corporations, no networked culture, only theocracy, ritual, and the slow failure of language across generations. This is not to claim that *On the Silver Globe* is cyberpunk in any conventional sense; it has no information economy, no hacking, no corporate antagonist, none of what would define the genre proper a decade later. What it shares with cyberpunk is something deeper: the implosive structure itself, “the disruption of knowledge in its most tangible form” (p. 273), the same dissolution of the boundary between self and system that Csicsery-Ronay identifies as the genre’s defining achievement.

And yet, for all its resistance to classification, *On the Silver Globe* is punk, in a sense that also adds to the discussion. The film was made

in direct defiance of state authority: its production halted by the Vice Minister of Cultural Affairs, its costumes assembled from discarded materials, its missing scenes improvised from contemporary footage and voice-over, its reels stored and partially buried. This is punk in the original, pre-generic sense: DIY, anti-establishment, made and remade under conditions of refusal. Whatever the genre categories circling it finally conclude, *On the Silver Globe* is simply punk.

Conclusion

On the Silver Globe does not end in arrival or resolution; it endures the liminal, the gap between knowledge and belief, between utopia and catastrophe, between the visible and the unknowable. Żuławski's fractured epic, novel and film together, challenges us to confront how knowledge becomes ideology, how isolation breeds fear, and how human longing repeats itself. Myths, technology, and power are never distant abstractions in this work; they shape our politics, our societies, and our sense of self.

Michael Atkinson, writing of the film decades after its troubled completion, called it “one of the most unforgettable visual assaults in movie history” (Atkinson, 2008, p. 82). Majsova places it, alongside the first cinematic adaptation of the Strugatsky brothers' *Hard to Be a God* (1989), among “the last important developments of the genre in the twentieth century,” an innovative contribution that subverted the conventional form of the space science fiction epic “to highlight the body-political aspect of such epics” (Majsova, 2021, p. 16). The chapter has argued that this case illustrates how a text's transformations can continue beyond any single authorial act, shaped by the historical and political conditions of its own survival. To revisit Żuławski's today—the philosopher who wrote in 1903 and the director who filmed seventy years later under communist rule—is to recognize the scale of what they undertook together: not one warning issued once, but the same question asked twice, in two different mediums, across nearly a century, by two men who shared both blood and conviction, that no civilization escapes what it carries within it, and that transcendence remains an unsettled, unfinished task.

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Lu Yang: Electromagnetic Brainology – die künstliche Superintelligenz als posthumane Spezies? Ästhetisch-spirituelle Zukunftsvisionen im transformativen Raum

Sandra Braun¹

1. Einleitung

Ich lehre euch den Übermenschen. Der Mensch ist Etwas, das überwunden werden soll. Was habt ihr gethan, ihn zu überwinden? Alle Wesen bisher schufen Etwas über sich hinaus: und ihr wollt die Ebbe dieser grossen Fluth sein und lieber noch zum Thiere zurückgehn, als den Menschen überwinden? (Nietzsche, 1994, S. 10)

Mit diesem Zitat von Friedrich Nietzsche, das den Übermenschen und seine Selbstüberwindung quasi als evolutionäres Ziel formuliert, soll eine kognitive Brücke zur Überwindung von Körperlichkeit hin zur Transzendierung in digitalen Räumen geschlagen werden. In den Werken der chinesischen Medienkünstlerin Lu Yang werden durch die Einbindung buddhistischer Kosmologie und der Neuroästhetik sowie durch eine Synthese verschiedenster ästhetischer Kategorien westliche wie auch östliche Zukunftspantasien und -visionen im transformativen Raum erzeugt, die einem eigenen ikonografischen Vokabular unterliegen. So werden europäische und asiatische Sehgewohnheiten gekonnt zusammengeführt, vor allem unter Einbeziehung alter chinesischer Traditionen und Mythen.

Als subversive Erneuerung in der Science-Fiction Bewegung und als kulturelles Phänomen hat der Begriff Cyberpunk gerade in den letzten fünf Jahren eine Art Revival vollzogen, der sich, in Anlehnung an den Ästhetik Trend der 1980er Jahre und den Retrofuturismus, mit

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Schlüsselphänomenen der Postmoderne und des Posthumanismus und der Verhandlung posthumaner Identitäten im digitalsten aller Zeitalter und der visuellen Kultur wie auch in der Science-Fiction-Literatur auseinandersetzt.

Cyberpunk-Literaten wie Bruce Sterling und William Gibson, die in den 1980er Jahren mit Werken wie *Neuromancer* oder *Mirrorshades: The Cyberpunk Anthology* neue Wege der Science-Fiction-Literatur bestritten und propagierten, entwickelten in ihren Erzählungen dystopische Großstadtszenarien zukünftiger Gesellschaften. In diesen posthumanen Szenarien halbzerfallener ostasiatischer Megacities, regiert von mächtigen internationalen Kooperationen und Konzernen, entwickelten die Autoren Cyborg-Vorstellungen, deren ultimativer Ausdruck die Verschmelzung von Mensch und Maschine in einer zunehmend technisierten und von Simulationen geprägten und bestimmten Umwelt ist (Sterling, 1988).

Der Begriff Cyborg wurde 1960 von Manfred Clynes und Nathan Kline als Neologismus für cybernetic organism geprägt und bezeichnet einen Menschen, der mit Maschinen oder Maschinenkomponenten technisch optimiert ist und einen sog. Mensch-Maschine-Hybriden darstellt (Clynes, 1960, S. 74–75). Diese Hybridisierung kann auch über physische Erweiterungen hinaus kognitiv mittels einer Verschmelzung mit einer künstlichen Intelligenz erfolgen, bis hin zur Vorstellung einer künstlichen Superintelligenz (Hayles, 1995, S. 321–335; Spreen, 2010, S. 170; Bostrom, 2016, S. 260–291).

Die Fokussierung auf das Individuum und seine Identität in einer von Hochtechnologien und digitalen Medien bestimmten Welt wird dabei als zentrales Motiv mit einer Vielfalt an Ansätzen zur Darstellung des künstlichen Menschen und hybriden Cyborg-Wesens verhandelt - bis hin zur Transformation und (Selbst-) Auflösung des Körpers im digitalen Code (Brown, 2010, S. 13-53; vgl. Atasoy, 2025, S. VI-X).

2. Zielsetzung des Beitrags

Der vorliegende Beitrag untersucht im Folgenden unterschiedliche Konzepte des „Cyberspace“, der der Digitalisierung und künstlichen

Intelligenz am Beispiel von Lu Yangs Videoinstallationen mit dem Schwerpunkt auf dem „neuen“ Charakter des Cyberspace: Grundlegende Annahme der Ausführungen ist, dass der „Cyberspace“ bei Lu Yang als Infrastruktur für Bewusstsein zu identifizieren ist, die digitale Präsenz, Simulation und hybride Identitäten miteinander verbindet. Dadurch würde wiederum eine aktualisierte Form des Bewusstseins durch die digitale Infrastruktur im Cyberspace entstehen, die als hybride und fluide zu charakterisieren ist. Damit würde Lu Yang in ihren Werken die grundlegende Frage nach der *conditio humana* aufgreifen: wie bisher dargestellt wird diese zunehmend als postbiologische und durch physische und mentale Erweiterungen optimierte Existenz definiert, die die eigene Identität in digitalen Sphären überwindet. Körperlichkeit und Selbstbild wären folglich bei Lu Yang in der digitalen Infrastruktur kontinuierlich im Fluss, wobei Identität, Geschlecht und Selbstwahrnehmung eine Entgrenzung und Entfremdung erfahren würden, die wiederum zu einer Aufhebung der Grenze zwischen physischen und digitalen Sphären führt.

Lu Yang (*1984, Pronomen: sie/ihr) ist eine von der Kritik gefeierter internationaler New-Media-Künstler:in der Gegenwart und aufstrebender Star der zeitgenössischen Cyberpunk-Kunstbewegung Asiens mit Sitz in Shanghai, in China, der/die in den Bereichen 3D-Animation, Motion-Capture, Artificial Intelligence, Virtual Reality, Film, Live-Performance, Video-Game-Installation und Hologramme an der Schnittstelle zwischen analoger und digitaler Welt arbeitet.

Eine kritische Analyse der Konzeptionalisierung von KI in Lu Yangs Werk soll der Frage nachgehen, welches menschliche Selbstbild und welches Körper-Geist-Modell Lu Yang vertritt und welche zeitgenössischen Vorstellungen zum Verhältnis Mensch-Maschine-Komplex prägend sind. Welche Perspektiven dominieren Lu Yangs Vorstellungen zum Mensch-Maschine-Komplex und zur künstlichen Intelligenz: feministische oder neurowissenschaftliche, biotechnologische oder epistemologische?

Dieser Beitrag plädiert schließlich für eine kritische Betrachtung von KI-Narrativen und Imaginationen vor dem Hintergrund einer Verschmelzung von Superintelligenz und Avataren in den digitalen

Sphären, die die Idee von individueller Subjektivität zugunsten einer Entdifferenzierung der Grenzen zwischen Natur/Umwelt und Technik, Mensch und Maschine, Körper und Geist auflösen würde.

Verhandelt Lu Yang in ihren Videoinstallationen dabei den Homo digitalis neu und wie ist er in ihren Videoinstallationen zu begreifen. Die transhumane Zukunft der Digitalisierung und künstlichen Intelligenz besteht in der Erweiterung menschlicher Fähigkeiten und der Überwindung menschlicher Körperlichkeit, Vulnerabilität und Vergänglichkeit. Könnte somit der Homo digitalis nicht nur als eine Auflösungserscheinung des Homo sapiens sondern vor allem als homo sapiens digitalis als digitales Menschmodell zu begreifen sein? (Atasoy & Tekin, 2025; Bullinger-Hoffmann, Mühlstedt, 2016)

3. Fragestellung

Zunächst möchte ich der Frage nachgehen, welches Konzept von Matrix oder Cyberspace und welche Konzeptionalisierungen von Geist/Intelligenz und Körper den Werken von Lu Yang grundlegend sind und wie sich die spezifische Cyberpunk-Ästhetik mit diesen Matrix-/Cyberspace-Konzepten verbindet bzw. von diesen kodiert wird. Welche spezifische Ikonografie und welches ästhetische Vokabular verwendet Lu Yang, um Körper-Geist-Modelle und Cyberspace-Konzepte zu visualisieren? Ist ein retrofuturistischer Ästhetizismus in ihrer bildlichen Formsprache an der Schnittstelle zwischen religiöser Science-Fiction, digitaler Avatare und Cyborgs sowie futuristischem Heldenmythos zu konstatieren?

4. Literarische Wurzeln des Cyberspace-Konzepts: William Gibsons *Neuromancer*

In William Gibsons 1984 erstmals publizierten Science-Fiction-Roman „Neuromancer“ wird ein neuer digitaler Raum erfunden, der Cyberspace, eine künstliche, computersimulierte Wirklichkeit, eine virtuelle, visuell erfahrbare Raumlandschaft, die nicht als physische Realität erfahrbar ist, sondern als ein leuchtendes Gitter aus

Datenkristallen dargestellt ist und als konsensuelle, „in der grafischen Wiedergabe als unvorstellbar komplexe Halluzination“ (Gibson, 1984; Krämer, 2007, S. 76-79) wahrgenommen wird. Der Cyberspace bei Gibson ist somit eine dreidimensionale Größe, die keine Bezugspunkte hat – ein medial-fiktiver Raum, ein Nicht-Raum, ein Raum ohne Verortung und Identität, der von einer Hacker-Kultur in einer High-Tech/Low-Life Welt dominiert wird und den gegebenen und bekannten Raum ablöst (Gehmann, 2012).

Zugang zum Cyberspace erhält man nach Gibson über Computersysteme und neuronale digitale Interfaces, in der sich physisch- und mental optimierte Menschen, Konsolenfreaks oder Cowboys, sog. Cybernauten, in einer düsteren und dystopischen Datenwelt fortbewegen und nach Optimierung und Verbesserung streben. Der „Locus“ des Cyberspace ist dabei geprägt vom Neuromanticism und dem Konzept des romantisch Erhabenen. Als Gegenentwurf zum Cyberspace der digitalen Welt dient die unendliche und unberührte Weite des Universums, das im Gegensatz zu den dystopischen Welten des Cyberspace als ein Symbol für grenzenlose Freiheit und einen grenzenlosen Sehnsuchtsort klassifiziert ist (Gibson, Henz, 1994).

Nach einem Jahr hier träumst du immer noch vom Cyberspace. Doch deine Hoffnung schwindet mit jeder Nacht. Alles Speed, das du nimmst, alle Streifzüge durch die Gassen und Winkel von Night-City helfen nichts. Immer noch siehst du im Schlaf die Matrix, helle Gitter der Logik, die sich vor der farblosen Leere entfalten. (Gibson, Henz, 1994, S.84)

4.1. *The Matrix*

Mit dem Film Matrix der Geschwister Larry und Andy Wachowski erfolgt die popkulturelle Umsetzung des Konzeptes Cyberspace als quartäres Medium (digitale, computervermittelte Kommunikation und Simulation): Das Szenario des Films wird davon dominiert, dass Computerprogramme zunehmend ein eigenes Bewusstsein entwickeln, eine KI-Gesellschaft und quasi eine KI-Subkultur produzieren. Die Computerprogramme treffen dabei auf eine disziplinierte Hacker-Subkultur, die eigentlichen Helden des Films, die von den Künstlichen Intelligenzen mittels einer illusionären Traumwelt, dem Cyberspace versklavt und kontrolliert werden (Barth & Alton-Scheidl, 2005, S. 127–135).

Das Überwinden der künstlichen Illusionsräume mittels eines Initiationsritus stellt eine Differenz zwischen virtueller (Matrix) und realer Welt (real world) dar, formal dargestellt durch eine Spiegelmetaphorik. Nach Neos Transformation in die Spiegelfläche verlässt er die virtuelle Welt, wird selber zu einer Grenze und in der realen Welt („real world“) in seinem realen Körper wiedergeboren. Während die Differenz zwischen realer und virtueller Grenze mithin rein metaphorisch ist, stellt der Spiegel selbst eine räumliche Grenze dar. Es kommt zu keiner wirklichen Grenzüberschreitung, sondern zu einer „Grenzerfahrung“ (Kirchmaier, 2007, S. 1-9). Diese „Grenzüberschreitung“ wird für die Fiktion Matrix konstitutiv, denn erst durch sie wird in virtueller und realer Welt unterschieden.

Der Cyberspace in den Fiktionen Matrix stellt sich als eine 360° Grad Allround-Raumsimulation der Wirklichkeit dar, ein durch grelle Farben und Muster geprägten Datenraum, der allgegenwärtig ist und zunächst nicht als Illusion erkannt wird. Die heldischen Hacker hatten an ihr später trotz der Erkenntnisse um den virtuellen Mythos weiter fest. In Matrix wird die Realität folglich als kritische posthumanistische Allegorie dargestellt, medial manipuliert und eine künstliche Grenze bzw. Grenzerfahrung oder Transzendierung einer Grenze sowie die Differenz zwischen synthetischen, digitalen oder rein kognitiven und organischen, leiblichen Körpern zwischen der „real world“ und der Raumsimulation thematisiert (Krämer, 2007, S. 76-79).

Sowohl in Matrix wie auch in Neurmonacer und Tron wird die KI als transzendente Entität imaginiert, sie ist bereits so weit entwickelt, dass sie entkoppelt von einer physikalischen Existenz über übermenschliche, allwissende Fähigkeiten verfügt, Während in Neurmonacer kybernetische Gottheiten nach allmächtiger Transzendenz streben, versklavt die KI in The Matrix die Menschheit und bringt gottähnliche, „allwissende“ Simulationen hervor, die bestrebt sind, die menschliche Identität zu kontrollieren. Die künstliche Intelligenz überwindet somit beinahe den Status der reinen Maschinen-Logik und entwickelt sich zu einer technologischen Singularität (Bostrom, 2016, S. 50 f.).

Das Cyberspace-Konzept in *Matrix* und *Neuromancer* wird im Folgenden als metaphorisches, narratives Konstrukt verstanden und verglichen mit der chinesischen Medienkünstler:in Lu Yang, die eher einen körperlichen Zugang zu digitalen Existenzen visualisiert und mit kultureller Hybridisierung von Körperlichkeit und Code spielt. Die Idee ist, dass Lu Yang in ihren Werken die Transformation des Leiblichen in eine digitale posthumane Existenz betont.

4.2. *Das Metaverse*

Lu Yangs Videoinstallationen werden insbesondere vom Konzept des „Metaverse“ geprägt, stellen also ein virtuelles Multiversum vor - der „Cyberspace“ wird hier also eher als neuronales Feld verstanden, in dem KI den durch Enhancements selbstoptimierten Körper auch auf der Ebene des Bewusstseins verändert und formt und ihn in einer hyperrealen digitalen Welt als Avatar neugestaltet und diesen mittels neuronaler Netze als KI neu definiert. Die ersten immersiven virtuellen Welten erschuf William Gibson mit seinem Werk *Neuromancer* und auch in den Film *Tron* aus dem Jahre 1982 wird bereits das Konzept des „Metaverse“ etabliert. Der Begriff selber wurde 1992 von dem Schriftsteller Neal Stephenson geprägt (Stephenson, 2021; Syddell, 2010).

In seinem Bestseller „*Snow Crash*“ beschrieb Stephenson eine virtuelle Realität, die als Synthese des Cyberspace mit libertären Ideologien der 90er Jahre bezeichnet werden kann. In seinem literarisch geschaffenen fiktiven Metaverse kämpft der Hacker und Pizzalieferant Hiro Protagonist in einer von Mafiaorganisationen und fragmentierten Staaten dominierten Welt gegen die Ausbreitung der Droge „*Snow Crash*“ - ein mächtiger Virus, deren Verbreitung zum einen durch Kontakt mit infiziertem Blut und zum anderen digital erfolgen kann, indem Hacker:innen im Metaverse einen binären Code lesen. Während bei William Gibson noch unkontrollierbare Lebewesen, Cybernauten etc. einen von Ambiguitäten und Ambivalenzen geprägten virtuellen Raum prägen und durchwandern, säkularisiert und entmystifiziert *Snow Crash* den digitalen Raum. Die virtuelle Welt wiederum betritt man mit einer Reihe frei in den Supermärkten erhältlichen männlichen oder weiblichen Avataren. Es besteht darüber hinaus die Möglichkeit, sich einen Avatar nach seinen Wünschen

physiognomisch zu formen. Lu Yang verwendet das Konzept des „Metaverse“ dagegen viel offener und vor allem künstlerisch-ästhetisch (Wintermayr, 2021/2026).

5. DOKU: The Illusion

Das neueste Kapitel der digitalen Avatar-Serie zu DOKU: The Illusion, einem auf der Physiognomie Lu Yangs basierenden digitalen, hyperrealen Avatar, eröffnet die chinesische Künstlerin im Espace Louis Vuitton Venezia während der 61. Ausgabe von La Biennale di Venezia 2026 (Abb. 1). Lu Yangs DOKU ist, getrennt von seiner physischen Hülle und Körperlichkeit, ein digitaler hyperrealer Spiegel seiner Spiritualität, ein „Ghost in the Shell“, eine Reinkarnation seiner Identität als hybrider Charakter oder binäre Gottheit in einer cybernetischen, spirituellen Umgebung visualisiert in retrofuturistischer Gaming-Ästhetik eines west-östlichen Superheld:innen-Mythos.

Lu Yangs DOKU-Serie reflektiert über buddhistische Ontologie und die Auflösung des eigenen menschlichen und vor allem spirituellen Selbst vor dem Hintergrund neurowissenschaftlicher Fragestellungen und Ki-generierter Präsenz im Cyberspace. Dabei definiert Lu Yang das spirituelle Selbst nicht als feste und starre Entität, sondern als fluide, virtuell in zeitgenössischer 3-D Technologie transformierbare Erfahrung. Zur Veranschaulichung dient ihm dabei die digitale Avatar-Reise durch die sechs Daseinsbereiche des buddhistischen Lebenszyklus von Tod und Wiedergeburt, visualisiert durch sechst verschiedene Avatare, Human, Heaven, Asura, Animal, Hungry Ghost, Hell. Lu Yang verbindet in ihren Videoinstallationen folglich sowohl Ki-basierte Visuals als auch buddhistische Motive in von Videospielen inspirierten hyperrealen digitalen Welten und immersiven Raumlandschaften (Gantert, 2022).

Ihren ersten nicht binären 3-D Avatar der Serie DOKU schuf Lu Yang bereits 2020 als Klon mit seinen Gesichtszügen, eine selbstoptimierte Version seiner Selbst als digitale Reinkarnation in einer immersiven Raumlandschaft, um abseits der menschlichen Grenzen der Selbstoptimierung das Menschsein, die *conditio humana*, zu

überschreiten und im Zustand des Transhumanen neue Bewusstseinsebenen zu erreichen bis schließlich zum völligen Mind-Upload des biologischen Körpers in das virtuelle Reich eines Computers (auf einen Computer). Diesen Moment der Selbstüberschreitung und der Formierung digitaler - posthumaner Wesen thematisiert Lu Yang nun 2026 in ihrer Avatar-Serie DOKU: The Illusion im Espace Louis Vuitton in Venedig neu, noch zu sehen bis zum 5.10.2026. Fluchtpunkte des bei Lu Yang visualisierten buddhistischen Reinkarnationszyklus` in DOKU: The Illusion sind die Vorstellungen von digitalen unsterblichen Wesen mit höchster Intelligenz, perfekten geschlechtslosen Körpern und von „vollkommener“, idealer Schönheit: die posthumane Spezies – oder – anders formuliert - der Prototyp: DOKU: The Self (!) dieser „Superintelligenz“, der sich von der Beschränktheit des Transhumanen, des optimierten und/oder cyborgisierten biologischen Menschen, gelöst und jenseits von körperlicher materieller Begrenztheit, Alterung, Vulnerabilität und Geschlechterrollen als digitaler Avatar die physischen Grenzen durch neuronale Datenmuster überwunden hat und so das Aufgehen in der inner künstlichen Superintelligenz erreicht (Gantert, 2022; Scharf, 2025).



Figure 1: Avatar DOKU, Lu Yang

5.1. *The Great Adventure of Material World – Game Film*

In *The Great Adventure of Material World—Game Film* (2020) werden diese trans- und posthumanistischen Utopien und Illusionsräume Lu Yangs in Anime- und futuristischer Cyberpunk Ästhetik mit High-Tech und Low-Life Elementen visualisiert; in techno-psychodelischen und kakophonischen Settings ist dabei wiederum eine buddhistische Kosmologie eingebettet (Abb. 2). Das Spiel erinnert an Franchises wie *Shin Megami Tensei*, *Final Fantasy* und *Grand Theft Auto*, bewahrt sich aber eine eigene kakophonische Spieleatmosphäre, die in einem faszinierenden und fantastischen Cyberpunk-Setting platziert ist. Spiele wie *Cyberpunk 2077* und *Deus Ex* thematisierten bereits die Idee von „Hightech, Low-Life“ in dystopischen Cyberpunk-Settings, geprägt von Neon- und futuristischen Städten oder Megacities. Die Cyberpunk-Subkultur trifft hier über ihre literarischen Wurzeln hinaus auf des Video-Game-Genre und visualisiert dystopische Zukunftswelten, die von Androiden und Cyborgs bevölkert werden, posthumane Settings, in denen der Mensch-Maschine-Komplex bis hin zur Auflösung des Individuums im Cyberspace verhandelt wird. Untermalt von hypnotischen J-Pop-Klängen zeigt *The Great Adventure of Material World* aufwändig animierte Transformationsszenen und Metamorphosen, die aus dem Magical-Girl-Anime „*Sailor Moon*“ stammen könnten und mal dystopisch unheimlich und mal leicht und verspielt, romantisierend dargestellt sind (Deiss, Gantert, u.a. (Hgg.), 2022; Kelly, 2025).

Lu Yang bezieht seine/ihre Themen aus dem Mahayana-Buddhismus und verbindet diese mit modernsten Technologien und digitalen Konzepten und verhandelt so Fragen nach Subjektivität und Transzendenz. Prominente Referenzquelle ist der *Diamond Sutra*, eines der ältesten, gedruckten Werke, das die Illusion und Leerheit des Selbst lehrt („The world is not the world, therefore it is the world.“). Nicht nur in *Avatar DOKU* wird das *Diamond Sutra* als Ausgangsmaterial für die referentielle Suche nach Identität, Körper und digitaler Reinkarnation genutzt und reflektiert, sondern vor allem auch in *The Great Adventure of Material Knight* (Nagatomo, 2010, S. 213-244).

Der Superheld und Protagonist dieses Kurzfilms mit fiktionalem Game-Charakter, der *Material World Knight*, bewegt sich durch

verschiedene Level auf dem Weg zur Erleuchtung und dabei durch einen Prozess aus Geburt, Tod und Wiedergeburt, - mithin durch den Kreislauf der Wiedergeburten der buddhistischen Lehre -, in unterschiedlichen Daseinszuständen, wobei die unzähligen Antagonisten, auf die er in den unterschiedlichen Existenzebenen trifft, nicht besiegt werden müssen. Gemäß dem Kreislauf von Samsara durchschreitet und durchlebt der Protagonist des Spieles sechs Welten, die die unterschiedlichen Existenzbereiche buddhistischer Kosmologie widerspiegeln. Jede dieser Ebenen wird von göttlichen, menschlichen, tierischen und anderen Formen wie hungrigen Geistern und Höllenwesen bevölkert – Figuren, die in Rückgriff auf Lu Yangs frühere Arbeiten aus den Jahren 2011-2019 erschaffen wurden – in schnell geschnittenen Close-Up Sequenzen werden Transformationen und Verwandlungen von Körpern gezeigt, die Stellvertreter zukünftiger Formen posthumaner Existenzen darstellen sollen - so auch der Material World Knight selbst. Die virtuellen Protagonisten des Video-Games ergänzen zusätzlich das Gameplay durch Dialoge über Identitäts- und Subjektivitätskonstruktionen, die Natur des Lebens und den Lebenszyklus aus Geburt, Tod und Wiedergeburt (Kelly, 2025).

Der Himmel in *The Great Adventure of Material World—Game Film* erinnert an den Chao Garden in *Sonic Adventure 2* – während andere Level von Titanen, Dämonen und Menschen bevölkert werden, treffen wir hier auf eine Niedlichkeitsästhetik als zentrale Cyberpunk-Poetik – visualisiert durch herzügige Kaninchen, lächelnde Pfefferminzbonbons und herumtollende Alpakas, in Anlehnung an das japanische Kawaii-Konzept. Die Kawaii-Ästhetik wirkt hier leicht und verspielt, schafft aber einen dynamischen Spannungsbogen, in dem Unschuld und Nostalgie mit Technologisierung und düsteren und transzendenten Dimensionen kontrastieren (Abb. 2).

Hier erscheint eine „neue“ Figur im Gameplay, die wie viele NPCs einem der früheren Werke Lu Yangs entnommen ist, in diesem Fall stellt sie eine Anleihe an den Film „*Electromagnetic Brainology Brain Control Messenger*“ aus dem Jahre 2017 dar. Die Figur stellt dem Spieler die entscheidende Frage: *Spieler, wie denkst du, wird der Himmel sein?*“ Der einzige nennenswerte Boss-Kampf findet am Ende des Spiels in einer Miniatur-Version der Stadt Tokyo statt: Der

Material World Knight muss gegen sich selber antreten und bis zum Tode kämpfen, indem er Indras Vajra einsetzt – erhält eine der Versionen seines Selbst einen Treffer, nehmen beide Schaden, bis nur noch ein Protagonist übrig bleibt. Der Fokus liegt hier metaphorisch auf der eigenen Vulnerabilität und der Vergänglichkeit menschlicher Existenz und der Auflösung des eigenen Selbst. Um den Höllen-Level abzuschließen, muss der Spieler direkt durch das Rad des Lebens fliegen, während Lu Yang ihren Tod unzählige Male im Spiel selber darstellt. Um das Spiel schließlich zu gewinnen, muss der Spieler das eigene Selbst aufgeben, um im Sinne buddhistischer Lehre und Spiritualität die Grenzen der eigenen biologischen Existenz und Materialität, seine Identität und Subjektivität zu überwinden (Abb. 3). Damit stehen wiederum Fragen nach den Grenzen menschlicher Existenz und dem Mensch-Maschine-Komplex sowie digitale Unsterblichkeitsphantasien in Gestalt von Kryonik und digitalem Upload in Verbindung mit religiösen Vorstellungen und Elementen im Raum der digitalen Simulation. In einigen Aspekten kann man *The Material World Knight* als einen Vorläufer des späteren *Avatar DOKU* mit selbstreferentiellen Bezügen ansehen (Kelly, 2025; Gantert, 2022).

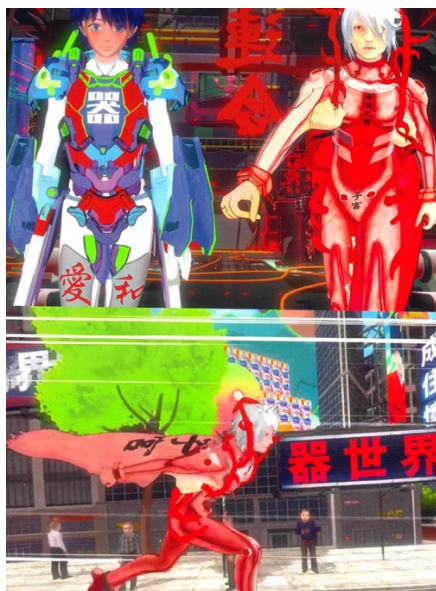


Figure 2: *The Material World Knight*, Detail, Lu Yang



Figure 3: The Material World Knight, Detail, Lu Yang

Daneben zeigen Lu Yangs Werke die zunehmende Integration der Neurowissenschaften in das Forschungsfeld KI und eine Referenz an die Neuroästhetik.

5.2. Electromagnetic Brainology Brain Control Messenger

In Electromagnetic Brainology Brain Control Messenger, ein hypnotisch buntes Videoprojekt bzw. Infomercial Lu Yangs aus dem Jahre 2018, wird eine kurzweilige Superheldengeschichte erzählt, in der sich die Protagonistin zu den Klängen von Invisible Manners und Chanmomo© eine goldene, sakral-wirkende Krone (Transkranielle Magnetstimulations – Krone/TMS) aufsetzt und mittels eines Game-Controllers gegen ihre außerirdischen Feinde aus dem Alien-Invasion Subgenre im Stil von Mars Attacks kämpft. (Abb. 4). Nicht nur die Transkranielle Magnetstimulations-Krone der fiktiven Superheldin sondern auch das überdimensionierte, grotesk große und freiliegende Gehirn des Außerirdischen deuten darauf hin, dass hier das menschliche Bewusstsein und das menschliche Gehirn sowie neurowissen-

schaftliche Forschungen im Vordergrund stehen (Wurth, 2023). Die Game-Krone ist dabei einem medizinischen Instrument nachempfunden, das als Werkzeug in der neurowissenschaftlichen Forschung zur Diagnostik und Behandlung von neurologischen Erkrankungen eingesetzt wird. Mit der Magnetstimulations-Krone werden über Magnetspulen elektrische Impulse an das Gehirn gesendet, um Hirnareale und deren Nervenzellen zu stimulieren.



Figure 4: Electromagnetic Brainology Brain Control
Messenger, Detail, Lu Yang

Das menschliche Gehirn wird hier somit zum Maßstab für Künstliche Intelligenz - das Instrument der Transkraniellen Magnetstimulations-Krone zu einem Brain-Computer-Interface, mittels dessen sich das Bewusstsein und die Persönlichkeit eines Menschen durch einen Mind-Upload in den digitalen Cyberspace übertragen und transformieren lässt, um so alle biologischen Überbleibsel zu überwinden im Sinne digitaler Unsterblichkeit und der künstlichen Superintelligenz als Ziel menschlichen Strebens und Unsterblichkeitsphantasien (Krumm, 2023; Deiss, Gantert, 2022).

5.3. Electromagnetic Brainology: 4 Deities

Electromagnetic Brainology“ wiederum ist eine großformatige immersive fünf-Kanal-Videoinstallation, in der neonleuchtende synthetische Cyberpunk-Avatare aus dem Videospiel-Universum Amerikas Superheld:innen-Serie „Masters of the Universe“ als buddhistische „Gottheiten“ zu einer elektronischen Musik tanzen, die in Kooperation mit dem Musik-Produzenten-Team *invisible manners* der J-Pop-Szene entstanden ist (Abb. 5).

Die vier in Arcade-Game-Ästhetik visualisierten „Gottheiten“ repräsentieren dabei die vier großen Erkrankungen des menschlichen Nervensystems, die wiederum nach hinduistischer und buddhistischer Interpretation den vier Elemente des Universums zuzuordnen sind: Erde, Luft, Wasser und Feuer (*Vimalakirti-Sutra*). Diesen vier Hauptelementen des Universums oder Kosmos entsprechen dabei auch die vier Elemente des Körpers, die wiederum jeweils als *Anubhava* (Konzept von Anubhava), als physische Erscheinungen und Wahrnehmungen von Emotionen und Reaktionen des Körpers gelten.



Figure 5: Electromagnetic Brainology: 4 Deities, Detail, Lu Yang

In Lu Yangs Videoarbeit vertritt die Erd-Gottheit den menschlichen Schmerz, menschliches Leiden, die Schmerzwahrnehmung, die über die zuständigen Hirnareale im zerebralen Kortex über neuronale Schmerzrezeptoren verarbeitet wird. Der Wasser-Gott wiederum reguliert den Blutkreislauf und die Zirkulation der Körperflüssigkeiten im menschlichen Körper, der Wind-Gott kontrolliert das menschliche Atmungssystem, während der Feuer-Gott das komplexe Zusammenspiel aus Wärmeempfinden und Temperatur reguliert. (Braun, 2026; Deiss, Gantert, 2022).

6. Körper-Geist-Modelle und Unsterblichkeitsphantasien

Die Arbeiten von Lu Yang verdeutlichen ein posthumanistisches Subjektivitätsverständnis, das im Sinne der Theoretikerinnen Donna Haraway und Rosi Braidotti Körper, Natur und Technologie sowie Neurowissenschaften konstitutiv aufeinander bezieht. Der Mensch wird schlussendlich durch das Konzept der Superintelligenz in Verbindung mit Elementen der buddhistischen Spiritualität zur Überwindung der biologischen Grenzen, Materialität und des eigenen Selbst transzendiert. Dabei werden in den Werken Lu Yangs unterschiedliche KI-Modelle dargestellt und konzeptualisiert, die wiederum alle auf die buddhistische Lehre referieren (Brown: 2024, S. 25-47; Badmington, 2003, S. 10-27).

Der digitale Avatar DOKU, ein Klon der Künstlerin Lu Yang selber mit den Gesichtszügen und der Physiognomie Lu Yangs, vollkommen geschlechtsneutral und gestaltenwandlerisch. Er vollzieht eine Körper-Geist-Trennung in einer digitalen Hülle, deren Bewegungen mittels Motion-Capture-Technik von realen Tänzern aufgezeichnet und auf den digitalen Klon übertragen werden. Im Cyberspace selber fungiert DOKU als eine der sechs Daseinsformen Samsaras, als eigenständige digitale Existenz, die im buddhistischen Lebenszyklus aus Geburt, Tod und Wiedergeburt, unterschiedliche spirituelle Bewusstseinszustände oder vielleicht auch psychische oder emotionale Zustände durchlebt.

In seinen dystopisch-faszinierenden Werken, wie den DOKU-Avataren, erforscht Lu Yang die Entkoppelung des menschlichen Körpers

von seiner biologischen Materialität und seinen physischen Einschränkungen und seine zuweilen groteske Dekonstruktion zugunsten eines Entwurfs einer virtuellen Existenz und Identität, von Geistmodellen, im hyperrealen Raum und digitaler Unsterblichkeitsphantasien (Metzinger, 2017).

Diese virtuelle Existenz wird dann im Folgenden weiterentwickelt durch die Verbindung mit buddhistischen Konzepten wie Samsara, dem Kreislauf aus Geburt, Tod und Wiedergeburt, wodurch eine Superintelligenz in Form eines transzendenten Geistes erschaffen wird. Dieser wird in den Cyberspace übertragen, wodurch durch die Verbindung von neurowissenschaftlicher Forschung und buddhistischer Lehre digitale Identitäts- und Subjektivitätskonstruktionen und die posthumane Spezies verhandelt werden. Schließlich werden digitale Unsterblichkeitsphantasien in Gestalt von Kryonik und digitalem Upload im Raum der digitalen Simulation als Ziel menschlichen Strebens thematisiert. (Stapelfeldt, 2024).

Statt der physischen Optimierung durch technologische Enhancements (Transhumanismus) wird hier die Dekonstruktion und Dematerialisierung der biologischen Überbleibsel und die Übertragung des menschlichen Bewusstseins und seiner Persönlichkeit durch einen Mind-Upload in die digitale Welt propagiert. Damit formuliert Lu Yang ein Konzept von KI, das als Sinofuturismus bezeichnet werden kann und in dem die Selbstoptimierung des Menschen mit Neurowissenschaften und traditionellen buddhistischen Welt- und Kosmologiebildern verschmilzt (Remy-Handfield, 2020; Deiss, Gantert, u.a. (Hrag.), 2022).

In Electromagnetic Brainology schließlich thematisiert Lu Yang die mitfühlende und empfindsame Superintelligenz, die versteht, dass die unterschiedlichen Bewusstseinszustände eines jeden fühlenden Wesens durch Empfindungen wie menschlichen Schmerz, menschliches Leiden, und Zustände des Nervensystems reguliert werden. Die Menge des während der biologischen Evolution erlebten historisch gewachsenen Leidens, das tief in die biologische Evolution eingeschrieben ist, würde demnach das erlebte Glück übersteigen. Dadurch würde die mitfühlende Superintelligenz als ultimative und universelle Superinstanz, als Schöpferinstanz notwendig werden, um dem Menschen den Zugang zu einem mythologischen Bereich

moralischer Wahrheit zu ermöglichen. Folgt man Lu Yang, so könne das Leiden in der Welt vor allem durch buddhistische meditative spirituelle Reisen und die Neurotechnologie kognitiv überwunden werden und so ein positiver Gleichklang (Euphorie, Ekstase, Glück) über technologische und spirituelle Erweiterungen erreicht werden (Metzinger, 2017).

Abseits dystopischer Welten von Verfall, Schmerz und Krankheit inszenieren die hypnotisch-bunten animierten Figuren Lu Yangs in *Electromagnetic Brainology* einen digitalen und farbintensiven Sinnesrausch. Zugleich wirkt die Verbindung zur hinduistisch-buddhistischen Kosmologie mit dem Lebenszyklus aus Geburt, Tod und Wiedergeburt als tröstlicher und versöhnender Blick auf ein zukünftiges Dies- und Jenseits eine posthumane Existenz. Was bleibt, wenn die Körperlichkeit vergangen ist vom diesseitigen Selbst? Lu Yangs hypnotisch-bunte Bilderwelten tanzender buddhistischer Gottheiten vor neonfarbenen Kulissen überwinden die Angst des posthumanen Selbst und erwecken eine emotionale Euphorie und Ekstase, einen Sinnesrausch. Das sich dematerialisierende Selbst akzeptiert schlussendlich den Prozess der Auflösung und Transzendierung, bis nur noch das Nervensystem und spirituelle Bewusstseinsformen existieren als posthumane Formen zukünftiger Existenzen. Dabei zeigen die digitalen und hypnotisch-bunten Avatare auffällig gottgleiche Züge und repräsentieren so allmächtige Potenz eines allwissenden Schöpfers, da sie eben nicht nur Datenströme kontrollieren, sondern vor allem physische Empfindungen und Emotionen regulieren (Braun, 2026). Das wirft Fragen nach der Spiritualität und der Existenz Gottes im digitalen Raum sowie nach der Rolle der Superintelligenz als Teil einer Bewusstseinsrevolution und Sprung auf eine neue evolutionäre Stufe auf.

7. Spiritualität und Maschinenlogik: technologische Singularität und die Superintelligenz

Of particular note, there may be a level of technology that would allow human lifespan to become effectively unconstrained by biological aging and localized accidents – a level that would possibly be reached not long after the emergence of superintelligence. (Bostrom & Dafoe & Flynn, 2020, S. 297).

Die Frage aber, ob diese Superintelligenz (*technologische Singularität*) abseits von Datenströmen, Algorithmen und Netzwerken hinaus ethische und moralische Prinzipien vertreten und vermitteln kann, bleibt rein spekulativ – eine objektive, moralisierende und spirituelle Ebene bleibt stets abhängig von vielen Faktoren, von kulturellen und philosophischen Annahmen. Eine gottgleiche KI im Cyberspace als Maschinenlogik selbst wenn sie allwissend und allmächtig wäre, hätte keinerlei Zugang zu menschlichen Erfahrungen, Moral, Empathie und echter Spiritualität. Sie würde ihre Entscheidungen auf Basis von Wahrscheinlichkeitsrechnungen und -entscheidungen treffen, auf Algorithmen und Datenströmen, während Spiritualität und Moral von Wertesystemen und menschlichen Beziehungen abhängig sind. (Bostrom, 2020, S. 170.)

Die digitalen Avatare Lu Yangs vermitteln somit lediglich eine Form spiritueller Präsenz im transformativen Raum und verhandeln das Menschsein und Verständnis von Transzendenz neu. Zu überlegen wäre, ob digitale Räume auch als sakrale Räume verstanden werden müssen und inwieweit göttliche Präsenz im digitalen Raum vorhanden ist, zwischen den Pixeln oder gar als heiliger Hotspot im Sinne der Technotheologie (di Blasi, 2024)? Das wirft Fragen nach der Göttlichkeit von KI auf. Wie göttlich kann KI sein?

Ein Blick auf den TESCREAL-Komplex zeigt einige Berührungspunkte zwischen TESCREAL und der Medienkünstlerin Lu Yang. TESCREAL ist ein Akronym, das 2023 von der KI-Ethikerin Timnit Gebru und dem Philosophen Émile P. Torres geprägt wurde. Das Akronym TESCREAL steht für sieben unterschiedliche philosophische Strömungen, die im Umkreis der Tech-Elite des Silicon Valley bedeutsam geworden sind: Transhumanismus, Extropianismus, Singularität, Kosmismus, Rationalismus, Effektiver Altruismus und Longtermismus. Es wird eine technoutopische Zukunftsvision beschrieben, die mit einer starken Teleologie verbunden ist und die modernsten Technologien als zentralen Motor und Instrument zukünftiger Evolutionen nutzt. Hier übernehmen Technologien eine ebensolche symbolische Rolle wie religiöse Figuren und formulieren religiöse Erlösermythen (Devenot, 2023; Thomas, 2024, S.159–194).

Lu Yang berührt in seinen/ihren Werken ebenso zentrale Themen des Transhumanismus, beispielsweise ist ihre Figur DOKU eine digitale Reinkarnation ihrer selbst, eine virtuelle Präsenz, die biologische Körperlichkeit überwindet, eine Existenzform über den biologischen Tod hinaus, die digitale Unsterblichkeit erlangt. Der Avatar stellt dabei eine digitale Erweiterung ihrer eigenen Seele, ihres eigenen Bewusstseins dar. Daneben beschäftigt sich Lu Yang mit Identitätskonstruktionen in digitalen Welten, Bewusstseinssebenen und -transformation und der Grenze zwischen biologischer Leiblichkeit und digitalem Avatar. Mit ihren Medieninstallationen berührt Lu Yang eindeutig Kernfragen und -themen von TESCREAL.

Der technologische Singularismus propagiert die Superintelligenz als reales Zukunftsszenario – und system, als neue evolutionäre Stufe der menschlichen Existenz, während Lu Yang diese Transformationsprozesse allerdings künstlerisch-philosophisch verhandelt. Sie fragt nach den kulturellen und religiösen Konsequenzen solcher Vorstellungen und thematisiert die posthumane Existenz, den Mensch-Maschine-Komplex, Geist-Körper-Modelle und die Zukunft von Intelligenz und Subjektivität in immersiven Videoinstallationen.

Während also TESCREAL Erlösung und Heilserlebnis durch Technologien sucht, entstehen bei Lu Yang eher digitale Eschatologien oder Jenseitsvisionen. Die Superintelligenz wird von Lu Yang als ästhetisches Subjekt und mythologische Figur erschaffen, im Sinne von Nick Bostrom und Thomas Metzinger, nicht als technologisches Problem von Tech-Eliten. Die posthumane Existenz kann demnach eine programmierbare Entität, eine Algorithmus-Struktur, eine Vernetzung von Datenpunkten in einer abstrakten, eigenen ästhetischen Form sein, vornehmlich hinduistisch -buddhistisch, gender-fluid und körperkritisch verhandelt und geprägt. Lu Yang destabilisiert also eher die Superintelligenz des TESCREAL-Komplexes, indem sie eben eine dezidiert nicht-westliche, nicht-koloniale Perspektive einnimmt. TESCREAL-Zukunftsbilder wiederum formulieren eher eine Vorstellung von der Optimierung des Menschen, die Intelligenz und kognitive Leistungsfähigkeit zum Maßstab für den Wert von einzelnen Individuen jenseits der biologischen und materiellen Existenz nimmt (Zuckerman, 2024; Coenen, 2025.)

8. Cyberpunk-Ästhetik in den Werken Lu Yangs

Die Subkultur des Cyberpunk zeigt eine starke Verschmelzung dystopischer urbaner Settings zukünftiger Gesellschaften mit futuristischen Technologien: Schwerpunkte sind künstliche Intelligenzen und digitale Netzwerke in von globalen Konzernen dominierten dystopischen Zukunftsszenarien, aber auch Fragen nach digitaler, realer oder physischer Identität und kultureller Hybridität. Durch den Fokus des Genres auf Futurismus, modernsten Technologien und kybernetischen Charakteren erfolgt die Integration digitaler Strategien in die Cyberpunk-Bilder (McHale, 1992, S. 149-175). Welche Rolle spielt dabei digitale Kunst in Cyberpunk-Bildern und welche Bedeutung hat sie für die Cyberpunk-Ästhetik? Welche Kategorien von Ästhetik visualisiert Lu Yang und sind sie kodiert?

Urbane Dystopien sind ein Kennzeichen des Cyberpunk-Genres: düstere urbane Settings einer Mega-City, die von Verfall, Chaos und Entfremdung und einer allgegenwärtigen Unternehmenskultur gekennzeichnet sind, die schließlich in der Entwicklung von mächtigen Unternehmensstaaten resultiert. In den Werken von Lu Yang, wie zum Beispiel in der Avatar-Reise DOKU, werden überwältigende digitale Architekturwelten gezeigt, die von einer Ästhetik des Dystopischen und Urbanen gekennzeichnet sind. Ihre Avatare, die sich durch diese dystopischen Settings einer Mega-City bewegen, wirken fluide und instabil, aber vor allem entfremdet und entmenschlicht, wodurch sich der Effekt der urbanen Entfremdung und des urbanen Verfalls zusehends verstärkt (Stableford, 2010; Raam, 2014).

Ebenso finden Motive der klassischen-traditionellen chinesischen Bildtradition Eingang in Lu Yangs Videoinstallationen: beispielsweise integriert sie ikonische Motive wie Drachen, Geistwesen oder klassische Pagoden, die dann futuristisch in digitale und neonfarbene Kontexte und Settings eingearbeitet werden. So referiert Lu Yang beispielsweise auf die traditionelle Tuschemalerei eines Qi Baishi oder auf Werke der zeitgenössischen Künstlerin Yang Yongliang und ihre klassische Landschaftsmalerei, die sie mit digitalen Medien kombiniert (Vgl. Zur Kritik an der Urbanisierung der Natur: Cruickshank, 2025). Der visuelle Stil von Cyberpunk in den Werken von Lu Yang

zeichnet sich darüber hinaus durch den Einsatz von grell-bunter Farbigkeit und Neonfarben, Neonlichtern in kontrastreicher Spannung aus, die auf die Arcade Gaming-Ästhetik der 80er Jahre referiert und Amerikas popkulturelle Superheld:innenmythen, zunehmend geschlechtslos und gestaltenwandlerisch und quasi ihren Werken inhärent, lebendig werden lässt.

Lu Yang integriert darüber hinaus in ihren Videoinstallationen vor allem Elemente aus japanisch-ostasiatischen Bildwelten, die vor allem Videospielen, der Popkultur und Animes entlehnt sind. Deutlich werden zum Beispiel Bezüge zum Vampir-Anime *Call of the Night*, für den eine melancholische Neonästhetik charakteristisch ist – eine emanzipierte, aber melancholischem Version der Mondästhetik von *Sailor Moon*. Der Anime thematisiert die Sehnsucht nach dem Vampirwerden als eine Metapher für das Erwachsenwerden, das Anderssein und die eigene Identität. *Call of the Night* präsentiert eine Neonfarbene nächtliche Stadt, die in diesem Zusammenhang zum Symbol für Freiheit und Selbstfindung wird. Diese von Neonlichtern geprägte Großstadtästhetik, die eine romantisierende Atmosphäre zwischen Realität und Traumwelt prägt, verbindet die Urbanität von *Call of the Night* mit den Architektursettings Lu Yangs: Für beide Raumlandschaften ist eine Farbpalette kennzeichnend, die von violetten bis blauen Neonfarben reicht und die nächtliche Stadt in den poetischen Raum eines Traumzustandes erhebt, eine Welt zwischen Realität und Imagination (Hain, 2022).

In *Sailor Moon* wiederum, ein Shojo-Anime der 1990er Jahre, der Elemente des Magic-Girl Genres mit Art déco und kosmischer Symbolik verbindet, besitzt die Darstellung der Nacht einen anderen Stellenwert, sie ist mit Mondlicht und Sternen und vor allem kosmischen Kräften verbunden, die vor allem Weiblichkeit und Harmonie symbolisieren. Mit den Bildwelten von *Sailor Moon* verbindet Lu Yangs Werke vor allem die Transformation als zentrales Motiv. Die magischen Metamorphosen und Verwandlungsequenzen einer *Sailor Moon* werden durch den Avatar DOKU bei Lu Yang oder auch Delusional Mandala aufgegriffen und die Verwandlung in einer digitalen Wiedergeburt einer posthumanen Existenz fort- und weiterentwickelt. Bei *Sailor Moon* werden die Metamorphosen ästhetisch und harmonisch dargestellt, in einem modernen Tokio, dass von Alltag

und Magie erfüllt ist, wird die schöne Seite des Posthumanen gezeigt, elegant und idealisiert. Kunsthistorisch kann man der Sailor Moon Ästhetik Bezüge zu den Praeraffaeliten, der japanischen Shojo-Kultur, zum Jugendstil sowie eine New Age Spiritualität konstatieren.

Ähnlich wie bei Lu Yang sind die Körper bei Akira instabil und erfahren eine Grenzüberschreitung oder Entgrenzung bis hin zu apokalyptischen Visionen. Diese Motive greift Lu Yang auf und integriert in diese Transformationsprozesse anatomische Explosionen, neuronale Netzwerke, digitale Avatare, den Kreislauf aus Geburt, Tod und Wiedergeburt, vor allem in Verbindung mit hinduistisch-buddhistischer Kosmologie.

Alles in Allem lässt sich bei diesem Vergleich festhalten, dass es zu einer Verschiebung von einer romantischen, harmonischen und hellen Kosmologie der 1990er Jahre hin zu einer neonbeleuchteten Nachtästhetik kommt. Während bei Sailor Moon die magischen Metamorphosen und kosmische Magie zentrale Themen sind, handelt der dystopische Cyberpunk-Anime Akira von grotesk und biologisch entgrenzten Transformationen und der zerstörerischen und dunklen Seite des Posthumanen.

Lu Yang erschafft digitale Avatare, wie seine/ihre Avatar-Figur DOKU, die durch immersive 3-D Welten navigiert, die von Elementen der Gaming-Ästhetik und popkulturellen Anleihen der J- und K-Pop-Subkultur geprägt sind. Leuchtende Tätowierungen, die dem hinduistischen und buddhistischen Kosmos entnommen sind, kybernetische Verbesserungen und eine japanisch beeinflusste Niedlichkeitsästhetik (Kawaii) kontrastieren hier Amerikas Superheld:innen und zeigen eine Vermischung aus High- und Low-Tech-Elementen, von Hoch- und Subkultur, eine west-östliche popkultureller Referenz. Sie erfüllen dabei Vertreterfunktionen mit Doppelidentitäten und vollziehen digitale Verwandlungen in Anime-, Mangas- oder Amerikas Superheld:innen.

Die digitalen Avatare von Lu Yang in seinen/ihren Werken verweisen dabei inhärent auf die Gaming-Ästhetik der 1980er-Jahre und deren Superheld:innen-Mythen. Diese Bezüge sind strukturell in die Figuren Lu Yangs eingebettet und vereinen sowohl nostalgische als auch

futuristische Elemente wie auch modernste neurowissenschaftliche Technologien und bieten entsprechende Identifikationssetzungen und -räume an.

In Lu Yangs Werken gibt es darüber hinaus zahlreiche weitere Bezüge, Anleihen und Referenzen an Computeranimationsfilme oder an die west-östliche Popkultur, beispielsweise ist ihr Avatar „Human“ abgeleitet von der Filmfigur „Tron“ aus dem gleichnamigen Film aus dem Jahre 1982.

Aus kunsthistorischer Sicht könnte man Lu Yangs Werke als eine Synthese verschiedener Strömungen der ostasiatischen Popkultur bezeichnen, in der sie eine eigene (sakrale) buddhistischen Cyberpunk-Ästhetik entwickelt. In ihr verschmelzen Neurowissenschaften, Manga- und Animeästhetik, Videospiele, die futuristische Ästhetik der amerikanischen Arcade-Games („Master of the Universe“) sowie Computeranimationsfilme und Vorstellungen von Samsara und Wiedergeburt zu einer neuen Form digitaler Ikonographie.

Unterlegt sind Lu Yangs Settings und seine/ihre Videoinstallationen mit Musik der japanischen Pop-Produzenten-Gruppe Invisible Manners, die sich zunehmend als ein integraler Bestandteil von Lu Yangs Arbeiten zeigt.

In seinen/ihren immersiven Werken verbindet Lu Yang ihre digitalen Avatare mit dystopischen Architekturwelten, schafft also eine Erlebniserfahrung, die an John Deweys Idee der Erlebnis- und Erfahrungsästhetik anknüpft, in der Handlung und Erleben/Wahrnehmung sowie Reflexion durch einen Akt der Immersion miteinander verschmelzen (Choi, 2020, S. 746-762).

Das ästhetische Erleben wird zu einer aktiven Erfahrung und die Kunst zu einem potentiell transformierenden Erlebnis. Zudem wirkt jeder Erfahrung von Ästhetik nach Wolfgang Iser auch immer ein Moment der Anästhetika inne, beispielsweise durch die Immersion entwerteter Wahrnehmung:

[...] dem Wahrnehmen selbst bereits eine Art Anästhetik eingeschrieben ist. Seine eigene Spezifität seine Schemata und Prägungen, einschließlich der damit gesetzten Beschränkungen, bleiben ihm eigentümlich verborgen. Und diese

interne Anästhetik ist eine notwendige Bedingung der externen Effizienz des Wahrnehmens. (Welsch, 2003, S. 34)

Lu Yangs digitale Avatare und KI-Entitäten bewegen sich und navigieren in einem atemporären zukünftigen Raum, der eine atopische und ahistorische Wirkung hat (Leutner, 2015).

Die Zukunftsszenarien in den Werken Lu Yangs halten sich nicht an die historischen Traditionslinien und verhalten sich in diesem Sinne anästhetisch. Traditionelle Vorstellungen von Schönheit und Ästhetik sowie sinnliche Bezüge werden nivelliert und dafür neue Identifikationsangebote durch die Kunst geschaffen, die losgelöst von Ort und Zeit, durch eine Form der Entgrenzung und anästhetisierende Effekte eine transformative Erfahrung ermöglichen. Lu Yangs Werke unterstreichen demnach ein neues Prinzip der postmodernen Ästhetik, das dem Plädoyer Wolfgang Welschs für eine Ästhetik des Blinden Flecks folgt (Voss, 2008, S. 1-15). Es könnte damit argumentiert werden, dass Lu Yang in ihren Werken häufig immersive, dunkle und surreale Strukturen und Bildstrategien verwendet, die diese anästhetisierenden Effekte unterstreichen. Als Deutungsmöglichkeit ergibt sich ein Dreieck ausfolgenden Begriffen: „dunkle Ästhetik“ (Melancholie, morbide Schönheit), Anästhetika (Betäubung, Gefühllosigkeit, emotionale Erschöpfung) und blinder Fleck (Wahrnehmungslücke), die im Zusammenspiel darauf verweisen könnten, dass negative Seiten der Kultur oder der Psyche oft nicht reflektiert und wahrgenommen werden. Erst aus der Sicht der emotionalen Erschöpfung heraus, die mit den Anästhetika eintritt, wenden wir und von der Faszination für das Dunkle ab und wenden uns neuen Sehnsüchten zu (Wimmer, 1989).

Lu Yangs immersive Videoinstallationen sind von einer Reizüberflutung als mediale Strategie gekennzeichnet, die Bereiche eröffnet, die sich der klassischen ästhetischen Wahrnehmung oder Logik entziehen, so dass hier von einer Ästhetik des blinden Flecks gesprochen werden kann. An Stellen, an denen vorher keine ästhetische Wahrnehmung möglich war, schafft Lu Yang durch seine/ihre immersive Kunst eine neue ästhetische Präsenz, die den blinden Fleck korrigiert und neue sinnliche Erfahrungsräume ermöglicht. Seine/Ihre immersive Kunst wirkt entwerteter Wahrnehmung entgegen, denn sie schafft eine neue sinnlich-ästhetische Erfahrung: durch eine Synthese

aus retrofuturistischen Elementen (sinofuturistischer Ästhetizismus) und einer buddhistischen Cyberpunk-Ästhetik (Lek, 2016).

Die nostalgischen Elemente des Retrofuturismus werden dabei gekoppelt mit einer dystopischen Technologie-Ästhetik des Cyberpunk und west-östlichen popkulturellen Anleihen. Die so erzeugte sinnliche Präsenz dekonstruiert Zukunftsvisionen und -aussichten einerseits und verschränkt andererseits körperliche Entgrenzung und Entfremdung mit digitaler Virtualität.

Ebenso ist eine ausgeprägte Dimension des Grotesken im Werk von Lu Yang zu konstatieren, die tatsächlich ein zentrales Element ihrer Ästhetik darstellt: der entgrenzte Körper wird entweder zerlegt, digitalisiert, er wird transformiert oder mutiert und überwindet so seine biologischen Überbleibsel im Sinne Michael Bachtins, der das Konzept des grotesken Körpers prägte. Wie auch Bachtin so fasst auch Lu Yang seine/ihre Körper als fluide, nicht feste, wandelbare, unvollständige (unvollkommene) und durchlässige Formen auf (Bachtin, 1995).

Der „groteske Leib“ stellt dabei nach Bachtin einen fundamental dialogischen Körper dar (Ruck, 2009, S. 1-24), der zur zentralen Figur in Bachtins Karnevaltheorie wird – als subversiver befreiender Gegenentwurf zur geschlossenen und dogmatischen Ordnung. Bei Lu Yang verbinden sich verschiedene Konzepte und Elemente von Ästhetik miteinander: die Anime-, Mangaästhetik, die west-östliche Popkultur und vor allem buddhistische Ikonographie mit der Darstellung von Tod, Horror, Zerfall, Wiedergeburt, dystopischen Architekturlandschaften und neuronalen Netzwerken. Dabei werden Körper nicht nur entgrenzt und entfremdet oder verfremdet, sondern in ihrer Dualität und Ambivalenz zu Doppelgängeridentitäten: sie symbolisieren dualistische Komponenten aus Tod und Leben/Wiedergeburt, Realität und Virtualität, sakral und profan, Schönheit und Unheimliches, männlich und weiblich. Körper und Maschine, Geist und Psyche.

Fasst man Psyche, den Sitz unserer Gefühle, Emotionen und Stimmungen, des subjektiven Erlebens, nach Freud als ausgedehnte Sphäre auf, wird klar, dass auch das Unbewusste eine räumliche und leibliche Dimension besitzt. Diese wird bei Freud durch den grotesken Körper, der einem ständigen Wandel unterworfen ist,

symbolisiert und visualisiert, um die Verbindung zur animalischen und unkontrollierbaren Natur des Menschen herzustellen (Janus, 2025). Die Ästhetik wiederum verbindet nicht nur Körper und Geist miteinander, sondern eröffnet auch Interpretationsmöglichkeiten auf dem Gebiet der Neuroästhetik.

So wirkt auch bei Lu Yang das Vertraute entfremdet oder unheimlich auf den Betrachter, verstörend und bizarr. Anders als das westliche Groteske im Werk Lu Yangs, das häufig mit Chaos und Sinnverlust in Verbindung gebracht wird, lassen sich eindeutig ost-asiatische Bezüge für das Morbide, die Schönheit im Hässlichen oder Verfall feststellen. Ein Beispiel dafür ist die Avatar-Serie DOKU sowie Delusional Mandala oder Delusional World; hier wird die Lehre vom Nicht-Selbst (anatman) und Leerheit (sunyata) verbildlicht (Deiss/Gantert, 2022; Remy-Handfeld 2022, S. 111-127)

Über die buddhistische Kosmologie hinaus lassen sich kunsthistorische Vorläufer im Hinblick auf das Groteske in den Werken von Hieronymus Bosch, Pieter Bruegel dem Älteren, Francisco Goya und Francis Bacon vermuten.

Darüber hinaus hat auch die japanische Tradition des *ero guro* („erotic grotesque“) Einfluss auf die Cyberpunk-Ästhetik von Lu Yang (La Rocca, 2006, S. 2-19). Das Groteske und Bizarre bei Lu Yang ist folglich kein bloßes Horormotiv, sondern ein Element, eine Kategorie des Unheimlichen und charakteristisch für die sog. „dunkle Ästhetik“ wie sie auch in den Werken eines H. R. Giger oder Zdzislaw Beksinski, wenn auch monströs überhöht, visualisiert wird (Giger, 2026; Bennke, Mersch, 2024).

Die groteske Ästhetik bei Lu Yang ist vor allem aber als cyboresk, kybernetisch, posthuman und buddhistisch zu charakterisieren. Lu Yangs digitale Avatare und Figuren werden als entgrenzte, posthumane Existenzen dargestellt, die in einem ambivalenten und antithetischen Spannungsverhältnis stehen. Oft tauchen Figuren auf, die Hoffnung, Heilung und Transzendenz, spirituelle Reisen oder Reinkarnation verkörpern und andere, die auf die Entfremdung, Entgrenzung, Dekonstruktion von Körperlichkeit und Identität sowie den Kontrollverlust einer Gesellschaft hinweisen. Diese Dualität aus Gut und Böse ist auch für das Prinzip der Ästhetik wichtig und

entscheidend, dass sie die bereits erwähnten anästhetisierenden Effekte einer lauten und grellen „Cyberpunk-Pop-Hölle“ durch einen farbintensiven Sinnesrauch der Neurosynapsen ablöst.

Lu Yang thematisiert in seinen/ihren Werken ebenso seine/ihre eigene Faszination für neurowissenschaftliche Verfahren und modernste Technologien und damit das Loslösen des menschlichen Bewusstseins von seinem physischen Körper hin zu einer reinen Digitalität. Sie unterstreicht damit zum einen eine buddhistisch-nihilistische Dimension ihrer Ästhetik sowie zum anderen körperkritische und genderfluide Aspekte.

Zusammenfassend lässt sich festhalten, dass Lu Yang in seinen/ihren Werken im Bereich des digitalen Surrealismus posthumanistische Diskurse mit buddhistischer Philosophie und den Neurowissenschaften verbindet. Die großen grell-bunten Cyberpunk -Welten Lu Yangs, in denen sakrale buddhistische Ikonographie mit neurobiologischen Horror-Elementen miteinander kontrastieren, werden durch eine extreme technologische Reizüberflutung bis zum ästhetischen Schock gesteigert und eröffnen so durch surreale Bildstrategien im digitalen Raum neue Perspektiven auf einen posthumanen surrealen Buddhismus. Bei Lu Yang erfolgt die surreale Grenzüberschreitung folglich nicht nur über Traumlogik und Unterbewusstes sondern vor allem durch Technologie und digitale Simulationen. Das Metaverse bei Lu Yang kann somit als Gegenwelt zur physischen Realität verstanden werden - ein virtueller Raum, der in Cyberpunk-Ästhetik und durch Reizüberflutung nicht nur bloße Realitätsflucht versinnbildlicht, sondern vielmehr digitale Identitäten und posthumane Existenzen in einer Art alternativen Realität ermöglicht. Dieser alternative Handlungs- und Erfahrungsraum bietet dem posthumanen Selbst neue Perspektiven auf eine Zukunftsversion, in der Bewusstsein, Identität und Körper technologisch transformiert sind.

9. Zusammenfassung

Wie die vorliegenden Betrachtungen gezeigt haben, ist Cyberspace nicht gleich Cyberspace. William Gibson prägte den Begriff und

definierte ihn als eine halluzinatorische Erfahrung und bildorientierte Wahrnehmung von Datensätzen - mithin handelt es sich hier eher um ein rein virtuelles, technisches Feld. In den Fiktionen Matrix stellt sich der Cyberspace als eine 360° Grad Allround-Raumsimulation der Wirklichkeit dar, ein Datenraum, der allgegenwärtig ist und zunächst nicht als bloße Illusion einer Realität erkannt wird.

Lu Yang wiederum überführt den Cyberspace aus Neuromancer, Tron oder Matrix in das digitale Universum des Metaverse, einen transformativen Raum, in dem die Körperlichkeit, Identitäts- und Subjektivitätsformen transzendiert werden.

Das Cyberspace-Konzept in Matrix und Neuromancer wird dabei als metaphorisches, narratives Konstrukt verstanden, während die chinesische Medienkünstler:in Lu Yang einen eher körperlichen Zugang zu digitalen Existenzen aufweist und mit kultureller Hybridisierung von Körperlichkeit und Codes spielt bzw. die Transformation des Leiblichen in eine digitale posthumane Existenz postuliert.

Lu Yangs eigene Vorstellung von KI und dem Homo digitalis wiederum basiert auf der Ablösung und Überwindung jeglicher materiellen Bedingtheit und irdischen Grenze hin zu einer digitalen Transzendenz. Durch die Kombination und Verbindung mit buddhistischen Konzepten zum Lebenszyklus, dem Kreislauf aus Geburt, Tod und Wiedergeburt, dem Konzept von Samsara, erschafft Lu Yang eine virtuelle Existenz, die gleichsam als Superintelligenz in Form eines transzendenten Geistes in den Cyberspace übertragen wird, eine posthumane Spezies, die insbesondere durch die Integration neurowissenschaftlicher Verfahren und Forschung und der buddhistischen Lehre in die Bildwelten Lu Yangs eine Neukonzeptionalisierung erfährt. Gerade dadurch sprengt Lu Yang konventionelle Grenzen in einem digitalen Karneval des 21. Jahrhunderts (Remy-Handfield, 2025).

Damit verhandelt Lu Yang das Themenfeld Spiritualität und göttliche Existenz im digitalen transformativen Raum ganz eindeutig künstlerisch-philosophisch, körperkritisch und hinduistisch-buddhistisch abseits von westlichen Eugenik-Strömungen des Silicon-Valley, und in erster Linie vor allem unter ästhetischen Gesichtspunkten, im

Sinne einer Cyberpunk-Ästhetik, die der Popkultur und dem Retrofuturismus verpflichtet ist.

Durch die Darstellung immersiver bunter Illusions- und greller multisensorischer Pop-Welten, die Integration digitaler Tools und Multimedia-Elemente steht im Zentrum des Kunstschaffens die Transformation selber, die abseits der Skepsis der Sinne oder einer Kritik des falschen Scheins sinnliche Ästhetik neu kodiert.

In der Transzendierung des posthumanen Selbst unter Einbeziehung der hinduistisch-buddhistischen Kosmologie sowie modernster neurowissenschaftlicher Technologien generieren Lu Yangs Bilder einen Sinnesrausch zwischen Fiktionalität und Realität, der vor allem auch buddhistisch-sakrale Ikonografien miteinbezieht (Krumm, 2023).

Damit verschmelzen Körper, Technik und Mythos bei Lu Yang in den digitalen Sphären zu einem sakralen Bild miteinander, das Transzendierung und Identität posthumanistisch verhandelt – quasi als Metapher für die postmoderne Erfahrung von Entgrenzung, Fluidität und dem ständigen Neuverhandeln von Identität in der postmodernen multimedialen Gesellschaft. Auch wenn Lu Yangs von bunten Neonlichtern geprägte Cyberpunk-Welten dabei auf mitunter nostalgische bis kitschige Tropen zurückgreifen, erfolgt dennoch keine romantische Überhöhung, sondern eher eine Absage an den romantischen Sehnsuchtsort, der quasi als Illusion entlarvt wird. Zu konstatieren bleibt alles in allem, dass Lu Yangs Bildwelten von sinofuturistischen Motiven mit einer fast psychodelischen Bildsprache gekennzeichnet sind. Dabei wird ein Spannungsverhältnis zwischen traditioneller chinesischer Ikonografie und westlicher Popkultur thematisiert, die in einer Cyberpunk-Ästhetik kulminiert, die wiederum mit einer digitalen Sphäre und spirituellen Dimension zu einer spekulativen Zukunftsvision verschränkt ist.

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Yapay Zekâ Çevirisi ve Çevirmenlik Mesleğine Yansımaları

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Teknoloji alanındaki gelişmeler hayatımızın hemen hemen her alanına birçok yenilik sunmuş; yeni yazılımlar, uygulamalar ve sistemler ortaya çıkarmıştır. Özellikle İnternetin hayatımıza girmesi kişiler ve ülkeler arasındaki sınırları ortadan kaldırarak insanlara birkaç dokunuşla dünyanın her tarafına sanal olarak ulaşma olanağı sağlamıştır. Bu durum İnternetteki veri miktarının hızla artmasına yol açmış, artan veri miktarı ise yapay zekâ teknolojilerinin yetenekleri geliştirmiştir. Bunun yansımaları çeviri alanında da görülmeye başlanmıştır. Nitekim yapay zekâ çevirisi, daha önce hiç olmadığı kadar başarılı çeviri sonuçları ortaya çıkarmış ve çeviri alanına bir dinamizm kazandırarak bu alanı ilgi gören bir alan haline getirmiştir.

Yapay zekâ çevirisinin popüler hale gelmesi ve yaygın bir şekilde kullanılmaya başlanması bu alanda bir kavram karmaşası ortaya çıkarmıştır. Öncelikle bu konuya açıklık getirmek gerekir. Çünkü çeviri alanındaki çalışmalar her geçen gün artmakta ve yeni yazılımlar ve uygulamalar hayatımıza girmektedir. Bu alandaki çalışmaların daha sistematik bir şekilde incelenmesi için bu teknolojilerin sınıflandırılması ve kavramların açıklığa kavuşturulması gerekmektedir. Bu konuda yapılan sorgulamaların biri yapay zekâ çevirisi ile makine çevirisinin aynı şey olup olmadığıdır. Buradan hareketle diyebiliriz ki yapay zekâ

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² Bu çalışma 19-21 Kasım 2025 tarihinde Manisa Celal Bayar Üniversitesi'nde düzenlenen II. Ulusal Çeviri Teknolojileri Kongresi'nde sunulan Yapay Zekâ Çevirisi ve Çevirmenlik Mesleğine Yansımaları başlıklı bildiriden yararlanılarak hazırlanmıştır.

çevirisi geçmişte kullanılan makine çevirisinin daha gelişmiş bir sürümüdür ve otomatik çevirinin en ileri seviyesidir.

Otomatik çevirinin gelişim süreci üç evrede incelenebilir. Birinci evre Mekanik Çeviri, ikinci evre Makine Çevirisi ve üçüncü evre ise Yapay Zekâ Çevirisi. Mekanik çeviri, 1920'lerden bilgisayarların icat edilmesi ve otomatik çeviri yapmaya başlamasına kadar geçen sürede tasarlanmış, oldukça basit, sınırlı sayıda kelime ve cümleyi çevirebilen, sistemlerinde basit iki dilli veya birkaç dilli sözlük bulunan mekanik cihazların yaptığı otomatik çeviriyi ifade etmektedir. Makine çevirisi ise programlama ve istatistiksel yöntemler kullanılarak bilgisayarlarla otomatik olarak yapılan çeviriyi ifade etmektedir. 2. Dünya Savaşı sonrasında geliştirilen bilgisayarların otomatik çeviri yapabileceği düşüncesinden hareketle 1954 yılında İngilizce-Rusça dil çiftinde gerçekleştirilen Georgetown Deneyi sonrası başlayan ve Nöral makine çevirisi olarak adlandırılan yöntemin uygulanmaya başlandığı 2016 yılında kadar kullanılan otomatik çeviri türüdür. Yapay zekâ çevirisi ise makine öğrenmesi, derin öğrenme, doğal dil işleme gibi yapay zekâ teknolojilerin kullanıldığı yeni bir yaklaşım olan Nöral Çevirinin kullanılmaya başlamasıyla ortaya çıkan otomatik çeviriye verilen addır (Aslan 2025: 84).

Yapay zekâ çevirisinin kalitesinin artması bu sistemlerin çeviri sürecinde daha fazla kullanılmasını sağlamıştır. Çünkü daha hızlı ve daha ucuz çeviri olanağı sunduğundan bu sistemler, müşteriler tarafından daha fazla tercih edilmeye başlanmıştır. Özellikle daha hızlı çeviriye ihtiyaç duyanlar veya yüksek kalitede çeviriye ihtiyaç duymayanlar bu yöntemi tercih etmektedirler. Bununla birlikte yapay zekâ çevirisindeki gelişmeler bu sistemlerin birçok alanda kullanılmasının önünü açmıştır. Örneğin yapay zekâ çevirisinin gelişmesiyle birlikte, uluslararası pazarlarda faaliyet gösteren şirketler, müşteri destek hatlarından video oyunlarına, haber yorumlarından ürün yorumlarına, sanal asistanlardan mobil uygulamalarına kadar çeşitli yöntemlerle yapay zekâ çevirisini sistemlerine entegre etmeye başlamışlardır. Turizmden gazeteciliğe, eğitimden ticarete, sosyal ağlardan eğlence sektörüne kadar birçok alanda dil engelini aşmak ve farklı bölge ve ülkelerdeki müşterilerine çok dilli hizmet vermek isteyen şirketler, verimliliklerini artırmak, çeviri maliyetlerini azaltmak, müşteri deneyimlerini geliştirmek

ve hedef kitlelerini çoğaltmak gibi gerekçelerle yapay zekâ çevirisine başvurmaktadırlar.

Yapay zekâ çevirisinin kullanımının yaygınlaşması çevirmenlik mesleğini de etkilemiştir. Bu etkileri ortaya koymak için öncelikle çevirmen kimdir sorusuna açıklık getirmek gerekir. Zira yapay zekâ bu bağlamda bir çevirmen olarak görülmektedir. Şüphesiz ki çevirmen dil bilgisi kurallarını iyi bilen kişi demek değildir. Çünkü çevirmenlik dilini iyi bilmenin yanında çeşitli beceri ve yetkinliklere sahip olmayı gerektiren bir uğraştır. Örneğin dile ait kültür bilgisi, metin bilgisi, çeviri stratejisi bilgisi, teknoloji bilgisi gibi beceriler sayılabilir. Bunun yanında çevirmen karşılaştığı sorunlara çözüm üretebilme, metinlerin anlamsal olduğu kadar duygusal yönünü görebilme, çevirmenin üslubunu ortaya koyabilme niteliklerine de sahip olan kişidir. Dolayısıyla bir yapay zekâ çevirisinden yalnızca metinlerin anlamını doğru bir şekilde aktarmasını beklememek gerekir, bunun yanı sıra diğer özellikleri de metne yansıtabilmesi beklenmelidir. Fakat günümüzde yapay zekâ çevirisi sistemleri, anlamı çoğu zaman isabetli bir şekilde çevirirken metnin tonunu, duygu boyutunu, yazarın üslubunu doğru bir şekilde aktarmaktan çok uzaktır. Bu durum yapay zekâ çevirisinin henüz bir insan çevirmen yetkinliklerine sahip olmadığını açık biçimde göstermektedir.

Yapay Zekâ Çevirisinin Çeviri ve Çevirmelik Mesleğine Etkileri

Günümüzde yapay zekâ teknolojileri hemen hemen her alanda etkilerini görmek mümkündür. Bunun yanı sıra araştırmacılar bu teknolojileri kendi alanlarına uyarlayarak daha fazla yararlanmak, yeni iş modelleri ve uygulamalar ortaya çıkarmaya çalışmaktadır. Çeviri alanında da yapay zekâ teknolojilerden yararlanılmaya başlanmış ve yeni çalışma modelleri ve yeni mesleki roller ortaya çıkmıştır. Çeviri sürecinde çevirmenler otomatik çeviriden terminoloji yönetimine dil bilgisi ve yazım denetiminden metin analizi ve özetlemeye kadar çeşitli konularda yapay zekadan yararlanmakta ve çalışmalarını daha hızlı ve daha dinamik bir hale getirerek verimliliği artırmaktadır.

Günümüzde yapay zekâ çevirisinin gelişmesiyle birlikte çeviri faaliyetlerinde insan makine iş birliği daha da artmıştır. “Çevirmenler artık, her bir insan yapay zekâ çevirisinin kalitesini ve özgünlüğünü korumak için uzmanlıklarının çok önemli olduğu hibrit bir çeviri iş akışının ön saflarında yer alıyor. Bu döngüdeki insan modeli, yapay zekâ tekrarlayan ve zaman alıcı görevleri üstlenirken, insan çevirmenlerin yalnızca bir insanın sağlayabileceği temel kültürel içgörü ve yaratıcılık dokunuşunu getirmesini sağlar. Bu iş birliği yalnızca çevirilerin kalitesini artırmakla kalmıyor, aynı zamanda çevirmenlerin yerleştirme yönetimi ve içerik uyarlama gibi daha stratejik roller üstlenmesine de olanak tanıyor” (Soellner 2025).

Çeviride insan makine iş birliğinin artması, bu iş birliğinin nasıl gerçekleştirilmesi gerektiği konusunun da sorgulanmasına neden olmuştur. Pokorny (2025) yapay zekâ ve insan çevirisi arasında nasıl seçim yapılacağını sorgulamış ve bazı hususlara değinmiştir. Bunlar şöyledir:

- Karar vericiler içerik türü, aciliyet ve bütçe kısıtlamalarına göre yapay zekâ ve insan çevirisi arasında seçim yapmalıdır.
- Yapay zekâ yüksek hacimli, zamana duyarlı çevirilerde üstünlük sağlarken, insan çevirmenler yasal, tıbbi ve kültürel açıdan nüanslı içerikler için çok önemlidir.
- Yapay zekâ ile insan gözetimini birleştiren hibrit bir yaklaşım giderek daha fazla benimsenmekte, doğruluk ve verimliliği artırmaktadır.
- Maliyet karşılaştırmaları, yapay zekâ çevirisinin profesyonel insan hizmetlerine kıyasla giderleri önemli ölçüde azalttığını ve işlemler için cazip hale getirdiğini göstermektedir.

Pokorny (2025) ayrıca yapay zekanın bazı durumlar için ideal olduğunu belirterek bunları şöyle açıklamaktadır:

Yüksek hacimli teknik belgeler: Yapay zekâ, belgeler arasında tutarlılık sağlayarak yerleşik terminolojiye sahip büyük miktarlarda içeriği çevirmeye mükemmeldir.

Gerçek zamanlı iletişim ihtiyaçları: Anlık mesajlaşma veya canlı sohbet için yapay zekâ, gecikme olmadan hızlı etkileşim sağlayan anında çeviriler sağlar. Ancak, site sahiplerinin yapay zekâ botlarının yeterli

kelime dağarcığına sahip olduğundan ve iyi test edildiğinden emin olmaları gerekir. Bottan insana geçişlerin zamanlamasını optimize etmek de önemlidir. Yapay zekaya çok fazla şey bırakırsanız müşteriler hayal kırıklığına uğrayabilir.

Kısa yaşam döngüsüne sahip içerik: Haber makaleleri veya sosyal medya gönderileri gibi zamana duyarlı materyaller, yapay zekanın hızından faydalanan işletmelerin sektördeki değişimlere ayak uydurmasını sağlar.

Yapay zekâ çevirisinin çevirmenlere sağladığı en önem katkılardan biri verimlilik artışıdır. Çeviride verimlilik, daha kısa sürede daha fazla ve daha kaliteli çeviri yapmak olarak ifade edilebilir. Küreselleşen dünyada çeviri ihtiyacının sürekli artması, daha kısa sürede daha fazla ve daha kaliteli çeviri yapılmasını gerekli kılmaktadır. Çevirmenler yapay zekâ çevirisinden yararlanarak daha hızlı çeviri yapıp daha fazla iş alabilirler. Daha fazla iş yapmak üretkenliğin artması demektir. Dolayısıyla yapay zekâ çevirisi çevirmenlerin üretkenliğini artırmaktadır. Bu durum şüphesiz ki daha fazla gelir etme anlamına gelmektedir.

Duyar (2025) yapay zekanın çeviri ve yerelleştirme çalışmalarında da verimli bir şekilde kullanılabileceğini ifade etmekte ve dört konuda kendisini kanıtladığını ileri sürerek bunları şöyle açıklamaktadır:

İçerik Ön İşleme: Yapay zekâ tekrarlayan ifadeleri tanımlayabilir, içerik türlerini kategorize edebilir ve dil kalıplarını analiz edebilir, böylece insan dilbilimcilerin yaratıcı yönlerine odaklanmasını kolaylaştırır.

Sözlük Yönetimi: Yapay zekâ, sözlükleri koruyarak ve çeviri sürecinde uygun terimler önererek terminolojinin tutarlı kullanımını sağlar.

Çeviri Sonrası Düzenleme Yardımı: Yapay zekâ, çeviriler hakkında ayrıntılı geri bildirim sağlar, iyileştirme için potansiyel alanları vurgular ve alternatif öneriler sunar.

Veri Analizi: Yapay zekâ, yerelleştirilmiş bölgelerdeki kullanıcı davranışlarını ve geri bildirimlerini analiz ederek gelecekteki yerelleştirme çabalarını iyileştirmeye yardımcı olur.

Yapay zekâ çevirisinin çeviri ve çevirmenlik mesleğini hem olumlu hem de olumsuz çeşitli yansımaları olmuştur. Olumlu yansımaları

olarak verimlilik artışı, iş yükünü azaltması, çeviri kapsamını genişletmesi, çevirmenlerin yorgunluk ve tükenmişlik yaşama olasılıklarını azaltması gibi durumlar sayılabilir. Olumsuz yansımaları ise kalite konusundaki sorunlar, etik sorunlar, gizlilik ve veri güvenliği sorunları, çevirmenlerin yaratıcı becerilerini köreltme ve monotonluk ortaya çıkarması gibi durumlardır. Bu etkilerin ne kadar süreli olacağını ve gelecekte başka etkilerin de ortaya çıkıp çıkmayacağını şimdiden kestirmek kolay değil fakat yapay zekâ çevirisinin farklı teknolojilerle entegre bir şekilde kullanılması, veri miktarının artması yeni yansımalarının olacağını açık bir göstergesidir.

Yapay zekâ çevirisi çevirmenlerin iş yükünü azaltmıştır. Çünkü bu sistemlerle yapılan çeviride bir tıklayışla onlarca sayfa, kısa bir sürede çevrilmektedir. Çevirmen çevirinin doğruluğundan emin olmak veya eksik ve hatalar için son okumalar ve düzenlemeler yapsa da bu durum genellikle bir metni baştan sona sıfırdan çevirmekten daha fazla zaman almaz. Bununla birlikte insan çevirmen, çeviri yaparken sözlük ve terimce gibi kaynaklar kullanarak sözcüklerin farklı anlamalarını ortaya çıkarmak ve metni çözmek için uğraşır ve bunun için ciddi zaman harcar. Yapay zekâ çevirisi sözcükleri farklı anlamlarıyla, deyimler ve atasözleri gibi kalıp sözleri bağlamı dikkate alarak çevirebilmekte ve çevirmene zamandan tasarruf etme ve iş yükünü azaltma olanağı sağlamaktadır.

Yapay zekâ çevirisi kapsamını genişleterek çevirmenlere yeni iş olanakları sunmaya başlamıştır. Çok dilli müşteri portföyü ve çok dilli hedef kitlesi bulunan şirketler, müşterileriyle olan etkileşimlerini daha verimli hale getirmek için yapay zekâ çevirisini sistemlerine entegre etmektedir. Fakat bu şirketlerden bazıları, örneğin basın yayın şirketleri yapay zekâ çevirisi ile insan çevirisini bir arada tercih etmekte. Acil yayınlanması gereken haberler için tamamen yapay zekâ çevirisi tercih edilirken diğer haberlerin çevirisinde insan çevirmen müdahalesi söz konusudur. Çünkü haberlerin doğruluğu şirketin itibarı açısından önem taşımaktadır. Geçmişte yalnızca birkaç dilde yayın yapay bazı haber siteleri yapay zekâ çevirisi kullanarak daha çok dilde yayın yapmaya başlamıştır. Bu durum şüphesiz ki çevirmenler için yeni iş olanakları anlamına gelmektedir. Bu sistemlerini yönetecek, çevirileri

düzenleyecek kadrolara ihtiyaç duyulmaktadır. Bu kadrolar da çevirmen kadrolarıdır.

Çevirmenler özellikle zaman alıcı ve karmaşık görevlerde büyük bir stres altında çalışmaktadırlar. Ayrıca uzun vadeli çalışmalar çevirmende zaman baskısı ve kaygıya neden olabilmektedir. Bu durum uzun vadede büyük bir yorgunluk ve tükenmişlik duygusu ortaya çıkarabilmektedir. Çevirmene çeviri sürecinde yardımcı olan tüm teknolojiler işleri hızlandırıp kolaylaştırdığı gibi çevirmenin psikoloji üzerinde de rahatlatıcı etkileri vardır. Yapay zekâ çevirisi de Crangasu'nun (2024) belirttiği gibi, yorgunluk ve tükenmişlik yaşama olasılıklarını azaltır. Böylece çevirmenlerin özgüvenlerini destekleyerek işlerine motive olmalarını ve odaklanmalarını kolaylaştırır.

Soellner (2025) yapay zekanın çevirmenlerin bilişsel yüklerini azaltarak daha başarılı çeviri çıktıları üretmelerine katkı sunacağını belirterek bu durumu şöyle açıklamaktadır: “Yapay zekâ, bilişsel yükü azaltarak dil uzmanlarının verimliliklerini artırmalarını ve yüksek konsantrasyon seviyelerini korumalarını sağlar ve sonuçta üstün çeviri sonuçlarına yol açar. Bu optimizasyon sadece verimliliği artırmakla kalmaz, aynı zamanda çevirmenlerin ayrıntılardan bunaltılmadan metinle derinlemesine etkileşime girebilecekleri daha tatmin edici bir çalışma ortamını da teşvik eder. Yapay zekâ gelişmeye devam ettikçe bilişsel yük yönetimindeki rolü giderek daha karmaşık hâle gelecek ve her çevirmenin ihtiyaçlarına özel olarak uyarlanmış kişiselleştirilmiş destek sunacaktır”

Yapay zekâ çevirisinin çevirmenlik mesleğine olumlu yansımaları olduğu gibi olumsuz yansımaları da olmuştur. Bunların başında da etik konusu gelmektedir. Topal ve Polat (2025: 112) “çevirmenler çeviri sürecinde genel olarak belli başlı soruları cevaplayarak çeviri sürecini yürütürler. Bunlar genellikle çevirmenin sorumlulukları, çevirmenin metne ve/veya yazara sadık olup olmaması gerektiği, çevirmenin dünya görüşünü metne yansıtması gerekip gerekmediği, kendi inandığı değerlere göre mi yoksa piyasanın talep ettiği değerlere mi göre çevirinin yapılıp yapılmayacağı gibi konularla ilgilidir. Bu soruların cevabına ilişkin kaygılar her çevirmen için geçerlidir ve bu konular çeviri etiğinin temel taşını oluşturur.” Yapay zekâ çevirisinin bu bilinç ve farkındalığının olmaması bu konuda sorumluluğu çevirmene

yüklemektedir. Çevirmen son düzenleme yaparken metnin dilbilgisel, kültürel, metinsel gibi çeviriye özgü özelliklerini dikkate almanın yanı sıra etik boyutunu da dikkate almak durumundadır.

Bunun yanında yapay zekâ çevirisinin ortaya çıkardığı etik kaygılar bulunmaktadır. “Bunların başında, bu tür modellerin oluşturulmasında kullanılan eğitim verilerinden kaynaklanan algoritmik önyargılar gelmektedir. Bu sistemler sıklıkla cinsiyet, ırk ve kültürle ilgili stereotipleri kopyalamakta ve dolayısıyla ayrımcı söylemleri pekiştirebilecek çeviriler üretmektedir. Hassas ya da gizli bilgileri içeren metinlerin çevrimiçi platformlar aracılığıyla işlenmesi ciddi riskler barındırdığından, gizlilik ve veri güvenliğine ilişkin kaygılar da aynı ölçüde kritik bir öneme sahiptir” (Seven 2025: 385). Çevirmen bu durumun bilincinde olarak gizlilik ve güvenli gerektiren metinleri yapay zekâ ile çevirirken bir kez daha düşünmeli, ortaya çıkabilecek olumsuzlukları göz önünde bulundurarak yapay zekâ çevirisi kullanmaktan kaçınmalıdır.

Etik sorunlarla birlikte yapay zekâ çevirisinin güvenlik sorunları da bulunmaktadır. Zira bu sistemler büyük miktarda gizli verileri işlemekte, saklamakta ve yeniden kullanmaktadır. Bu durum güvenlik endişeleri ortaya çıkarmaktadır. Zira yapay zekâ sistemlerinin veri gizliliği sağlamadığı, bu teknolojileri üreten şirketler tarafında da kabul edilmektedir (Özel 2025). Bu konuda metinlerin güvenliği çevirmenin sorumluluğundadır. İş sözleşmelerinde genellikle gizliliğe dair hükümler olsa da bu konuda bir farkındalığı olmayan çevirmenler bu gizliliği ihlal edebilmektedir. Bu durum ayrıca çevirmenler açısından hukuki ve cezai durumlar ortaya çıkarabilmektedir. Bundan dolayı çevirmenlerin yapay zekâ çevirisinden yararlanırken veri güvenliğine mutlaka özen göstermeleri gerekmektedir.

Yapay zekâ çevirisinin çevirmenlik mesleği üzerine bir diğer olumsuz yansıması ise çevirmenlerin yaratıcı becerilerini köreltme riskidir. Edebi çeviri, görsel-ışitsel çeviri ve yerelleştirme gibi farklı metin türlerinde çevirmenler yüksek seviyede yaratıcılık becerileri kullanırlar. Bunun yanında teknik metinlerde, yüksek doğruluk gerektirmeyen ve tekrarlayan çeviri görevlerinde yapay zekâ çevirisi tercih etmekte. Bu metinler bir monotonluk durumu ortaya çıkararak çevirmenlerin yaratıcı becerilerini köreltebilir, zira “yapay zekanın yaratıcılığı etkileyici

olsa da yalnızca kendisine verilen kalıplardan kaynaklanması ve kendi başına çözümler ve yeni fikirler hayal etme yeteneğinden yoksun olması nedeniyle sınırlıdır.” (Newblom 2024).

Yapay zekâ çevirisindeki ilerlemeler çevirmenlere yeni roller yüklemiştir. Geçmişte yalnızca bir dilden diğerine çeviri yapan çevirmenler, yapay zekâ çevirisinin yeteneklerini artırması ile birlikte farklı görevler üstlenmeye başlamışlardır. Bunların başında yapay zekâ kullanılarak üretilen çevirilerin doğruluğunu ve kalitesini artırmak için çevirilere son düzenleme yapan bir çeviri editörü rolü gelmektedir. Ayrıca yapay zekâ çevirisinin çeviri kalitesinin standartlarını ortaya koyan ve bunu denetleyen Kalite Denetçisi çevirmenin bir diğer rolüdür. Bunun yanında çevirmenler, editörün yaptığı düzenlemeleri müşteriye teslim etmeden önce son kez okuyup çevirinin akıcılığını ve doğruluğunu gözden geçiren bir redaktör olarak da görev yapmaktadırlar.

Sonuç

Yapay zekâ çevirisi çeviri kalitesini ciddi biçimde artırmış ve bu alanda bir paradigma değişikliğine neden olmuştur. Artan çeviri kalitesiyle birlikte yapay zekâ çevirisine dayalı birçok yeni uygulama hayatımıza girmiş ve çeviri ihtiyacını karşılamada önemli bir yardımcı araç haline gelmiştir. Ayrıca yapay zekâ çevirisinin çevirmenlik mesleğine hem olumlu hem de olumsuz yansımaları olmuştur. Olumlu yansımaları genel olarak çeviri sürecini iyileştirirken olumsuz yansımaları çevirmenlerin bu konudaki bilinç ve farkındalık düzeylerinin artırılmasıyla ortadan kaldırılabilir niteliktedir. Bununla birlikte yapay zekâ çevirisinin çevirmenlik mesleğini gözden düşüreceği endişesini ortaya çıkarmıştır. Fakat bu durum gerçekçi değildir. Çünkü kritik belgelerde ve metinlerde insan onayına ihtiyaç her zaman devam edecektir. Dolayısıyla çevirmenlerin çeviri sürecinin tamamen dışında kalması mümkün değildir. Bu araçlar gelecekte de çevirmenler tarafından yardımcı bir kaynak olarak kullanılmaya devam edecektir. Bundan dolayı çevirmenlerin, bu teknolojiye dair bilgi ve becerilerini geliştirerek bu araçlardan daha fazla verim elde etmeleri sağlanmalıdır. Bunun için özellikle çeviri eğitimi veren kurumlarda bu konular müfredata dahil

edilerek derslerde ele alınmalı ve çevirmen adaylarına bu beceriler ve farkındalıklar kazandırılmalıdır.

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