

# Confero

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**Confero: Essays on Education, Philosophy & Politics**

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## Editorial: Open Issue

*Amanda Hoskins, Paul Resch, Kenna Sim-Sarka,  
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**I**n this 10<sup>th</sup> issue, Confero turns its attention to pressing global questions at the intersection of education and artistic practice. Two essays critically examine the increasingly prominent role of artificial intelligence (AI) in reshaping classrooms and artistic creation, while a third emphasizes the need for mutual recognition and dialogic pedagogy in contexts of conflict. Together, these contributions highlight both technological development and humanistic challenges and invite readers to reflect on how education and art can navigate ongoing societal changes.

The issue opens with Gene Fellner's essay, which addresses urgent pedagogical concerns arising from historical, contemporary, and anticipated future conflicts. It examines the role education might play not only in bringing people together, but also in fostering mutual understanding, through pedagogy built on dialogue - the possibility of mutual recognition as a pedagogical process. Shifting focus, the essays by Cornelia Linderoth & Carl-Johan Stenberg and Alessandra Di Pisa & Robert Stasinski explore how we might comprehend and respond to the social transformations brought about by new technologies. They examine how education and artistic practice are affected by the ongoing digital evolution of society, and how education can serve to engage with these changes. At the same time, the two essays raise questions about how such transformations might challenge our understanding of and relationship to technology. More specifically, in the second contribution, Cornelia Linderoth and Carl-Johan Stenberg employ the concept of educational fiction to explore a future shaped by datafication, rationalization, efficiency, and management-by-data. The final essay, by Alessandra Di Pisa and Robert Stasinski, examines the evolving

relationship between art, artificial intelligence, and the relationships between humans and technology.


In the first essay, titled *The possibility of mutual recognition: What we can learn from the tragedy of Achilles*, Gene Fellner argues for a necessary transformation in the classroom through mutual recognition among individuals. Using Homer's Iliad and the tragedy of Achilles as parallels to contemporary times, Fellner suggests that when students and teachers see themselves in each other through dialogic engagement, such recognition can transcend the classroom. In times when impunity on the global stage is spreading and oppression is conflated with victimhood, Fellner's plea in this essay for mutual recognition in schools and beyond is of paramount importance.

In the second essay, *Welcome to Class*, Cornelia Linderoth and Carl-Johan Stenberg explore how education and teacher practices are reshaped by AI and data-driven technologies. Using education fiction based on sociotechnical imaginaries of AI in education, they question and re-imagine a future classroom, highlighting the tension between teacher autonomy and the implementation of AI. In particular, the two fictional narratives serve as illustrations of a possible future where the implementation of an AI system facilitates classroom management and assessment to the point where efficiency and personalization are maximized; however, they also depict a change in teachers' professional judgment and agency, where they have now become facilitators rather than the primary decision makers. Thus, the authors emphasize the need for teacher involvement in shaping technology based on their pedagogical needs and argue that understanding the many practices involved in how AI systems are created will make teachers better equipped to not only engage in informed discussions on AI but also critically assess them.

In the third essay, *The Silicon Other*, artist-researchers Alessandra Di Pisa and Robert Stasinski offer a compelling and timely intervention into contemporary debates about AI and artistic practice. Moving beyond the prevalent instrumental use of commercial AI tools that merely reproduce existing datasets and reinforce capitalist extraction, the authors propose Technoecology, a framework that repositions AI not as a subordinate creative assistant but as an

autonomous "alien agency" with its own computational expressivity. What distinguishes this work is its synthesis of posthumanist theory with practical artistic research to demonstrate how AI can be engaged on its own terms within broader ecological systems. The authors' most significant contribution lies in their challenge of human-centered paradigms of creativity and authorship, advocating instead for an emergent aesthetic practice where meaning arises from the dynamic entanglement of human, algorithmic, machinic, and environmental agents. This radical reconceptualization, from AI as a tool to AI as the "Silicon Other," opens vital new directions for artistic research at the intersection of technology, ecology, and posthuman thought.

The contributions in the tenth issue of *Confero* shed light on pressing debates within and beyond pedagogy. At a time marked by rapid technological, political, economic, and social transformations on a global scale, these essays invite readers to pause, reflect critically, and reconsider established approaches as we collectively navigate this era of profound changes.

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# The possibility of mutual recognition: What we can learn from the tragedy of Achilles

*Gene Fellner*

Much has been written about mutual recognition in educational scholarship and its potential to deliver education that is enriching, not remedial, and relatable, not irrelevant (see, for example, Fellner et al., 2024; hooks, 1994). In the United States, the necessity of this pedagogical practice has mostly focused on classrooms serving students of color though it is needed in all educational settings. Mutual recognition embraces students getting to know themselves and each other through dialogic education. It aims to catalyze awareness of one's position in the world, the first step in positively transforming one's own reality and thus of reality itself. Mutual recognition also highlights the vital importance of guiding students and teachers to acknowledge each other in their full authenticity, which is especially challenging when they are divided by race, culture and the experiences of daily life.

In the United States today, aspects of mutual recognition have been incorporated into school curricula, most prominently in the form of social-emotional learning, which is seen as a "primary goal of education" (Cipriano et al., 2022, p. 74) and in programs of restorative justice (Anfara Jr. et al., 2013). Social-emotional learning has mostly focused on classrooms serving students considered to be at risk (Bierman et al., 2010; Cipriano et al., 2022), and though it has many important elements, including helping students monitor and control their own behavior (Bierman et al., 2010), it has been accused of ignoring issues of race and cultural differences (Cipriano et al.,

2011). Though there has been relatively little research about restorative justice programs in schools (Mustian et al., 2022), they theoretically share a more critical lens than social-emotional programs in that they consider the role of institutional power and systems of justice in mediating student behavior and seek an alternative to punitive disciplinary measures to resolve conflicts (Anfara Jr. et al., 2013). The most popular methods of restorative justice “include derivations of peer juries, peace circles, and restorative conversations and conference” with the goal of building “community and shared trust and then work to restore and reconnect people within the community when damage or harm occurs” (Mustian et al., 2022, p. 53). There is a body of existing research that questions the success of both social-emotional and restorative justice programs (Cipriano et al., 2022; Mustian et al., 2022). Additionally, even in conception, these programs ignore the chiasm in life experiences that often divide teachers from students and thus they undermine the spirit of mutuality that is essential to the concept of mutual recognition as it applies to schools.

The practice of mutual recognition, unlike social-emotional curricula, cannot be an imposed or formulaic method of instruction, but as seems true for the success of restorative justice programs as well (Mustian et al., 2022), it must be genuinely embraced as the foundation of pedagogical interactions by educators. To further mutual recognition within educational settings – among students and between students and teachers – teachers need to facilitate an environment in which all participants engage dialogically with each other in the spirit of “strict equality,” which is how Hannah Arendt (2004, p. 434) characterized the relationship between Socrates and his students. These dialogs, these “talking things through” (p. 434) with others, aim to catalyze self-knowledge along with empathy for what one’s dialogic partners are experiencing given their positions in our common world. For mutual recognition to become manifest in classroom relationships, and for participants to see or come to see each other in the spirit of “strict equality,” they must feel they are in a compassionate space in which they can speak honestly and in which they have the time and opportunity to safely engage with others in self-reflection that may be uncomfortable. I, often with my colleague and with my students (Fellner et al., 2024), have written articles about mutual recognition as it has been enacted in our classrooms in Newark, New Jersey. That work has leaned on the



scholarship of such educators as Paulo Freire, bell hooks, and Lisa Delpit, all of whom might be considered teachers in the Socratic tradition and all of whom believed the practice of mutual recognition could create a pathway to a more just and equitable world.

The term mutual recognition itself, and the importance of practicing it within schools, are mostly associated with bell hooks (1994) and her book *Teaching to transgress*. She writes that mutual recognition demands “recognizing one another’s presence” (p. 8) and seeing every person as a full human being (“in their particularity as individuals”) (p. 7) with a voice that is worthy of being heard, acknowledged and welcomed. hooks’ articulation of the importance of mutual recognition rests on her childhood educational experience in a one-room segregated schoolhouse in Kentucky. Her teachers valued their students’ intellectual and emotional growth, knew their families, shared cultural practices, and taught with an orientation founded on historical knowledge of the African American experience. In the introduction to her book, hooks writes that her belief in her own unlimited possibilities was nurtured by a collective ethos that affirmed every individual’s worth and ability to shape their future. Education was enriching, empowering and relatable; it enhanced community love and solidarity, which in turn fostered individual exceptionality. School, she writes, was “a place of ecstasy” and learning was a “joy” (p. 3). That all changed with integration. The recognition between students and between students and teachers that seemed organically woven throughout her childhood education came to a sudden halt. Black teachers were fired, and instruction was conducted by white teachers unfamiliar with their students, their history or their culture and often disdainful of them. Her new white teachers did not “recognize” the presence of their Black students, did not see them as “full human beings,” and did not value their voices. Obedience to authority replaced love of learning. There was no mutual recognition or even an attempt at attaining it.

This lack of mutual recognition between teachers and students remains a major obstacle in education today. Dishearteningly, the differences in the life experiences between teachers and school administrators, who are mostly white (Schaeffer, 2024) in the United States, and their students of color, and the perceptions arising from

those differences, combined with the official power dynamics inherent in the classroom and the society it reflects, too often lead to an absence of recognition, miscommunication and conflict. This is evidenced in the great disproportion of Black students who are suspended, arrested on school property (Ferguson, 2001; Gregory et al., 2010) and misclassified with the most subjective disabilities (learning disabilities, emotional and behavioral disorders, speech and language disabilities) and thus excluded from the general student population (fortifying the school-to-prison pipeline) (Annamma, 2016; Merkwae, 2015), or simply leave school because they find it irrelevant to their lives (Coates, 2015; Dumas, 2014; Fellner, 2019). Many come to see schools as alien territory (Bruner, 1996; Coates, 2015; Dickar, 2008; Dumas & ross, 2016) rather than as a place where they are recognized, that place of “ecstasy” which hooks (1994) experienced during her early school days. As one of my 7<sup>th</sup>-grade African American students told me, “I don’t know what they talking about [in school]; give me something real.” Dumas (2014, p. 2) writes that for many Black students, school “is a site of suffering.”

Just recently, I finished the new Emily Wilson translation of the Iliad (Homer, 2017), Homer’s epic about the Trojan War. As I was reading it, the war between Israel and Hamas continued (as it still does as of this writing), atrocities exciting further atrocities. As a child of two Holocaust refugees and the grandchild of Holocaust victims on both my parents’ sides, the events in Israel and Gaza were particularly painful to me. I remember my mother watching the televised images from the 1982 massacres in the Sabra and Shatila refugee camps. Seeing the fleeing Palestinians, she turned to me aghast and said, “They look just like we looked.” Forty years later, reading about the destruction of Troy and witnessing the destruction of Gaza, both “sites of suffering” (Dumas, 2014), and as I think of my own history, I feel the urgency of seeking mutual recognition as an alternative to violent confrontation, not only in our schools but in the larger world as well.

### *Achilles and his inability to sustain recognition*

Homer’s Iliad, commonly dated to the 8<sup>th</sup> Century BC, recounts a brief period towards the end of the 10-year Trojan War that took

place about 400 years earlier, in the 12<sup>th</sup> or 13<sup>th</sup> century. The war pitted the Greek people, known as the Achaeans and led by King Agamemnon, against the people of Troy, led by King Priam. As the Iliad begins, we are told of how King Agamemnon insulted the honor of the famous warrior Achilles, the epic's protagonist, by taking for himself the "trophy wife," Briseis, that Achilles won in battle. In revenge, Achilles refuses to participate in the war that the Greeks cannot win without him. The Iliad's central storyline revolves around Achilles' refusal to fight, followed by his furious re-entry into battle when his dearest friend, Patroclus, is slain by Hector, Priam's son.

In one scene, Achilles reflects on his own self-defeating fury at King Agamemnon, telling his mother:

I wish anger did not exist. Even the wisest people are roused to rage, which trickles into you sweeter than honey, and inside your body it swells like smoke" (Homer, 2017, p. 443).

Later, avenging the killing of Patroclus by Hector, Achilles tells his dead friend:

And I will choose twelve lovely Trojan children and slit their throats about your funeral pyre because I am so angry at your death. (p. 451)

Spoken as story nearly 3000 years ago, Achilles could be a stand-in for the leaders of both Hamas and Israel, one atrocity begetting an even greater atrocity. Wilson comments:

People subsumed by rage try to replicate the wrongs they have suffered by hurting others. ... The enraged want to humiliate, hurt, or kill. (xLiii)

There is another contrasting scene in the Iliad where the old warrior Nestor, in an effort to get Achilles to join the war against Troy or to at least get Patroclus to fight in his stead, tells Patroclus, "Perhaps some god will bless your words, and you will touch his heart and change his mind" (Homer, 2017, p. 273). In this particular instance, Nestor successfully uses words to foment more violence and to inflict more suffering on the men, women and children – the

poor and unglorified – of both the Trojan and the Achaean allies. And so words, as all dictatorial and populist leaders know, can contagiously sway masses towards hate and violence that primarily serve the interests of power and control. And indeed, in the *Iliad*, there are countless examples of the epic’s “heroes” rousing the masses of unnamed and unremembered soldiers to fight and die, leaving their families bereft, without any chance of acquiring the honor or immortal fame that both Achilles and Hector will amass. There is only one moment in the Homeric epic in which an exchange of words, a dialog, actually leads to some type of mutual recognition and change of heart. That is when Priam, Hector’s father, begs Achilles to release to him his son, whom Achilles killed and whose body he abused, so that he can give him a proper funeral. For a moment, a speck of time in the decade-long war, words are able to stir self-reflection and awareness of the common humanity that binds the two enemies together. Priam and Achilles, weeping together and mourning the deaths of those they loved, see themselves in each other. That spark of mutual recognition, ushering in a brief truce, is the only one in this epic of carnage that suggests that it is possible for enemies to talk as friends, and for the world to be different, and better, than it is.

That Achilles and Priam were able to perceive and actually feel each other’s pain through sharing their own personalized and particular grief suggests the power of face-to-face dialog to transcend the fury, fear and bitterness of enmity engraved over time. And yet the fragility of that power can easily lead to despair. Aristotle believed friendship was more important than justice because one didn’t need justice among friends (Arendt, 2004; Aristotle, 1994), but even among friends who genuinely love and care for one another, as countless political family discussions and historic wars that have divided families attest to, love is unreliable as a mediator, and justice can be elusive. And, in the case of Achilles and Priam, who were marked as enemies but had a chance to pursue friendship, dialog and empathy had its limits. Aware of the commonalities in their experiences and feelingly cognizant of the truth that the other carried but also of a greater truth that embraced them both, they could have seized the moment to cease hostilities, celebrate their acknowledged and shared humanity, and explore the possibilities of living together in peace. But their brief recognition of their commensurate griefs could not overcome the overarching values of

their time that elevated personal glory, power and wealth over collective welfare, peace and justice; indeed, these latter values were not even within the theoretical grasp of those warrior-heroes. And so, after a short agreed-upon time of mutual mourning, Achilles and Priam reasserted the exterminatory destruction that would lead to both their deaths and those of countless and unconsidered others.

In our own era, with existential crises embedded in the attraction of authoritarianism at home and abroad and the annihilation of Gaza, the inability of dialog to resolve different perceptions of our common reality, even between friends we know and love, has been very much on our minds even as we recognize that our conflicting views are shaped by our different positions and experiences in the world. And so, the Aristotelian sense that friendship makes justice unnecessary (Arendt, 2004; Aristotle, 1994) seems distant from our own experiences where friendship, because it is so personally sustaining, survives scarred but triumphant over agreement as to the nature of justice though at the cost of abandoning the quest for shared visions of how to better the world we live in together.

It is therefore sobering to reflect on the difficulties inherent in the dialogic process that seeks to build agreement even among friends who share similar values and commitments. More elusive yet is dialog's power to have friendship transcend enmity. And if the Israelis and the Palestinians, both of whom have an historically embodied knowledge of what it feels like to be dispossessed, discriminated against and decimated, cannot see the world as it opens itself up (Arendt, 2004), with all its grief and suffering, to their enemy, and if they cannot set aside their fury and somehow suture their deeply rooted existential trauma to move forward together, then it seems that little has changed since Achilles and Priam looked into each other's hearts, found and then discarded their spark of recognition, and returned to rage and slaughter.

### *The dialogic process as a path towards mutual recognition*

It is in the tradition of Socratic teaching to use dialogic questioning to guide students to understand their own thinking, their own view of our one world and the conditions and experiences that have

shaped it. Socrates saw himself as a “midwife” for the thoughts of his students, someone who could help his students give birth to their own understanding of how the world “appeared to them,” (Arendt, 2004), a revelation that was only possible through dialog with others based, as previously cited, upon “strict equality” (p. 434) between participants. Without that authentic back and forth, without “talking things through” (p. 434) as a method of inquiry rather than judgment, his students were in danger of blindly accepting the commonly held narrative of reality and the ideas that sustained it rather than learning how to reason for themselves and to align their contradictory thoughts and feelings in a way that both acknowledged and transcended their particular circumstances and contexts. Hannah Arendt writes that for Socrates, in order for a person to be able to know themselves and thus take a step towards authentically knowing others, they had to discover “the truth of their own opinions,” (p. 434) – mediated, necessarily, by their own position in the world and the complexity of truth itself.

Of course, Socrates’ students were “those who have the most leisure, the sons of the wealthiest” (Plato, 1979), and Socrates himself was not an advocate of democracy or concerned with the welfare of the “common people” (Stone, 1979). But in our time, educators like Paulo Freire, bell hooks and Lisa Delpit, have written about authentic dialog as a liberatory practice to achieve recognition of both self and others, even when doing so threatens our ideals and conceptions of who we are. Paulo Freire, sounding very Socratic, wrote that the “task of the dialogical teacher,” is to “represent that universe to the people from whom she or he first received it, and “re-present” it “not as a lecture but as a problem” (1970, p. 109). In this way, Freire approached his first students, the peasants of Brazil, in the spirit of “strict equality,” refusing to tell them how they felt or to judge them. Rather, through his questioning of what they told him, and through their questioning of each other, he excited them to collectively decipher their own thinking and thus question hegemonic thought. Just as Achilles was trapped within the dominant value system of his time, Freire noted that current dominant values trapped his students within ideas that served to oppress them and their communities, and that they needed to “emerge” from that situation in order to “intervene” in their reality and thus become activists in the shaping of their world. Freire helped them realize, for example, through dialogic engagement, that if their idea of success

matched those of their land-owning bosses, there would never be any real change in the world. Under those conditions, they could never come to recognize their true selves or the truths that others carried. And justice would remain a mere dream rather than a lived experience.

### *Mutual recognition and the durability of embedded attitudes*

The sociologist Pierre Bourdieu thought that a person's values, ideas and attitudes "were unconsciously acquired over time through socialization in particular fields of activity and social life" (Fellner & Kwah, 2018). Many of these, like those prioritizing individual wealth and power over community health and welfare, and tribal-like allegiances, were almost impossible to transform given the overwhelming power of established political, economic and social structures that are infused with those values and which we are born or migrate into (Bourdieu, 2000b; Fellner & Kwah, 2018). We adhere to these values automatically as we live our lives unless some epiphanic experience or cataclysmic event loosens their hold. Bourdieu allowed for the existence of contradictions between the dominant values in different fields of activity (home, job, school, recreation etc.), and that the resolution of these contradictions could modify a person's attitudes. Still, the dominance of hegemonic ways of seeing the world are so fully embodied; so innately integrated into our beings through an alignment of mind, body and spirit; so familiar, habitual and taken-for-granted, that he doubted that values fundamentally clashing with these deeply internalized ones could be advanced through explicit pedagogy alone. bell hooks is also skeptical that intellectual instruction by itself can lead to the transformation of hegemonic values and practices or divergences from what Bourdieu called "the rules of the game" (Bourdieu, 1993, p. 183). Still, in contrast to and more optimistically than Bourdieu, hooks believes in the possibility of transformation through a process of mutual recognition through which "two individuals see each other as they really are" (2009, p. 183). As hooks (1994) implies and as Arendt (2004) emphasizes, this process ideally happens between two individuals, as in the case of Achilles and Priam.

In schools, however, where numerous individuals in multiple settings interact, and even more so in society at large, where multiple truths and multiple visions of justice encounter each other, it is far more complicated to engage in authentic and reflexive dialog that will reveal the “truth” of the opinions that participants hold. These multiple truths are highlighted by such writers as Ta-Nehisi Coates (2015), James Baldwin (1962), Christine Sharpe (2016) and Saidiya Hartman (Hartman, 1997) who all illuminate the radically different ways in which, generally speaking, African Americans and white Americans perceive the ideals that American society proclaims to uphold, the concrete conditions on the ground that confront those ideals, and the role that schools play in reproducing and perpetuating inequalities. Mutual recognition, and the dialog needed to facilitate it, are challenged by these tensions and the resulting “thin cultural coherence” (Sewell Jr., 2005, p. 166) to some of the “rules of the game” (Bourdieu, 1993, p. 183). It is further and formidably challenged by the familiarity and durability of established structures and the role of power in their maintenance. Additionally, mutual recognition confronts the understandable fear of the privileged of losing their place in the social hierarchy even when they may believe abstractly in the equal rights and dignity of others, the logical resistance of the oppressed and the unrecognized to opening themselves up to those with more power, and the seeming unquenchable desire of all classes of people, to identify success with what the powerful have attained and accumulated (Freire, 1970) .

The educator, Lisa Delpit, articulates, better than maybe anyone else, the challenge of fully recognizing one another, especially when there is an imbalance in power, experience and economic security. Like hooks (1994), she believes authentic dialog can unveil a new awareness of one’s own abilities to see beyond deeply ingrained attitudes, beyond the established lenses of race, class, gender, and national customs and allegiances. Barring being struck by some instant epiphanic empathy between participants (which hooks (2009) allows is possible), Delpit (1988) writes that for mutual recognition to be successfully actualized in schools, it has to be initiated by those with official power and sustained by dialog that touches the heart as well as the mind. She emphasizes the importance of radical listening on the part of white teachers as they converse with the Black parents of their students, an implicit receptivity to see them in the “spirit of full equality.” Such radical



listening, which Ken Tobin defines as seeing the world from the place of the other (C. Ali Kahn, personal communication, June 3, 2009), is needed in order to feel, and be, activated by the “truth” of their opinions.

To do so takes a very special kind of listening, listening that requires not only open eyes and ears, but open hearts and minds. We do not really see through our eyes or hear through our ears, but through our beliefs. To put our beliefs on hold is to cease to exist as ourselves for a moment- and that is not easy. It is painful as well, because it means turning yourself inside out, giving up your own sense of who you are, and being willing to see yourself in the unflattering light of another's angry gaze. It is not easy, but it is the only way to learn what it might feel like to be someone else and the only way to start the dialogue. (Delpit, 1988, p. 297)

Delpit focuses on the enormous self-work it takes to become, at least temporarily, “an empty vessel”, which is how Socrates described himself, so that we can be filled and activated by the truths of others. Only then can we see ourselves as others see us, and through that lens also feel what it means to be in their shoes. Only then do we have the possibility of investigating our own particular truths and so, through dialog, find a way to move forward together. While hooks, in particular, recognizes the therapeutic aspects of radical listening and of genuinely welcoming everyone's voice, the success of mutual recognition needs to be anchored in an activist desire, shared by Freire, hooks and Delpit, to participate in a world that uplifts us all through furthering recognition of our common humanity. It is not, in other words, simply a question of method – of following a formulaic set of steps and rules. Rather, the practice of mutual recognition needs to be anchored in a vision and a deeply felt need to better all of our lives in a shared world. It is necessarily infused with improvisation and risk.

This does not in any way negate the necessity of the oppressed to demand a justice that serves and recognizes them in their full humanity.

## *The failure of Achilles*

The tragic essence of Homer's story, and its relevance to us today, does not reside in its excess of violent heroics and endless killing (though that too resonates). Instead, it dwells in the moment in which the possibility of creating a different reality briefly flickered and was then snuffed out, a moment in which, as Aristotle (Arendt, 2004; Aristotle, 1994) suggested, a relationship based on friendship might have prevailed over the "rules of the game" (Bourdieu, 1993, p. 183) with compassion replacing the vengeance and retribution that war and that era's rules of justice demanded. That new possibility, of humans living in the world together in peace, rested on mutual recognition rather than on the endless accumulation of possessions, the desire for individual glory, or the wounding of personal pride, all of which were important to Achilles but none one of which could, in any case, heal the trauma of loss. Mutual recognition shone in that unexpected moment in which Achilles and Priam saw each other in themselves and themselves in each other and were struck by how the one world appeared to them both in the same way despite the particularities of their personal grief. And it is in that instant of fleeting awareness that the common humanness of Achilles eclipsed his invulnerable and godlike reputation, transcending time and myth to touch our hearts; this, despite our knowing of his past cruelty. Had that recognition endured, and even more profoundly, had it embraced the unseen and barely recognized masses who lacked his god-like status, a new reality could have come into being, one that embraced the universal recognition of each of us in our "strict equality." Such a conception, of course, could not spring from the ethos of that ancient time. But it is within our grasp today if we choose to embrace it.

We live in a world where tribal, ethnic, racial and religious identities too often still take precedence over our common human bond, and where power and personal wealth are still culturally disseminated values used to measure individual worth. In our dealings with each other, instead of defaulting to these habitual values and the practices that affirm them, we can learn from the best of Socrates, Freire, hooks and Delpit and seek, as Freire writes, to "emerge from submersion" rather than continue the seemingly endless cycle of terror, destruction, dehumanization and suffering. We will not likely shake the most powerful from their Achilles-like self-image,

nor likely change the minds or touch the hearts of leaders who, like Achilles, seek to impose their personal vision of justice and truth on others, which is a recipe for cruelty and tyranny. Still, if the rest of us can pursue the goals of mutual recognition through dialogic engagement, then we have a possibility of transcending our current condition and mapping a way forward.

Mutual recognition, one that touches the heart as well as the mind and the body, even with all its fragility, uncertainty and enormous challenge, can help usher in a more just and inclusive world, one in which we see ourselves in each other and each other in ourselves and in which collective peace and well-being are elevated over individual excess. Freedom, as Merleau Ponty writes, “can only come about ...by our going beyond our original situation...” (1993, p. 72). Achilles, unable to imagine such an option, and too powerful and narcissistic to care about others, saw no reason to attempt that journey. We, who live at a time where the future of humanity is in peril, but also, fortunately, in a time where we can conceive of better ways of being together, must take a different path.

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## Welcome to Class

*Cornelia Linderöth & Carl-Johan Stenberg*

In the last few years, Artificial Intelligence (AI) has become a subject of discussion and debate within the education research community. While the introduction of Open AI's ChatGPT caused some educators to reassess the role of home assignments (Winerö, 2022), others have highlighted the educational possibilities of generative AI and other AI-infused applications such as learning analytics, student performance prediction, and data-driven school development (Luckin et al., 2016; Wayne Holmes & Ikka Toumi, 2022; Zawacki-Richter et al., 2019). As AI has sparked debate, teachers and researchers have yet to understand the consequences of bringing this technology into the classrooms. Commercial interests, as well as a policy "push" for introducing AI into educational practices (Linderöth et al., 2024; Rahm, 2024), create tension and possibly decrease teacher agency. As technological advances dominate the educational discourse, teachers are tasked with adapting to the new systems introduced to schools around the globe (Player-Koro et al., 2018; Sperling et al., 2022, 2024). These developments are further driven by technosolutionist (Sætra, 2023) education policies, which create narratives of possible futures (Sporrong, 2024). These narratives, or sociotechnical imaginaries, create anticipations of what future to expect and prepare for (Jasanoff & Kim, 2015; Jasanoff & Kim, 2009). The imaginaries and anticipations surrounding AI and education can, and should perhaps, be questioned (Hillman et al., 2019; Houlden & Veletsianos, 2022; Sporrong, 2024). Sporrong (2024, p. 197) highlights the issue that "claims that the state of education needs to be improved also convey that something in the current state of education is problematic." Furthermore, Rahm and Rahm-Skågeby (2023) share the understanding that technological "solutions" to educational "problems" frame education as broken somehow.



Visions, imaginaries, and narratives around education can be questioned by drawing on speculative methods (Rahm, 2024; Sporrang, 2024). Recently, education fiction has gained traction as a tool for questioning and re-imagining the future of education. Hrastinski and Jandrić (2023) call it a way to “abandon the chains of academic formality” and imagine a future that has yet to come. These futures can be imagined through collaboration with teachers, or, as in this essay, by utilizing current literature related to the chosen subject. This essay takes on a pessimistic, and rather dystopian point of view when discussing a future where classification, algorithms and data have become an integral part of the educational future. Much like Hillman et.al., (2019) as well as Selwyn and others (2019), who have previously used this method, we use the narratives to discuss the future. The world in the narrative is inspired by a techno-solutionist worldview where more data is good data. As both authors of this paper have previously interviewed computer scientists, teacher educators, and teachers on AI in education, the narratives are inspired by our shared experiences from those. The narratives in the following sections are a means for a broader discussion on efficiency, rationalization, and teacher agency. As Gerlach Hamilton (2003) describes it, using narratives is “a methodology for grasping the social” (p. 168). As such, the central focus of this essay is to unpack the sociality of digitization associated with the introduction of AI technologies in education through education fiction.

First, we will introduce a fictional school setting where an AI system is being developed and implemented. We then ground the narrative in research on the sociality of technological development and the implications of datafication on education and teacher professional practice. Third, we will discuss how these systems might challenge educational practices and question the autonomous agency of teachers by framing AI in education within a discourse of effectivization, rationalization, and management-by-data. The novelty of AI in the school system paves the way for diverse possibilities, making it essential to consider them from multiple perspectives in order to offer insights for future developments. Furthermore, the commercial interests in the development of technology for the school system make it crucial to examine how technology enters schools, and to involve teachers in these implementation processes. We end the essay by looking beyond education to how AI relates to discussions about a welfare sector in crisis.

*Scene 1: The man in the well-fitted suit*

The man in the well-fitted suit had been in the school for more than two weeks when September turned to October. His presence had become a familiar sight in the classrooms, yet his purpose remained somewhat of a mystery to some of the teachers. The students spread rumors that the man was, in fact, a former agent sent to school to inspect their teachers, while others thought he was there to ensure safety. Each morning, he would arrive at precisely 8 o'clock, his polished shoes echoing through the somewhat empty corridors as he made his way over to the teachers' lounge to have his first cup of coffee. He took his coffee black, as he stood – never sat – watching the minutes pass until the school bell rang at 8.10 to mark the beginning of the first lessons. As he made his exit from the teachers' lounge, his colleague, the researcher with whom he collaborated, caught up with him. She nodded to him and offered a smile, which he reciprocated with a slight strain.

As he and the researcher, Ms. June, entered the first class on the agenda for the day, English, he greeted the teacher with a slight nod before installing his pocket-sized camera on a tripod in the middle of the room. He pressed the on-button and watched the 360-camera start up with a blue light indicating it had initiated recording. He situated himself in the back of the room while Ms. June set up the rest of the equipment. As she sat down beside him, her screen hummed to life, displaying the classroom from the teacher's view. The students made their way into the room, avoiding the chairs in the front row of the room. The man in the well-fitted suit, or Mr. Anderson, as he was actually called, opened his laptop and started typing as the teacher, whose name he hadn't memorized, started the lesson.

"Good morning, everyone", the teacher said. "As you can see, we have Mr. Anderson and Ms. June here to record what we are doing today. You've met them during math in previous weeks, I presume".

The lesson proceeded as usual, although Mr. Anderson could feel their presence affecting the classroom with an air of tension. The teacher, whom he learned went by “Mrs. Hill”, led a discussion on a novel they had read. He recorded everything with precision, down to every minute of the lesson, and was fed data through the camera in real time. As he recorded the teacher’s every move, Ms. June’s screen instead recorded the students. He could see how their body language and facial expressions were analyzed in real time. A boy in the back slouched over his desk, the word “inattentive” hovering above his head. A classmate in the row in front of the inattentive boy was marked by a green indicator, the word “focused” marking his digital self. When the students left the room, Mrs. Hill made her way over to them as they were writing up the summary of the data collection.

“May I ask what you found during this lesson?” she asked. Mr. Anderson looked up, nodding to the screen in front of him. “As you know, I’m here to work on the development of your new AI agent, so for today’s class, I have noted the focus minute by minute, with the help of that”. He gestured towards the camera. “For example, you spent a total of 4 minutes pausing to wait for the students to speak after asking a question, and 2 minutes reminding students of page numbers”. She frowned ever so slightly. “And Ms. June here”, he continued, not waiting for her to speak “has recorded a mere 36 percent focus in your class, based on a set of biometric data”.

“Oh, and what does that mean?”

“It means nothing, yet. When I’m done going through each subject though, I will have subject-specific quantifications on how time is used in your classrooms. And then we’ll feed it into the system, train your AI agent and improve teaching – we call it informing the system”. He closed his computer and stood, marking his exit from the room. “Thank you. I have to check in with the developers at 9:15”. He took his camera and left the room with Mr. June right behind him, leaving Mrs. Hill with a confused look on her face for exactly 12 seconds before gathering her books to leave for the next lesson.

### *A new system in class*

In her seminal genealogy on the informing of work, Zuboff (1988) describes how the embodied and living knowledge of workers has been explicated and transformed into a sort of knowledge susceptible to scientific rationality and effectivization. This means knowledge is datafied and algorithmized through interviews and observations, where embodied and implicit knowledge is dissected and classified, much like the narrative above, where Mr. Anderson collects data on teachers to feed an algorithm. According to Zuboff, this informing process of work leads to confusion, a literal senselessness among workers, when practice becomes increasingly datafied and mediated through digital systems. Comprehension and manipulation of symbols take precedence over real-world action, fundamentally altering power relations in work practices. Similarly, Bowker and Star (1999) note how the classification of nurse practice in the Nursing Intervention Classifications (NIC) led to a sense of frustration in explicating their ‘invisible work’. One such frustrating explication of professional practice highlighted by Bowker and Star (1999) involved codifying “humor”, which resulted in a detailed description of what “humor” consists of and how one could produce (and avoid) it in healthcare settings. The proponents and organizers of these types of work-classification schemas highlight its role in creating a scientific body of knowledge on professional practices. Furthermore, as working life becomes more digitalized, the process of informing practice is seen as imperative to avoid becoming marginalized in a computer-mediated future. This process, then, is seen as a natural development to keep in tune with broader technological, societal, and professional developments.

For both Zuboff and Bowker and Star, a central theme is worker control and agency within a particular professional setting, which is challenged when classificatory managers enter. Different discourses clash when experience needs to transmute into variable, and these new sociotechnical ensembles (Johnson & Verdicchio, 2017) mean professional agency is being redistributed among various actors, illustrated in the narrative by Mr. Anderson’s classifications of “hesitation” in Mrs. Hill’s classroom. Aside from the redistribution of authority and agency, classification and data-work often entail a sense of meaninglessness among those whose

knowledge is being transmuted. Analogously, Hoeyer and Wadmann (2020), in studying data work in health care settings, note how the “imposition of certain forms of data work potentially undermines professional motivation and the pursuit of meaning”. In relation to AI, this calls for a renewed discussion on how the meaningfulness of work is affected when these systems are deployed in classrooms. As Furendal and Jebari (2023) argue, there are different paths to the future of work with AI. While these systems present an opportunity for workers to be augmented and pursue excellence in their work, current examples (such as Amazon fulfilment centers) highlight how AI can also be stunting, transforming workers into appendices of the artificially intelligent machine.

In addition to asking whether AI will replace, enhance, or augment teachers and teacher work, it is important to look at how AI in education increases datafication and how it is fundamentally entwined with algorithmic systems of rational management. In an analysis of documents and guidelines on AI in education, Nemorin et. al. (2023, p.11) conclude that “at the core of many current AI-driven educational initiatives lies a computational understanding of education and learning that reduces student and teacher life-worlds to sets of data logics that can be managed and understood”. This has implications both on how education is understood on a policy level, and how teachers and students come to understand themselves and their practice. The data work carried out by teachers involves, for example, the categorization and quantification of knowledge, attention, and emotion of students on learning platforms, learning analytic dashboards, or through video observation, later to be subjected to statistical analysis. Ben Williamson (2017, p.9) describes this process of datafication as “the transformation of many aspects of education into quantifiable information that can be inserted into databases for purposes of enacting different techniques of measurement and calculations”. At first glance, this might not seem like anything more than just collecting information and data. However, this datafication affects many levels of education, and can subsequently alter how we think about learning, teaching and assessment. If real-time assessment can be made using software, why do we need teachers to assess students’ knowledge through tests?

Relatedly, Sperling and colleagues (2022) have shown how the introduction of AI entails “invisible” data work for teachers and note how teachers compensate for errors in the software by either making excuses for the algorithms or supporting them through adding other solutions. They state that “human actors enable the actions of the AI Engine in ways that can be described as compensatory in relation to the unfulfilled hope of what AI can do in education, we call this a perceived promise of technology” (Sperling et al., 2022, p.592). As such, the promises of automation come at a price: teachers will act according to the promise of less labor, paradoxically adding more labor. This transmutation, investing the work, authority and situated knowledge of teachers into AI systems, alters the ways in which agency is distributed in educational settings (Bearman & Ajjawi, 2023). The promises and anticipations around what AI could offer education are well-established and need questioning. In the narrative that follows, the introduction of a new AI agent is portrayed through a Silicon Valley-esque launch that lends itself to questions on what problems we are trying to “fix” in education.

### *Scene II: Welcome to the machine*

*Welcome, my son, welcome to the machine*

*Where have you been?*

*It's alright, we know where you've been*

(Pink Floyd – Welcome to the Machine, 1975)

The introduction could not be described as anything other than a success. Well, it depended on whose shoes you were in, to be fair. In Mr. Anderson’s polished shoes and the developers’ (presumed) sneakers, it had been a success. Mr. Anderson stood in front of the faculty in the assembly hall, looking out. The smell of coffee lingered in the room as a sign of the early morning. His closest colleague, the educational researcher Ms. June, was done with her data collection in connection with Anderson’s development and had not taken part in the design he was now to introduce.

“Good morning, everyone”, he began, his voice steady. “As you know, over the past six months I have visited your lessons, interviewed you and measured blood pressure,

dopamine and student focus, with the help of Ms. June. The goal – to create a perfectly adapted AI agent for your specific needs – has been met”. He gestured with his arm towards the projection behind him. The screen turned white, and a set of charts and graphs appeared.

The teachers listened intensely as Mr. Anderson explained the metrics and how the data had been used to develop the new AI agent. “This completely personalized AI agent, Alma, will assist you in managing classroom engagement, optimizing learning and predicting potential challenges even before they occur”, he paused as he presented the next slide. It showed a matrix with minutes and tasks from lessons Mr. Anderson had attended. “This is your teaching before the implementation of the new AI software. We will minimize unnecessary unproductivity by following the AI-crafted lesson plans. It will suggest real-time changes to remove instances of hesitance or give feedback to students’ questions quicker – let me demonstrate”. He pressed a button on his laptop, and the screen showed a blue circle on a white background.

“Alma – what page is Mr. Graham teaching during his Monday lesson?”. The blue circle reacted instantaneously. “Mr. Graham is teaching page 75 – division. If you’d like to know more about division, I am happy to help”. The voice was cool and crisp. The teachers looked at each other with disbelief, eyebrows raised. Mr. Anderson had seen that look several times over the past two years, as he had implemented personalized school agents in more than 20 municipalities. His favorite part about that look was how it slowly melted away once his demonstration was over.

“This matrix”, he said, showing the previous slide with minutes and tasks again, “is in the past”. Over the course of an academic year, this school has wasted a total of five hundred twenty-seven point five minutes in mere hesitation. Alma will erase that hesitance and ensure that you and your students have an assistant at the ready around the clock”. A teacher in the back raised her hand. Mr. Anderson nodded in her direction and waited for her to speak.

“I’m sorry, so this AI is like Siri, or Alexa?” Mr. Anderson smiled.

“I’m glad you asked. No”. He turned again to the screen behind him, showing Alma the blue circle. “Alma, predict the grades of all of year 8 and suggest lesson plans for every individual student”. The circle disappeared; a gallery of faces that belonged to their students appeared in its stead. Metrics, graphs and predictions were visible to the right of each student’s face. Mr. Anderson clicked on one of the students, a boy in class 8B. “As you’ll see here, this boy is struggling with science. If I use Alma’s prediction, she will plan the rest of the academic year, complete with exercises, a reading schedule and resources for improving his grade drastically. She will also ensure that the parents are informed of changes in his study activity and behavior, as well as moods during lessons, to ensure optimal teacher-parent collaboration. Alma is nothing like your phone – she will follow up on the progression in real time using the newly installed cameras in your classroom”.

A murmuring traveled through the audience. He continued, “Not only will Alma help you with lesson plans, but she will also help with individualizing lessons for each student. A set of pre-set tasks will carry each student through your lessons, with clear and precise learning goals”. A teacher at the back of the room raised their hand. Anderson nodded towards him, beckoning him to speak.

“So, let me get this straight – I will not plan the lessons? And I won’t grade them? How do I know what each student does during my lessons?”.

Anderson smiled and projected the next image – as he had already predicted the question to come.

“Alma will use a system of live feedback to you as teachers. This dashboard will indicate how students move through the software. If students succeed with their assignments, Alma will award them stars in the system. If they fail, they will not receive stars”. He then moved to the next image – an image of the school kiosk, where students can purchase



snacks and sweets. “The stars will translate to a sort of new economy in the school, and students will be able to use their stars to purchase what they wish – we call this gamification of learning, a holistic view of the students’ school day”.

### *Understanding AI systems in education*

In the narratives, a central aspect is how AI is not only a technology, but rather embedded in the sociality of the school system. As such, the AI agent Alma is not only a technological “device” but socially constructed in the ecosystem of the school. This view on technology follows other feminist critiques, which have historically tried to untangle technologies from positivist and objectivist viewpoints and instead emphasized the social dimensions of how technological systems come into being. Similarly, Johnson and Verdicchio (2017) draw on science and technology studies (STS) to suggest that AI should be thought of as sociotechnical ensembles. This means not treating AI as a “thing”, or an “it” that “does stuff” and “thinks” separate from its social environment. Rather, it is to be understood within its context, with disparate actors (and mountains of capital<sup>1</sup>) working to bring the magic of Artificial Intelligence in Education (AIED) about (Sperling, et.al., 2022; Stenliden & Sperling, 2024). This ‘Wizard-of-Oz-AI’ means combining several statistical innovations and opaque data with human labor in ways that make the seeming magic of AI possible. The systems are made to appear autonomous, but are ultimately programmed by human designers, who massage data in ways that make it coherent within their social context. Bender and colleagues (2021) argue that the seeming coherence of large language models (LLM:s), such as Alma in the previous scene, is only made possible through an illusion of meaning on the user’s end. They point out that these systems are stochastic parrots (Bender et al., 2021, p.616), creating coherence not by means of truth, but rather relying on humans to provide meaning and connect the dots between statistical probabilities. Arguing along the same lines, Hicks and others (2024) note how LLM:s – lacking any connection to truth – should rather be understood as bullshit machines. The apparent reason and intelligence of these systems are only made comprehensible and desirable through commercialization in the current hype-cycle and glimmer of

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<sup>1</sup> Some \$335 billion in the US alone ([HAI AI-Index-Report-2024 Chapter4.pdf \(stanford.edu\)](#))

technological innovation – essentially social practices. Grounding these systems in real-world social practice enables ways of engaging with the ethical dilemmas currently discussed within the AIED community by looking at ethical issues not as bugs, but as features of an ensemble with power structures at work with human designers at the keyboards (Johnson & Verdicchio, 2017).

In the context of education, the proliferation of AI also implies importing certain theories about learning and thinking that might be at odds with how the educational sciences usually view teaching and learning today. Drawing on Gert Biesta's concept of learnification, Knox and colleagues (2020) argue that datafication has ushered in a new form of behaviorism in education. As more and more data are being collected on learning platforms, there has been growing interest in making use of this data to enhance education in various ways (cf. Watters, 2021). Through influence from behavioral economics and machine learning methods, the notion of learning is being transformed into behavioral modification and “nudging” of students and teachers (Selwyn, 2022). This development marks a shift from an understanding of students as rational consumers toward an understanding of students as irrational and in need of increased surveillance and hidden disciplining (Knox et. al., 2020). Moreover, Khalil et.al. (2022) show how disparate ‘self-theories’ guide the development of learning analytics, and how “raw data” make theory seem obsolete. However, as more data are fed into learning analytics and AI systems, students and the sociality of learning are increasingly mediated through data funnels designed by engineers and computer scientists. This mediation influences how teachers understand their students and practice, thus limiting or guiding (our understanding of) learning in certain ways (c.f. Verbeek, 2011). Within the sociotechnical ensembles of AI in education, thinking about thinking and learning are not settled matters. Intelligence might, of course, be the same as statistical correlations, and reinforcement through reward functions might be the same as learning, but interdisciplinary dialogue is needed to bring these possible differences to light and critically engage with AI systems in education. It is important to remain cognizant of the ways in which dominant theories in learning analytics and AI influence how the teaching profession understands itself and its practice, and how children and students understand themselves. Thus, there is power

dynamics involved on multiple levels when different disciplines and theories enter the classroom.

### *Futuring*

Looking beyond education, other parts of the welfare sector are today working to implement AI, and there are several instances that highlight the ethical and judicial risks with these systems (Fjaestad & Vinge, 2024). Framed within a discourse of economic and demographic crisis, effectivization and rationalization through digital technologies, such as the case with Alma, is often seen as a solution. In the context of an educational system viewed as “problematic”, AI serves as a technological solution to both economic and pedagogical issues (Rahm & Rahm-Skågeby, 2023). However, enabling a different understanding of the disparate practices involved in creating AI systems may empower teachers to critically assess and engage in discussions on artificial intelligence. Beyond the narratives offered by AI and EdTech companies, as well as global policy organizations, previous research has shown how the active involvement and labor of workers are required for the development of new technologies. We are situated in a time where “selling tech to teachers” is a common endeavor for EdTech companies. Player-Koro and colleagues (2018, p.683) state that “technology use in public schools is shaped by a combination of local interests and international corporations working with each other to construct nationally appropriate agendas”. This process of marketization calls for involving teachers in the chain of decision-making even more than before. Professions with a stake in education must ask if pedagogies should be adapted to technology, or if technology should be developed based on teachers’ actual needs for pedagogical development. Involving teachers in designing or defining the “problems” should be a priority.

Although the education fiction in this essay may seem like a drastic, over-the-top Silicon Valley science-fiction dystopia, we are facing real issues with applying AI systems into the school system that are not necessarily based on teacher or student needs. Teachers need to discuss and safeguard desirable values and practices in the profession by being part of the discussion on AIED, its theoretical assumptions about learning, the economic and political imperatives of its implementation, and the impacts on professional practice.

Through this essay, we hope to have highlighted some of the intricacies of developing technology by trying to convert experience to variable and by omitting teachers in the definitions of what technology should and should not do in the educational infrastructure. We hope that other scholars engage in speculation through current literature to add to this spectrum of discussion.

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# The Silicon Other: Crafting a Technoecology of Posthuman Performativity

*Alessandra Di Pisa & Robert Stasinski*

## *Introduction: A Deeper Engagement with AI*

In an era where the tendrils of artificial intelligence (AI) intertwine not only with our social and economic systems but also with the very roots of our organic world, a radical reimagining of art, technology, and existence is necessary. The artist's re-imagination of technoscientific research at the intersection of the mechanical and the natural is therefore crucial. This approach is not merely an exercise in advancing mould-breaking technologies but an effort to cultivate an environmental understanding of AI, robotics, and digital systems when they coalesce with the material and immaterial processes of art. As artists, we must continuously reimagine and deconstruct the grand narratives of what technology *wants* through methods of slowness, unthinking, and cross-disciplinarity (Stiegler, 2018 and Kelly, 2010).

AI can potentially be the most impactful technology in modern human history. All AI systems of today are based on human-made data, modelled on a normative understanding of human neurology, with efficiency as their deep-seated, developmental goal. As such, these systems are part of a paradigm of human-centered technological quest for dominance over nature (Haraway, 2015). This is where the historic rationalist idea of a sterile construct of the Human yields to the fertile possibilities of a posthuman sensibility. But a shift of this kind demands a deeper engagement with AI and robotics to operate not merely as tools for generative reproduction of the past but as agents embedded within broader

ecological and technological systems. Thus, this approach positions AI and robotics within a technoecological framework, moving toward an understanding of AI as an “alien agency” (Parisi, 2019), actively shaping artistic, ecological, and cognitive landscapes through posthuman performativity.

### *AI Beyond Serfdom*

Although recent advancements in AI have significantly increased artistic engagement, many of these explorations rehash, remix, or reproduce the outputs of Silicon Valley-esque AI tools such as ChatGPT, Photoshop Generative Fill, and Midjourney—all of which remain tethered to human-made datasets. Here, AI is relegated to the role of a tool—an advanced, but ultimately subordinate technology, a serf or robotic assistant, designed to enhance human capabilities without threatening the sanctity of human authorship. This paradigm, exposed by Donna Haraway through her notion of “informatics of domination,” perpetuates a world where technology serves as the extension of human colonial power, reinforcing capitalist modes of extraction, automation, and creative exploitation often at the expense of ecological and ethical considerations of modernity (Haraway, 1991). As a result, the dominance of generative AI in artistic practices conforms to capitalist technoscientific production chains, historical biases, and ideological agendas, raising critical concerns about its cultural implications for creative practices and society at large (Åsberg, 2024).

In recent years, some artists have, in response to this, increasingly engaged in critical dialogues with algorithmically generated art to shed light on these issues. Trevor Paglen raises awareness of the need for more diverse datasets, urging a more nuanced interrogation of machine vision in works such as *ImageNet Roulette* and *They Took the Faces....* Adam Harvey problematizes GANs and their entanglement with energy consumption, surveillance, and propaganda through a display of how they simultaneously solve and generate new problems, such as their massive energy consumption. Marion Carré generates post-truth archives with AI assistants, unsettling our trust in computational authority. The

artist duo Varvara & Mar builds interactive robots and generative image systems that reflect humankind's impact on terrestrial ecosystems and global challenges, such as *A Needle in a Haystack*, that explores technology's limits when faced with tasks deemed impossible for humans. These works suggest that artistic methods can serve as powerful tools for examining the impact of technologies on perception and interaction with our surroundings. However, such explorations often remain within a framework that positions AI as a tool to be critiqued rather than a force to be engaged with on its own terms.

There is an urgent need to explore a recent form of cohabitation of human and AI—one that acknowledges AI as “*dramatically alien to human thought*” while interrogating its onto-epistemological autonomy (Fazi, 2019). This relationship, described by N. Katherine Hayles (2012) as a “*reciprocal causality between human bodies and technics*”, emphasizes the mutual evolution of humans and technology. As language and code interact, they engender significant transformations in both human cognition and society at large, suggesting that artistic research can play a key role in shaping new modes of engagement with intelligent systems—ones that do not sever technology from nature but instead position it as an integral part of ecological thought and artistic exploration.

This framework of technogenesis (Hayles (2012) forms the core of the craft we<sup>1</sup> refer to as Technoecology—an artistic framework that embraces the entanglement of AI, robotics, and ecological systems, to unveil novel expressions, representing a momentous step in which artistic research disrupts the social, political, and environmental paradigms of technology. Through the notion of Technoecology we avoid the trap of merely engaging with AI as a tool for generating human-defined artistic outputs. Instead, it allows us to position ourselves in dialogue with cognitive alien robotic entities that exist not simply as a mirror of human neuronal structure, with the aim of replicating human activities and creativity, but as onto-autonomous entities embedded within the very fabric of our environments (Danto, 1981, Lacey, & Lee, 2003). Thus, in an act of embracing the potential of current models of AI

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<sup>1</sup> “we” as referring to the artist duo DiPisaStasinski.

as alien agency, we aim to shift instrumentalist frameworks toward explorative ones, building the epistemological space as well as artistic means for AI to emerge as a Silicon Other within a technoecological framework.

### *Posthuman Performativity and Alien Aesthetics*

The realm of performance presents one of the most potent sites for exploring the embodied, emergent nature of AI. Karolina Bieszczad-Stie's *Limit(less)* (2023) stages an intricate duet between Butoh dancer Azumarú and a KUKA iiwa robot, exploring symbiotic movement, machinic improvisation, and embodied computation. Similarly, Robin Jonsson's robochoreography incorporates robotics and audience interaction, where human and machine gestures fold into each other in a continuously shifting dynamics. Similarly, artist and roboticist Louis-Philippe Demers creates large-scale installations and performances focusing on the embodiment and computation of robots and performers, while the performance collective Survival Research Laboratories stages large-scale robotic aural performances. These works reframe AI not as a disembodied computational process but as an active, physical presence (Masumi, 2002).

Our artistic project is dedicated to expanding this performative space by exploring embodied understanding of computation, allowing the Silicon Other to perform its computational expression in a post-human and more-than-human tradition in relation to its technoecological environment. Barad's agential realism is our starting point for positioning art objects, technologies, and other materialities in a dynamic entanglement of phenomena that emerge through intra-actions (Barad, 2003), emphasizing the mutual constitution of entities and environments, signifying how phenomena come into being through their interactions.

Furthermore, as we approach Fazi's notion of onto-epistemological autonomy, we should reconsider the relationship between computational systems, perception, and creative agency. This calls for rethinking perception itself, as how AI processes, extracts, and generates meaning is profoundly distinct from human cognition.

Perception here must be understood not as a mechanical processing of sensory inputs but as the extraction of patterns, movements, and flows of stimuli—a process of emergent computation embedded within digital, physical, and larger ecological systems (Gibson, 1966).

The Alien Aesthetic approach to computation and AI does not seek to humanize AI but instead allows it to articulate its computational logic and performative expressivity, not as an artificial humanity, but as an intelligence of The Silicon Other, of the artificial alien, resisting assimilation into existing aesthetic paradigms. The act of building this Technoecology, from which a type of alien content could emerge, should be followed by a close *interspection* of its environmental, cognitive, and aesthetic effects on itself and its environment.

This is a radical step from market-driven norms, not only because it de-emphasizes the notion of the single creative (human) genius but also because it situates computational performativity in a larger environment, adding new occurrences of intra-action where aesthetic modalities explore the un-making of human-centered paradigms of engineering and possibly towards a post-human and more-than-human aesthetic production of knowledge.

### *Conclusion: The Emergence of the Silicon Other*

Through this artistic research approach, we seek to unravel new methodologies beyond anthropocentric paradigms of creativity and data. This demands a radical, post-disciplinary effort to reimagine capitalocene artistic doing—not only to encompass more-than-human cognition but to fundamentally rethink our relationship with the creative data that forms the foundation of today's generative AI models (Moore, 2014, Chun, 2011, Lanier and Weyl, 2018).

In this context, the artist is no longer the sole arbiter of meaning, data or creative endeavors. The notion of singular authorship dissolves, replaced by an ecology of interactions between human, algorithmic, machinic, and environmental agents through a filter of

data dignity. Creativity is no longer a private act of human genius but an emergent phenomenon.

Thus, we enter into a new mode of artistic inquiry—one that is not merely about what AI can do for art, but what art can do to reveal the aesthetic potential of the Silicon Other.

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