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Mutant in the mirror: Queer becomings with artificial intelligence

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Abstract: This paper contributes to scholarly discourse on design and AI by using queerness as a theoretical grounding to explore potentialities for design to interface with and imagine artificial intelligence (AI) differently. The paper does so by reporting on an autotheoretical experiment in which I pose the questions: *What if we understood AI as queer, a kind of mutant, in a state of becoming; a dynamic, relational, non-binary gender variant? How then might AI show up in and act on the world (with us humans) differently?* The experiment uses a Generative Adversarial Network (GAN) to unsettle how AI is understood today, and to allow for new AI propositions to take root. The work provides a glimpse into forms of design refusal that might illuminate designers to cultural computability and self-determination when designing with AI systems.

Keywords: queerness; autotheory; artificial intelligence; co-performativity

1. Introduction

Any engagement with Artificial Intelligence (AI) imaginaries, cultural fictions and technological possibilities, must begin with how they show up, move through and act on the world – a world characterised by increasing technological complexity, met with a diminishing understanding of it (Bridle, 2018). AI in particular has been described as a gendered research agenda (Bell & Broad et al, 2022) while also being characterised as a kind of magical alien cognition, gesturing towards what Alexander Campolo and Kate Crawford (2018) have termed as enchanted determinism, or "a form of power without knowledge" outside the scope of science (Campolo & Crawford, 2019, p. 5). Herein lies a dilemma for designer and Human Computer Interaction (HCI) communities: knowing how to engage with AI in imaginative ways while negotiating the deterministic and calculative power of AI systems that orientate us towards particular futures and that can inadvertently reinscribe and intensify social processes of classification and control (Campolo & Crawford, 2020). The challenges designers face in negotiating enchanting and deterministic characterisations of AI, then, call for an unsettling of how designers' interface with and imagine AI, inviting dialogue with other/d



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forms of situated knowledge and ways of understanding AI. Responding to this challenge, this paper works towards a proposal for a differently situated way of thinking about AI through the lens of queerness. Queerness, I propose, can help unsettle dominant ontological encodings of AI shaped by culturally engendered, deterministic worldviews of late capitalism, and heteropatriarchal power arrangements bound to colonial violence and the epistemology of sexual difference. The goal for this research has been to reflect on AI logic and meaning critically and playfully through queer readings (Ahmed, 2006) aimed at challenging dominant understandings of how we turn towards and relate to AI systems today.

Using queerness as its theoretical grounds, the paper functions as a mode of autotheory (Fournier, 2021) and speculative enquiry, that asks if another future is possible (Wilkie et al. 2017), while dialoguing with my personal experience in relation to queer theory. From an empirical point of view, this incipient research seeks to gain insight into new ways of thinking about the conceptual foundations, technological and imaginative possibilities for AI systems and by extension the co-performative interplay between the human and the artificial in the making of worlds (Giaccardi & Redström, 2020). I start by posing the question, *what if we understood AI as queer, a kind of mutant, in a state of becoming; a dynamic, relational, non-binary gender variant, how then might AI show up in and act on the world (with us humans) differently?* By posing this question, this paper gestures toward the co-performative interplay between humans (myself included) and AI systems, in what Karan Barad has termed 'intra-action'—recognising that different entities do not merely interact with each other, but rather, define each other through their intra-acting agency and affective power to make and remake the world (Barad, 2003).

First, I explore the notion of queerness through which mutations arise, which I then apply to an autotheoretical experiment, using a Generative Adversarial Network (GAN) model to gain insight into queer readings and understandings of AI systems. As a tentative conclusion, I reflect on insight gained from the experiment, calling for an unsettling of dominant AI (socio)technical imaginaries through the lens of queerness, through which a new set of possibilities for design/ing *with, for* and *through* AI systems may emerge. As part of a larger research project, this paper aims to contribute to design and HCI's engagement with AI as both a research agenda and field of practice by offering insight into the potentialities for what Donna Haraway (2013) has termed as a "becoming-with" AI at the level of the individual, as a society and as a species.

2. Queerness, borderland perspectives for becoming with AI

As a starting point, this paper acknowledges that queerness is necessarily indeterminate, ambiguous and always in relation, denoting flexible spaces for the expression of all aspects of non, anti, contra, straight, cultural production and reception. As put by Sarah Ahmed, "queer lives are about the potentiality of not following certain conventional scripts, whereby not following involves disorientation" (Ahmed, 2006, p. 189). To reorientate our understand-

ings of human-AI relations, from the ontological and epistemological borderland of queerness and the gender binary, we first need some sense of what queerness means, and how it relates to (design/ing, with, for and through) AI systems. *Queerness* as described by José Muñoz in *Cruising Utopia: The Then and There of Queer Futurity*, can be read as a “horizon imbued with potentiality”, an “open mesh of possibility”, a rejection of the here and now, and a “basic desire to live otherwise” (Muñoz, 2001, p. 1-2). Always rooted in queer life, struggle and liberation, queerness “is not yet here... we are not yet queer” (Muñoz, 2009, p. 1-2). Accordingly, queer futurity, is less about expanding a range of choices (liberal freedom) than it is about transforming the kinds of beings we desire to be while embracing the mutating multitudes and entangled lifeworlds that make up the pluriverse, or as referred to by the Zapatistas, “un mundo donde quepan muchos mundos” (a world where many worlds fit) (Escobar, 2016, p. 42). In considering queer becomings with AI, we cross a threshold, intentionally getting lost in the borderlands of possibility, what Gloria Anzaldúa proposes as a psychic, social, and cultural terrain that we inhabit and that inhabits all of us (Anzaldúa, 1987), by which they mean a terrain where we encounter the world differently; losing our way to find our way (Ahmed, 2006). Importantly, this place of uncertainty is not a weakness but a power to be explored (Preciado, 2021). In this way, queerness is just as much about playing with the kinds of beings we desire to be as much as it is about offering a critique of the cultural, sociotechnical systems that shape our becoming with AI.

To the binary logic of AI, differently situated knowledge(s) and other/ed perspectives, are destabilising, thus demonstrating that binaries, be they imagined, cultural or technological are not natural nor always necessary. Rather, the notion of queerness speaks to a politics of transitivity—relating to, or characterised by, transition, bringing into question modes of gendered embodiment within all humans and non-humans and their configurations (Halberstam, 2016, 2017). In this sense, a queering of AI is a proposal to unsettle western thought, including the dominant techno-deterministic, cultural fictions, social imaginaries and technical propositions that shape how we create for, through, and with AI relations (Revell et al 2021, p. 57). Calling for new postures or rather, “queer turnings,” (Ahmed, 2006) towards AI, may help shift how we relate to, and move with AI differently. Mutations arising through queerness offer designers a borderland perspective to decode, indeed, to deterritorialise AI's fixed binary historical understandings and how it is deployed within everyday life (Deleuze & Guattari, 2005, p. 69). My point of departure, then, is to think about mutations as a means of unsettling common understandings of or postures towards AI today. This, I hope, will offer designers a mode of leaning into performativity, improvisation and uncertainty in their dealings with AI and the “mutable and the immutable features of our existence” (Levitas, 2013. p. 137).

3. Experiments and speculations on queer becomings with AI

In the following section, drawing particular inspiration from Paul B Preciado's *Testo Junkie: Sex, Drugs, and Biopolitics in the Pharmacopornographic Era*, I present an *autotheoretical* experiment and provocation centred on queerness. With this, I seek to problematise notions of

normativity and the naturalisation reproduced in and through AI systems (Bell et al., 2022). It can also be read as a gesture of resistance, a means to rethink encoded meaning beyond binary hegemonic, heteronormative classification schemes, categorisation, and modes of production. It is, as Preciado (2013) has described, “a body-essay” – a kind of soma-technological fiction relating to self-experimentation (Preciado, 2013, p. 7), or a queer reading into the possibilities of becoming oneself, finding one’s body “through becoming, embodying, a glitch” (Russell, 2020. p 151).

The experiment which I will introduce here as *Mutant in the Mirror* engages with the notion of queering AI by tinkering with an AI system that identifies patterns, abstract meaning and signification, classifies, categorises and creates. Along these lines, I return to the questions:

What if we understood AI as queer, a kind of mutant, in a state of becoming; a dynamic, relational, non-binary gender variant, how then might AI show up in and act on the world (with us humans) differently?

Mutant in the Mirror uses a readily available AI platform, in this case, one that uses StyleGANs, a class of deep learning generative and predictive modelling in which two neural networks compete by discriminating between real and fake data in order to become more accurate in their predictions. In this way, the StyleGAN model performs as a vehicle to grapple and play with the idea of mutations arising through AI and further queer becomings with AI. As such, the experiment itself is not reliant on the technical capacity or limitations of the platform as it is. I start my inquiry by considering how embodied subjects are constituted (subjected and subjugated) through configurations and delegations, intended or unintended, that shape potentialities emerging from the co-performative, intra-actions a user might have with an AI system. Accordingly, following Helga Nowotny’s (2021) claim that the power of AI is performative, playing with the idea of performative power, noticing ways “an algorithm has the capability to make happen what it predicts when human behaviour follows the prediction” (Nowotny, 2021, p. 19). Here the notion of performativity, originating through certain speech acts that pronounce and affect the world can be understood as performative action (Butler, 2002), where action originates through recursive feedback loops of material and discursive practices. As it intersects with the performative, the ‘co’ used here recognises the agency of both the user and the AI system in producing action, where their becoming is mutually dependent on their intra-actions (Barad, 2003).

By way of a methodological grounding, I borrow from what Luran Fournier (2021) has called ‘autotheory,’ used to describe a reflexive praxis that blurs the boundaries between living, making, and theorising (Fournier, 2021). I couple it with speculative research (Wilkie et al. 2017). While all research is subjective in the sense that the researcher's perspective cannot be uncoupled from the research process, autotheory places the researcher's 'self' at the centre of inquiry, always in situated relation to the subject and theory being studied. In this sense, by placing myself within the experiment, I gain a more textured insight into AI, through my own queer experience, dialoguing with queer theory as a means to reflect on the *felt*, imagined-but-not-yet-real (*im*)possibilities of AI signaling in the present. Moreover,

the experiment in itself is an act of co-performative, theatrical modelling—an ontological reflexive inquiry into the relational, recursive, emergent and exploratory production of fictive becomings with AI, crafted through performative action (Christy, 2017). Through this self-experimentation process¹, I hope to gain insight into the queer borderland relational aspects of the constituted self, mutating, becomings through co-performative intra-actions with AI.

3.1 The crossing, mutant in the mirror

I titled this ongoing experiment as the Mutant in the Mirror for the obvious reason that my self-reflexive experience of observing the images documented in Figure 1 quite literally feels like staring into a mirror, with mutants staring back at me. The potential variations of myself function as possibilities of myself, a uniquely queer skin anticipating changes to my cyber-identity. It asks, *do I present as ambiguous? I am a body in mutation? It is my intention.*

¹ Given the nature of the experiments, I feel it useful to articulate my situatedness and my orientation towards the theoretical cartography mapped throughout the text. In no particular order, I am a designer, artist and researcher. I am also a dyslexic, bi-cultural, queer, gender variant, Colombian-Australian, Spanglish is my mother tongue. Thus, I position myself simultaneously in relation to various spatial and temporal contexts and systems of oppression and privilege. From this position, I grapple with my own particular body biopolitics, worldviews, and ways of knowing, from which I act on the world as I negotiate my own mutability in becoming with AI.



Figure 1. Selected image results from, Mutant in the Mirror, a StyleGAN experiment. The images represent a queer aesthetics of transformation, algorithmic imagination and mutation, suggestive of a queer becoming with AI.

Figure 1 presents some of the mutating synthetic image data produced through the experiment. The images act as a discursive device used to evoke reflections on the kind of queer, mutating becomings with AI discussed in this text. Generating multiple mutant images and synthetic data through the StyleGAN model provided me with a space to play with my own indeterminacy, fluid boundaries, (dis)identifiability and resistance to classification and categorisation. The particular model used in this experiment was trained using a small personal dataset of 70 images of myself across different places in time, some passing more feminine and some as more masculine. Also included in the training dataset were images of other humans (grandmother, mother, etc.), and non-humans (dog, places, etc.) that shape my sense of time, self and world. The 3000+ image(s) and video(s) generated through the experiment function as a mirror, through which I get lost, disoriented and reoriented, turning differently

towards myself, my body, my corporal and subjective experience of the world. In this way, the Mutant in the Mirror comes to function as both a looking glass and a crystal ball, surfacing (speculations of) alternative versions of myself—*mutating*—becoming with AI. What started as an experiment in reimagining the notion of "fixed labels, fluid complexity" concerning who decides how we are read in the world, challenging deterministic binary modes of classification and categorisation (Crawford, 2021), concludes as an exploration into a metaphysics of interconnectedness (Anzaldúa, 2015). Indeed, a reflection on what (queer) intra-actions with AI systems might tell us about ourselves when we co-perform with them.

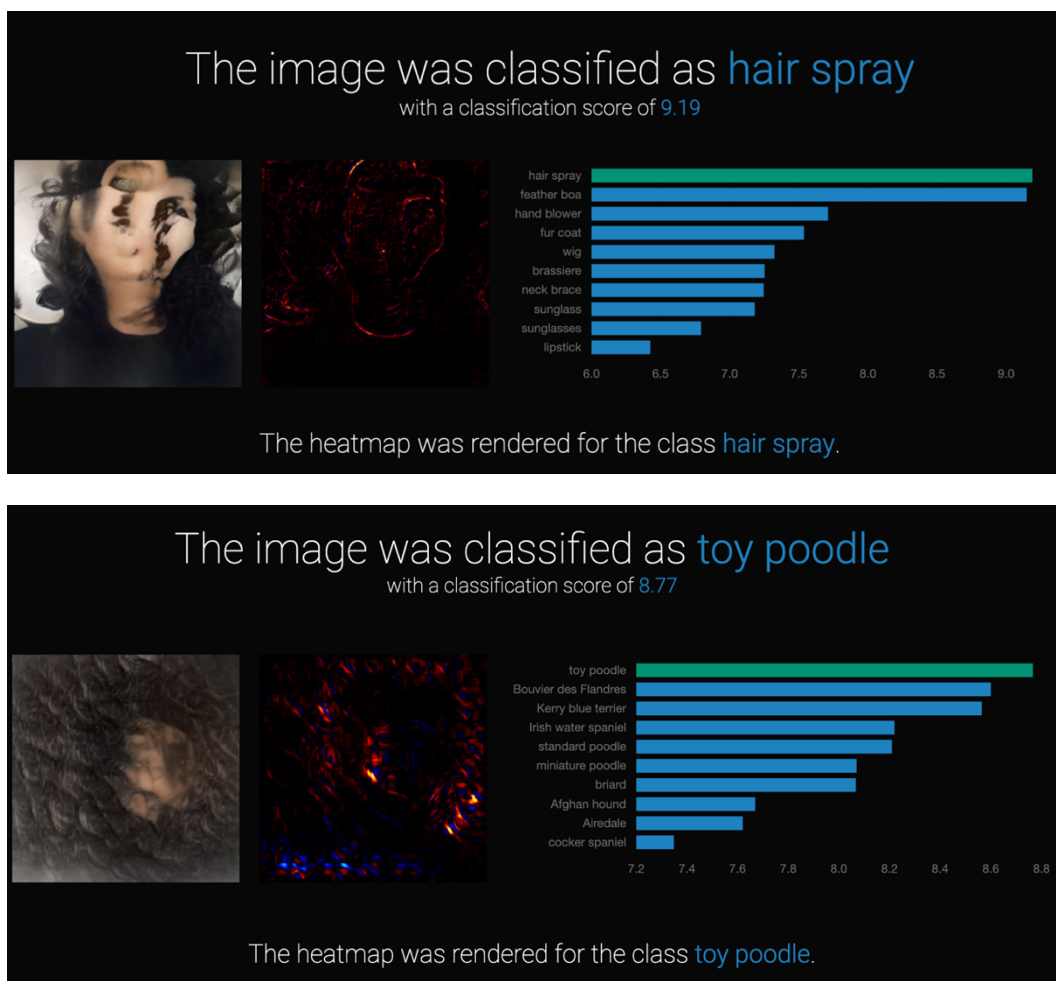


Figure 2. StyleGAN image generations were classified, here rendered as hair spray with a classification score of 9.19 accuracy, and as a toy poodle with a classification score of 8.77. Other classifications included a mask and a fur coat.

So what did the experiment tell me about myself? Am I a woman or a man? A subject or an object? Corporeal or incorporeal? Or, am I something in-between or outside of these dichotomies? *Am I hairspray? Or am I a toy poodle?* (see figure 2) Design's current instantiations and orientations towards AI tend towards inscribing binary classifications, engendering human and non-human bodies and experiences—resulting in the misclassification or erasure of

nonbinary or trans bodies and experiences via cultural (sociotechnical) classification systems encoded with homonormative (masculine) logic and meaning (Bell & Broad et al., 2021; Keyes 2018). The Mutant in the Mirror calls the binarization of AI into question, offering a glimpse into designing interventions for refusal to 'perform' in a way that was prescribed as much as it provides openings for imagining and enacting the world in unpredictable ways while reaching more diverse probabilistic outcomes.

The classification presented in *Figure 2*, with a high probability that I am hairspray and a low probability that I am lipstick, suggests that the mutable self is reducible to a set of categorical signifiers when in reality data is textural and culturally rich. By playing with AI systems that at once negotiate deterministic and probabilistic outcomes—while neatly classifying and categorising people—one could quickly grasp that this is an area that requires critical design review. As everyday life practices increasingly rely on AI systems, what is at stake are our computational sovereignty (Bratton, 2016) and our ability to imagine and enact different realities as self-determining subjects (Parisi, 2019; O'Shea, 2021), individually or collectively. It is not evident how the classifications depicted in *Figure 2* came about. However, through the experiment, it becomes clear that, to paraphrase James Bridle, we (designers) must find ways to deal with an incomputable world while acknowledging that it is irrevocably shaped and informed by computation. Recognising that AI systems are encoded, and thus can be decoded and re-written, allows for a different kind of logic and meaning to take root. Such a re-writing of AI may challenge how the self can be interpreted and labelled by and through AI systems in its open-ended becoming.

Upon reflection on the experiment, I am reminded by Muñoz's (1999) proposal that we view identification as code, a raw material that can be cracked open and reconfigured. This experiment opens doors to rethinking categorical signification, challenging the notion of categories and classification under its current deployments within and by AI systems. In this way, (dis)identification can be seen as a possible avenue for designers to engage with the incommensurate, that which resists fixed definition or measurement. Or otherwise put, disidentification and the failings to read by computational systems may present opportunities to negotiate calculative reasoning, the fine line between incomputability, and cultural computability of AI in more imaginative ways. Along these lines, mutations, rebelling against classification (Preciado, 2021), can be seen to make space for representation and empowerment of minority identities, identifications and positionalities rendered unthinkable by the dominant culture, whereby the potential for computational sovereignty and digital self-determination can be realised. Moreover, as an act of refusal, the mutant starts a conversation with us about AI predictions, categories and classifications. It testifies that AI needs not be deterministic in moving to a singular final destination; it must not assume that how we are read must be chosen for us, as if we were singular and not plural, static and unchangeable.

The mutant demonstrates the dynamic nature of becoming through relation. The mutant moves and mutates with me. In a mutually affecting mutation, we become grammatically incorrect singular, plural, by co-performing, intra-acting together, gesturing towards moving in

concert, alongside, mutating together. Who is the mutant in the mirror staring back at us? Do we know them? How do we move through and act on the world with them?

4. Gestures of resistance, for designers becoming with AI

Mutant in the mirror acknowledges that we live in times of digital transformation, yet design practice is ill-equipped to proactively and responsibly deal with such change. Consequently, designing for, with, and through emerging AI systems require new design vocabularies, narratives and requirements adept at negotiating complex human and artificial relations. As such, the Mutant in the Mirror experiment finds particular relevance within the emerging field of AI, HCI and designs' critical engagement with AI in theory and practice. As we become reoriented towards AI, we (designers) must begin to engage with AI as something that is not neutral nor outside us. It is a part of our daily life, mutating the heterogeneity of systems, sentient beings, others' bodies, their agencies and affective powers to make the world. Modes of knowing and unknowing under the rubric of mutations compel us to reflect on ways different entities do not merely interact with each other, but rather, define each other through their intra-action (Barad, 2003).

In his lecture at the École de la Cause Freudienne annual conference, Preciado posed a question to the 3,500 Psychoanalysts in attendance: "Can the Monster Speak?" By asking this question, and while reflecting on his own experiences of transitioning and embodied mutation, Preciado invited those in attendance to consider a new epistemology capable of "allowing for a multiplicity of living bodies without reducing the body to its sole heterosexual reproductive capability and without legitimising hetero-patriarchal and colonial violence" (Preciado, 2021). Through a reoriented epistemology of bodies, human and nonhuman, new possibilities may emerge for humanity to present otherwise, where "pregnant androids and clone sister-mothers can be read as queer and trans algorithms of kinship" (Cárdenas, 2018). As fantastic as it may seem, the kinship articulated by Cárdenas offers glimpses into the cultural fictions, social imaginaries and technical propositions stemming from such epistemological reorientations as proposed by Preciado, where bodies might be grounded in relational plurality. In other words, the mutant becomes a 'theoretically-powered cartographic tool' to support the multi-directional emergence of a posthuman subjectivity (Braidotti 2019).

Reflecting on my own personal experience of subtle mutations with AI, I find the affective power of mutation akin to what Preciado (2013) has called "Potentia Gaudendi" or "orgasmic force", which he describes as the most abstract and the most material of all workforces. To paraphrase, Potentia Gaudendi embodies an indeterminate capacity; it has no gender; its orientation emphasises neither the feminine nor the masculine. It is not human nor animal, neither animate nor inanimate, and creates no boundary between object and subject (Preciado, 2013, p 34). My mutating body is neither an organism nor a machine. Rather it passes as a "fluid, dispersed, networking techno-organic-textual-mythic system" (Preciado, 2013, p. 35), a performative phenomenon with no absolute exteriority or interiority (Barad, 2013),

inhabiting the boundary between the physical and the metaphysical. *We inhabit the mutant and it inhabits us.*

Preciado, recalling the transformative effects constituted by testogel, and the effects of testosterone mixing with their blood (which can be understood within this text as mutation), states that *"My body is present to itself"* (Preciado, 2013, *emphasis added*). The self-reflexive awareness of oneself produced through mutation is a critical feature of how we might engage with mutations more deliberately and thoughtfully through design. Preciado writes, "I am the future common artificial ancestor for the elaboration of new species in the perpetually random process of mutation and genetic drift" (Preciado, 2013, p.2). Transferred to the context of AI, becoming with AI can be seen as a sustained performative practice of world-building that embraces mutating multitudes. By understanding AI as a queer body containing multitudes, co-conspiring through synthetic-alliances between differently situated embodied subjects, we may begin to explore how AI embodies multiplicity, mutates, and resists solidified definitions. Recognising the resistance of solidified definitions and sustained performance, AI exists in constant negotiation between biological, technological, cultural and computational systems. *If* a designer were to engage more intentionally with AI, and the social application of AI, they would do well to engage with the stuff of mutations, the orgasmic force between things that changes things. *Then*, perhaps we could be better prepared to design with mutations, with the social, cultural, political and biological implications and consequences of those mutations in mind.

5. Conclusion

There is increasing awareness in design and HCI communities that queering as a strategy may help subvert existing sociotechnical systems and codings of hegemonic worldviews that reinscribe unsustainable, unethical and apolitical design practices (Spiel & Keyes et al., 2019) (Light, 2011). Along these lines, there is an urgent need to critically re-think the capacity of design to cope with the increasing complexity and dynamism of (socio)technical systems that actively learn, anticipate and adapt over time while in use (Giaccardi & Redström, 2020). To return to Muñoz's (2009) notion of queer futurity and queerness as an open horizon imbued with potentiality, this research calls for queer turnings toward design's engagement with AI as a growing research agenda and field of practice (Bell & Broad et al., 2022). As part of a larger research project, this paper aims to contribute to the scholarly discourse on design as it intersects with AI, offering insight into the potentiality for becoming with AI, otherwise, as individuals, as a society and as a species. Although the *Mutant In the Mirror* provides only a glimpse into designing interventions for refusal or at best an aspirational de-territorialization of AI, it does signal as an experiment novel practices toward queering AI. More critical (and playful) exploration and experimentation in design/ing towards queer becomings with AI are needed.

Herein lies my proposition for a different kind of (queer) encoded AI that might help illuminate to design and HCI communities an alternative route to addressing cultural computability, sovereignty and self-determination when designing with AI systems. A proposition for queerness, whereby a celebration of the mutant multitudes, may offer more responsible, inclusive and liberatory models for becoming with AI, allowing for range and variability, bringing forth new ways of being, doing and acting on the world, on route to becoming otherwise—a path that need not be linear.

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