TU Delft

Delft University of Technology

Document Version
Final published version

Licence
CC BY-NC

Citation (APA)
Turtle, G., Kotowski, B., Giaccardi, E., & Bendor, R. (2026). Sounding Territories: Dis/identificatory codings as relational worlding. In *Proceedings of DRS* (Proceedings of DRS; Vol. 2026), (DRS Biennial Conference Series). Design Research Society. https://doi.org/10.21606/drs.2026.2162

Important note
To cite this publication, please use the final published version (if applicable).
Please check the document version above.

Copyright
In case the licence states “Dutch Copyright Act (Article 25fa)”, this publication was made available Green Open Access via the TU Delft Institutional Repository pursuant to Dutch Copyright Act (Article 25fa, the Taverne amendment). This provision does not affect copyright ownership.
Unless copyright is transferred by contract or statute, it remains with the copyright holder.

Sharing and reuse
Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy
Please contact us and provide details if you believe this document breaches copyrights.
We will remove access to the work immediately and investigate your claim.

This work is downloaded from Delft University of Technology.

Design Research Society

DRS Digital Library

DRS Biennial Conference Series

DRS2026: Edinburgh

Jun 8th, 9:00 AM - Jun 12th, 5:00 PM

Sounding Territories: Dis/identificatory Codings as Relational Worlding

Grace Turtle
Delft University of Technology

Błażej Kotowski
Universidad Pompeu Fabra

Elisa Giaccardi
Politecnico di Milano

Roy Bendor
Delft University of Technology

Follow this and additional works at: https://dl.designresearchsociety.org/drs-conference-papers

 Part of the Art and Design Commons

Citation

Turtle, G., Kotowski, B., Giaccardi, E., and Bendor, R. (2026) Sounding Territories: Dis/identificatory Codings as Relational Worlding, in Simeone, L., Gray, C. M., Verhoeven, A., de Götzen, A., Bakırlıoğlu, Y., Zohar, H., Stead, M., and Buwert, P. (eds.), *DRS2026: Edinburgh*, 8–12 June, Edinburgh, United Kingdom. https://doi.org/10.21606/drs.2026.2162

This Research Paper is brought to you for free and open access by the DRS Conference Proceedings at DRS Digital Library. It has been accepted for inclusion in DRS Biennial Conference Series by an authorized administrator of DRS Digital Library. For more information, please contact library@thedrs.org.

Sounding Territories: Dis/identificatory codings as relational worlding

Grace Turtle[a], Błażej Kotowski[b], Elisa Giaccardi[c], Roy Bendor [a]

[a] Faculty of Industrial Design Engineering, Delft University of Technology, The Netherlands

[b] Music Technology, Department of Engineering, Universitat Pompeu Fabra, Spain

[c] Design Intelligences, Department of Design, Politecnico di Milano, Italy

*Corresponding author e-mail: g.l.turtle@tudelft.nl

https://doi.org/10.21606/drs.2026.2162

Abstract: This paper presents *Sounding Territories*, a sonic performance developed with Fundación Organizmo (Colombia) that explores dis/identificatory codings as an orientation for resisting and subverting algorithmic capture. Building on queer and more-than-human perspectives, the project reorients computational logics from stable classification toward relational and generative forms of *dis/identification*. Through deep listening, embodied performance, and model training, datasets were composed as relational constellations: entanglements of sounds and situations (e.g., fire–conversation–bird–wind) that enact the liveliness of data beyond representational frames. Rather than seeking legibility within existing taxonomies, dis/identification becomes a methodological reorientation—a *performance of politics*—that disturbs predictive logics to embrace *illegibility* as a generative principle. The paper contributes to more-than-human design by advancing dis/identificatory coding as a mode of *relational worlding*.

Keywords: algorithmic identification; disidentification; generative sonic modeling; performative politics; latent relations



This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International Licence.

Figure 1 Performer's gesture-based interactions with the latent space of the Sounding Territories sonic model.

1. Introduction

This paper is part of a trilogy of autotheoretical experiments exploring human-AI entanglements where situated "mestiza" queer theories are mobilized towards the subversion of mainstream AI development (Turtle, 2022; 2025). Drawing on Muñoz's concept of disidentification (Muñoz, 1999), the work presented in this paper critiques the ways AI reinforces fixed identities through data capture, classification, labeling, and computational predictability. *Sounding Territories*—an autotheoretical experiment in generative AI sound modeling and embodied interaction—was conducted with *Fundación Organizmo* in Tenjo, Colombia and explores disidentification as a "performance of politics" (Muñoz, 1999) to challenge the ontological assumptions encoded in AI systems. This performance interrogates how might algorithmic disidentifications foster more fluid, relational, and entangled identity formations. In response, the experiment treats identification as a malleable code open to reconfiguration, reinterpretation, and subversion through disidentificatory performances enacted in the making of a sonic model.

Sounding Territories is a queer response to the increase in algorithmic systems that render the world more computable through algorithmic identification—the classification, labeling, and ordering operations by which AI systems recognize, categorize, and make legible elements of the world (Amaro, 2020; Nowotny, 2021). These systems quantify identity through reductive categorization, extracting individual characteristics such as race, gender, sex, dis/ability, religious beliefs, or area code, to recognize patterns and construct identity formations that can be administered through the quantification of knowledge (Amaro, 2022; Hacking, 1990; Hinds & Joinson, 2018). Such processes effectively stabilize and fix both human and non-human entities digitally, diminishing the capacity for complex entanglements to transform (Amoore, 2020; O'Shea, 2021), while enabling predictability and control that reinforce existing power asymmetries in everyday life (Amaro, 2022).

We offer an alternative by drawing on José Esteban Muñoz's work on disidentification. In *Disidentifications: Queers of Color and the Performance of Politics* (1999), Muñoz explores how individuals marginalized by mainstream culture—particularly those outside racial and sexual norms—navigate and transform dominant cultural narratives for their own purposes. Muñoz introduces "disidentification" as a process where these individuals neither fully align with nor entirely oppose mainstream culture; instead, they reinterpret and reshape it to serve cultural objectives often undermined by dominant cultural constructs. This approach offers a novel perspective on minoritarian engagement with performance as a mode of intervention in normative modes of making worlds.

This paper turns to the queer performative politics of disidentification to challenge dominant algorithmic logics—meaning the reasoning processes by which AI classifies data into stable,

discrete categories, such as “person,” “object,” or “event,” for computational legibility. It follows that, if identification in algorithmic systems presupposes legibility, where entities fit predefined categories, then disidentification, by contrast, might presuppose a kind of illegibility. In this paper, the use of "/" in dis/identification recognizes that disidentification’s subversive potential is always bound to identification itself. The folding of identification within dis/identification reflects how legibility and illegibility entangle within algorithmic systems. Through the making of and reflection on *Sounding Territories,* we propose that this illegibility may reveal alternative relational ontologies and identity formations encoded within human-AI entanglements.

We explore and enact these transformations across three interrelated sites: (1) *territory*, where data collection practices encode identity through relations; (2) *model*, where algorithmic logics shape computational identities; (3) *bodies*, where embodied interaction with the model emerge. The work contributes to critical and more-than-human scholarship in design and human-computer interaction (HCI), offering dis/identification as an orientation for recasting algorithmic systems as sites for resistance, political performance, and relational worlding.

2. Related work

In this section, we situate our work within design and HCI research on human-AI entanglements, drawing from critical perspective on algorithmic identification, more-than-human inquiries into relational ontologies, and embodied explorations of latent human-AI interaction. By bringing together these lines of research with intersectional queer perspectives and Latin American knowledge-making traditions (De la Cadena, 2010; Espinosa et al., 2014), we surface tensions between dominant computational paradigms and more relational, indeterminate approaches that resist fixed ontological framings in more-than-human data practices in AI development and interaction.

2.1 Critical perspectives on algorithmic identification

Algorithmic systems play into discourses of identity and identification. Drawing on queer theory, Light (2011) proposes queering as a lens to resist computational identification within HCI. This becomes pressing as algorithmic identification grows increasingly discriminatory (Keyes, 2018) and fixed (Lu et al., 2022), reinforcing systems of oppression, particularly when HCI lacks explicitly articulated politics (Keyes, 2019). Baumer et al. (2024) propose "algorithmic subjectivities" as an approach to attend to how humans and algorithms are not prefigured concepts but come into being through mutual interactions. As they point out, algorithms materially shape and stabilize subjective experiences, engineering how we see and relate through a computational lens. Similarly, Sanches et al. (2022) caution that treating data as abstract reflections risks obscuring the world through particular measures, proposing instead to view data as co-produced, living, and situated. Such modes of capturing and codifying identities via algorithms risk becoming the only way to think about the realities being encoded (Vallverdú, 2014). If identity is performative, how might identities be

imaginatively and materially reconfigured in relation to algorithmic systems? This concerns not just how social categories (race, gender, class, sexuality) become algorithmically encoded, but the power structures that shape and enforce those categories (D'Ignazio & Klein, 2023; Guyan, 2022), risking the foreclosure of more fluid or open-ended modes of identification.

2.2 More-than-human inquiries into relational ontologies

Recent HCI and design research has challenged anthropocentric ontologies by opening pathways for more-than-human perspectives (Giaccardi et al., 2025), building on feminist posthumanist theories (Braidotti, 2011; Haraway, 2016) applied in HCI (Forlano, 2017; Wakkary, 2021). Scholars have explored methodologies ranging from thing-ethnography (Giaccardi et al., 2016) to feminist posthumanist fabulations (Søndergaard, 2025) and decentering approaches (Di Salvo & Lukens, 2012; Forlano, 2016; Nicenboim et al., 2025) that attend to the intimate entanglements of humans and machines (Frauenberger, 2019). These works trouble human-centricity by foregrounding the participation of non-human agencies in design (Giaccardi & Redström, 2020). Søndergaard's (2025) *I Moss You* poetically foregrounds marginalized voices while decentering the human, making space for the "enlivening" of "natureculture" relations that reveal co-constituted agencies, affects, and meanings. This highlights the "ontological uncertainty" arising from performative boundaries, where meanings and identities shift over time, unsettling any presumed stability (Frauenberger, 2021, p.81).

Yet a critical question remains: who or what is being decentered, and what emerges in its place? (Nicenboim et al., 2025). When the human is decentered, various non-human actors (plants, animals, machines) may simply occupy a new center. Latin American decolonial feminist scholars (De la Cadena, 2010; Espinosa et al., 2014) emphasise the need to unlearn ontologies of separation that may inadvertently reinforce new binaries (human vs. non-human) and adopt pluralistic politics, rather than adhering to singular, stable realities.

2.3 Embodied explorations of latent human-AI interaction

There is a growing interest in the latent space and latent interactions within AI, design, and creative practices (Tahiroglu & Wyse, 2021). Note that by latent space, we refer to the computational space into which the training data in AI systems is projected and latent interactions as the modes of interaction that engage with this space. Recent works approach latent space performatively, emphasizing interaction, relationality, and divergence rather than representation. Broad's *Active Divergence* (2021) documents techniques that subvert the rigidity of data-driven modeling, while Shaheed and Wang's *I Am Sitting in a (Latent) Room* (2024) reframes latent space as a shared improvisatory environment shaped by recursive feedback. Scurto and collaborators extend this toward embodied experience: in *Soundwalking Deep Latent Spaces* (2023) and *Deeply Listening Through/Out the Deepscape* (2023), latent spaces are traversed through bodily movement and listening, merging human and non-human agencies in ways that blur perceptual, ecological, and computational distinctions. These works point to latent interaction as a relational field of becoming, though the politics of such entanglements often remain implicit.

These explorations align with research approaches in HCI foregrounding how both human and non-human bodies participate in shaping computational processes (Höök et al., 2019). Somatic design methods emphasize first-person, felt experiences to bypass fixed encodings of identity (Höök et al., 2019; La Delfa et al., 2024). Drawing on Massumi's (2021) assertion that "when a body is in motion, it does not coincide with itself," these methods highlight the fluidity of bodies and subjectivities. Interpretative gestural engagements (Alaoui & Matos, 2021) and performative explorations of data-driven sound models blur boundaries between performer, instrument, and computational system (Geronazzo & Serafin, 2023; Morrison & McPherson, 2024; Perovich & Zizzi, 2024). Yet, even as these approaches foreground relationality and fluid identities, they often overlook the explicit politics of embodiment. As Garrett et al. (2024) suggest, embodied design practices are "intimately entangled with the politics of bodies," or, as Muñoz (1999) argues, it instantiates a "performance of politics." Without asking "who can be our relations?" (Lewis et al., 2018, p.9), without a decolonial, explicit politics of embodied practice, we risk reproducing assumptions about who is allowed to participate in shaping computational processes.

3. Autotheoretical approach

To account for the making of theory through embodied practices, the first author adopted an autotheoretical approach to experimentation (Turtle, 2022; 2025). Drawing on autotheory, a term articulated by Fournier (2021), we leverage intersectional feminist, queer perspectives. The goal is to experiment with dis/identification with both human and non-human bodies as sites of political negotiation, dissolving strict separations between bodies, technologies, and their respective territories, and extending calls for more relational AI, or what Lewis et al. (2018) have proposed as making kin with the machines. This autotheoretical experiment takes shape as a performance, where theory and practice are enlivened through reflexive critique, making, and writing. While drawing on first-person methods (Desjardins et al., 2021), our autotheoretical approach intentionally troubles the researcher's positionality and practice by questioning whose bodies are implicated in research and which theoretical frameworks inform and emerge from these embodied encounters. In doing so, autotheory further unsettles the researcher/researched dichotomy, drawing on insights from critical race and transfeminist theory (Bey, 2021; Preciado, 2013), as well as crip and disability studies (Forlano, 2024). Theorizing dis/identification then arises through the dynamic relations between *territory* (data), *model* (algorithmic logics), and *bodies* (embodied interaction) within the experiment.

3.1 Positioning the experiment: Fundación Organizmo

Sounding Territories was conducted in collaboration with *La Fundación Organizmo*, a training and research centre for intercultural knowledge and regenerative practices situated on the ancestral territory of Los Muiscas in Tenjo, Colombia. Ana María Gutiérrez, its founder, describes it as un *territorio del cuerpo tejido* (a territory of the woven body).

The physical site comprises interconnected spaces including *La Maloca* (a ceremonial space), *El Jardin Sagrado* (a garden for medicinal plants), *La Huerta* (a food garden), and *La Casa de*

Pensamiento (The House of Thought) (Figure 2). We approach deep listening within these spaces as an embodied practice that extends listening to improvisational sonic meditations, and site-specific, more-than-human engagements (Oliveros, 2005). For example, within *La Casa de Pensamiento*, collective dialogue is facilitated through what is understood as a *círculo de palabra* (word circle) around a fire. In this context, dialogue, and by extension listening, is woven into Organizmo's practice methodologies, rooted in deep, ancestral, and embodied knowledge that extends dialogue to the non-human. In dialogue with Gutiérrez, the first author explored dis/identification in relation to Organizmo's intercultural knowledge-making practices, grounded in their queer mestiza experience and Colombian roots. This positionality informed both the making and theorizing of dis/identification in relation to *un territorio del cuerpo tejido.*



Figure 2 La Casa de Pensamento, Organizmo, Tenjo, Colombia.

4. The experiment: *Sounding Territories*

In *Sounding Territories*, a performer interacts with a custom sound-generative AI model (a sonic model) that uses machine learning to encode entities such as water, fire, and bees, organizing them spatially into its latent space. Through gestures, the performer disturbs and disrupts familiar expressions of these sounds, challenging traditional algorithmic encodings of identification and sound categorization within the model's latent space. The process introduces ambiguity and openness, allowing for improvisational sonic expressions that escape conventional classifications. The performer enacts dis/identification through an embodied, affective relation with the model, as their movements modulate how sound unfolds from within the latent space. As illustrated in Figure 1, the performer describes this experience as one where the boundaries between their body and the sonic entities blur,

creating a sense of mutual transformation. In this way, dis/identification performs an active recomposition of relations and ontological possibilities. To examine more in detail these reconfigurations, in what follows we attend to the three interrelated sites where the first author's performance unfolded:

- ***Territory*** – Where alternative data collection practices transform identifications by shifting the material and epistemic foundations on which identity formations rest.
- ***Model*** – Where shifts in algorithmic logic and co-performativity emerge when dis/identification becomes an operative principle, revealing the malleability of classification and prediction.
- ***Body*** – Where new human-AI entanglements arise through embodied interaction, complicating the binary between human agency and algorithmic determination.

We approach the first author, Grace Turtle's (hereafter GT) position as something that emerges by attending to relationships—both with research collaborators, movement artist Romany Dear (hereafter RD), sound artist and engineer Błażej Kotowski (hereafter BK), visual artist and researcher Bárbara Santos (hereafter BS) and founder Ana María Gutiérrez (hereafter AG), with nonhuman entities such as water, fire, and bees. This acknowledges the situated, co-constitutive nature of research, where identity is continuously woven through entanglements.

4.1 Note on data analysis

The experiment generated three kinds of data sets. Territory was explored through autobiographical analysis (Anderson, 2006; Desjardins & Ball, 2018) and reflexive thematic analysis (Braun & Clarke, 2019) to make sense of the data (Dataset A). Model was interrogated through field notes and recordings of GT's encounters with human and non-human entities (Dataset B). Lastly, Body was explored through generative audio outputs, supplemented by video recordings of embodied latent space interaction overlaid with reflections by GT and RD (Dataset C).

Given the iterative and performative nature of the experiment, data interpretation occurred in two phases. First, real-time self-reflexive documentation captured immediate responses (Dataset A) and embodied interactions (Datasets B and C), including deep listening exercises (Oliveros, 2005), dialogical prompts, movement scores, and reflections on where and how disidentifications arose. Second, the post-experiment thematic analysis traced how deep listening, sonic, and gestural interactions transformed AI-entangled identifications across territory, model, and body relations. The following section discusses our findings.

4.2 Territory: Situated data collection

Our approach to fieldwork and field recordings directly responds to Organizmo's relational ontology and practice of weaving territories. Drawing from Organizmo's situated knowledge, GT practiced deep listening from soil to insects to wind, fire, and conversations—to "prepare

the soil" for exploring what arises through dis/identificatory orientations. This preparation signals attunement and relational ethics, where identification is approached as an ongoing negotiation of identities-in-difference (Muñoz, 1999).

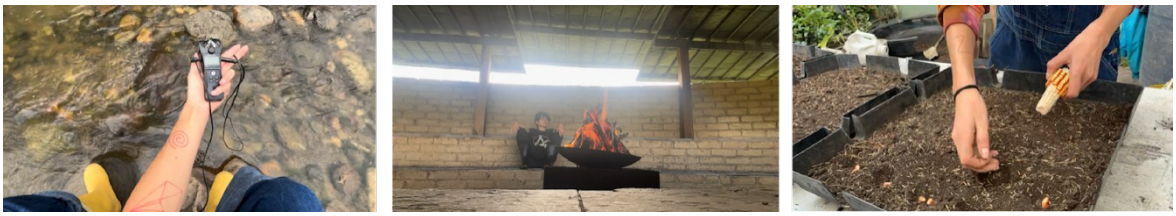


Figure 3 Sound recordings based on situated experiences such as tending to the fire and planting maize.

Through this lens, GT approached data as entangled in and with bodies (human and non-human woven together), actively resisting the disembodiment of data collection that neutralizes both data and its interpretations through an objective lens (Sanches et al., 2022). Field recordings, in this context, did not simply capture isolated sounds but materialized through deep listening—from tending to a fire, untangling and cutting back trees, and planting seeds. These recordings were not extracted but co-produced through lived, multisensory engagements with place, thus, challenging data collection practices that separate data from its relations and contexts (Figure 3). Being situated at Organizmo for a period of three months (November 2023 - January 2024) allowed GT to effectively “sound territories” and capture that sounding through direct experience over time— from recording their experience listening to human-made sounds (anthrophony), to sounds produced by living entities (biophony), and non-animated sounds like wind or water (geophony) (Krause, 2008). To record their sound experiences in their full spectrum, GT used multiple recording devices to capture anthropogenic, ultrasonic, low-frequency, and underwater sounds (Figure 4).



Figure 4 Recording devices included (from the left): a contact microphone, a handheld recorder with built-in stereo microphone, a clippable microphone, a directional microphone, and a full-spectrum acoustic logger.

To organize the data for training the three models, GT and BK created three categories – "NX," "SY," and "WZ" – to avoid falling back into typical naming conventions, and based the three models on spatial coordinates and orientations to loosely group the relations recorded in the sounds. These groups were formed based on constellations, rather than specific categories of individuated entities. For example, category "NX" reflects the relations that GT formed while sitting with and tending to a series of fires and conversations held around them across different locations at Organizmo (i.e., La Maloca, El Jardin Sagrado, La Casa de Pensamiento). These categories are intentionally non-semantic, designed to avoid imposing rigid constraints of categorization based on predetermined sound features or taxonomies. By categorizing the data in this way, the aim was to capture the "liveliness of the data" (Sanches et al., 2022) beyond any direct representation of reality, without relying on discrete labeling of individual objects.

Labeling the final categories as "NX," "SY," and "WZ" allowed to train three distinct models. Using three models instead of one offered a more fine-grained control, enabling richer interaction affordances. In the following sections, we illustrate the ways sound data is then transformed through the model and gesture-based latent interaction.

4.3 Model: Dis/identification as operative principle

We approached sonic modelling from the perspective of latent variable models, specifically variational autoencoders (VAEs) (Kingma & Welling, 2019), which allow for non-semantic, parametric control over the generation of sound. In simple terms, rather than learning to recognize and reproduce discrete, nameable sounds, a VAE learns a continuous field of sonic relations, a space where any point exists as a potential blend of what was heard during training, never fully resolving into a singular identity. The experiment adopted an approach that involves subjecting a VAE-based neural synthesis model, specifically the realtime audio variational autoencoder (RAVE) (Caillon & Esling, 2021), to a series of latent transformations, oriented toward dis/identification. Unlike generative models that reduce data to discrete tokens or codes, RAVE models the continuous distribution of latent variables underlying the data. This approach enables continuous transfigurations of identities expressed within the latent space of the model, allowing for subversion of singular identifiable categories, characteristics, and interpretations.

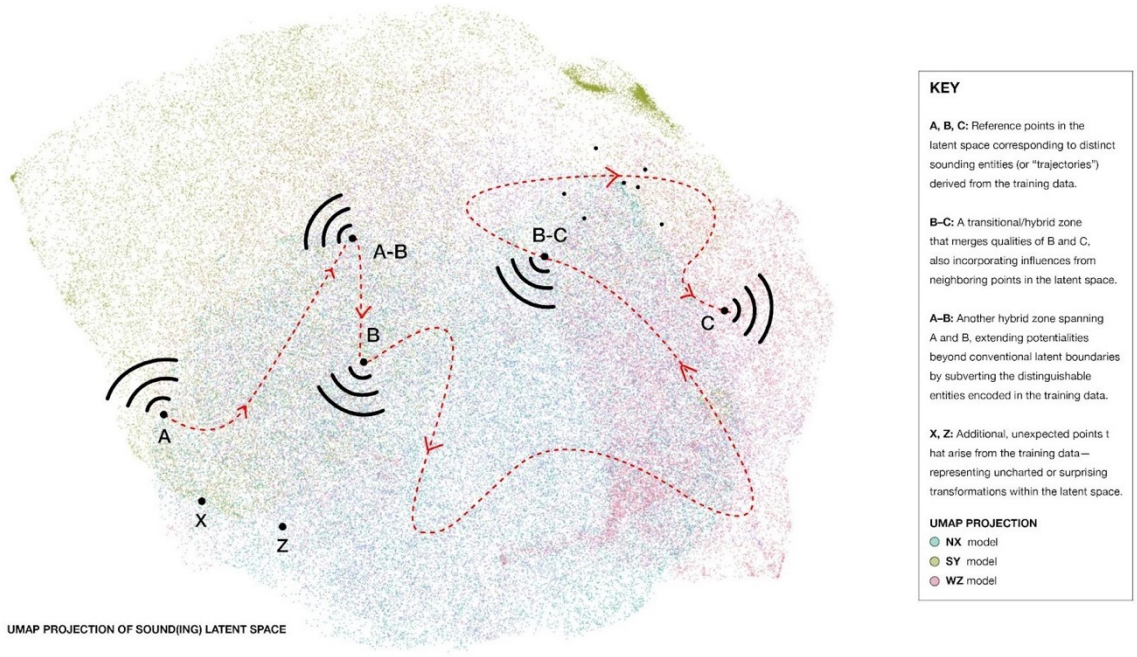


Figure 5 Illustrative view of the sounding latent space created in Sounding Territories.

This setup enables the latent space of our models to serve as an underlying structure of possibilities, where sounding entities are neither static nor complete, but are continuously enacted. By generating variable identity formations, the model's architecture enables the interruption of representational codings. Figure 5 illustrates the generation of dis/identifying sound formation that resists strict boundaries between familiar entities, such as a (A) "bee" or (B) "fire." Through the sounding of the latent space, characteristics blend, giving rise to ambiguous identity formations such as (A-B) "bee-fire". With the model's latent space configured as a terrain of relational possibility, the question becomes how embodied interaction activates and extends these dis/identificatory potentials.

4.4 Body: Enacting disidentifications through gestural latent interaction

Building on the model's latent space, as described above, we investigated how movement can enact disidentificatory performance through gesture-based interaction. This exploration was conducted in collaboration with movement artist and researcher RD in two phases: first in January 2024 at Organizmo (Tenjo, Colombia) and later in August 2024 at X Studios (Berlin, Germany). For this paper, we focus on the former.

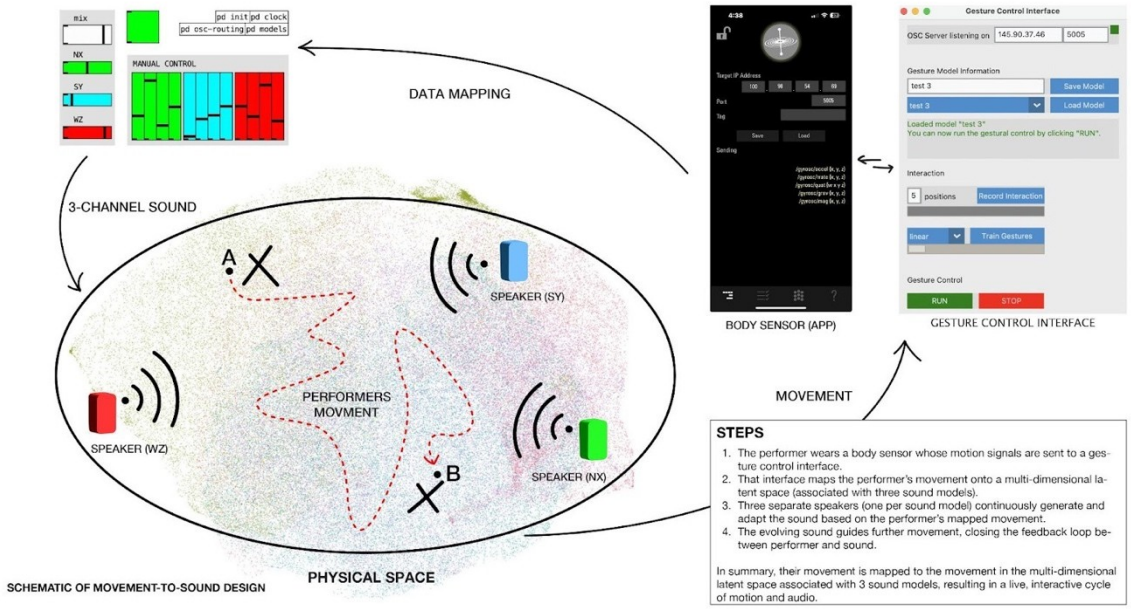


Figure 6 Mapping of movement-to-sound design in Sounding Territories.

Through the gesture-based interface, physical movement was mapped onto the latent dimensions of three models—"NX," "SY," and "WZ"—each generating sound in real-time through its corresponding speaker. We implemented a system mapping gyroscope sensor data to the models' latent variables, effectively translating physical movement into latent space transposition (Scurto & Fiebrink, 2016). This gesture-control interface (Figure 6) facilitated RD's interaction with the model's latent dimensions.

We developed movement scores with RD to foster experimental, embodied co-performance with the model. These ranged from improvisational fluid movements to directive, linear gestures—reaching, pushing, pulling—exploring how they affect latent interactions. One score had RD alternate between floor-based improvisation and upright, purposeful movements, observing each transition's impact on the model's sonic response. Another encouraged her to move "from the bees," imagining stinging or vibratory sensation as a catalyst for jolting improvisation. In RD's words, these exercises prompted deep inquiry into listening, how and from where she listens, and how this listening informs her movement and attunement. By playing with agency and attention, the scores encouraged RD to explore emergent, relational dynamics between her body, the model's sonic expressions, and the co-constructed space. The co-performance between RD and the models' latent space, generated sound through embodied interaction, with sound emerging in real-time through RD's movements and the model's sonic expressions.

5. Dis/identificatory tactics and movements

Drawing on GT's autobiographical accounts, situated reflections, and theoretical critique, this section foregrounds the affects, agencies, and relational dynamics that unfold through

wayward (Hartman, 2019) reflexive making, resistant to conventional evaluation practices or faux objectivity. What follows is a series of dis/identifying queering tactics that examine how intersectional queer knowledge-making practices foreground dis/identification as both a feature of identity formation *and* as a mode of computational logic. These tactics unfold through the GT's reflections and and dialogues with AG, RD, BS and BK, with the writing deliberately shifting between "I" to "We" to make visible the relational entanglements through which dis/identification emerged.

5.1 Tactic 1: Unsettling identities in data capture

By situating myself at Organizmo, the process of data capture became an embodied dis/identificatory performance of "weaving territories". Unlike conventional data collection methods that extract and categorize discrete units, my approach was guided by situatedness, relationality, and entanglement, treating data as co-produced and enlivened rather than as abstracted snapshots (Sanches et al., 2022). Through ongoing dialogues with BS and AG in the company of a fire—*mambeando*—BS asked, "Do you speak through the plant, or does the plant speak through you?"—the answer was "Both" (Figure7).



Figure 7 *Field documentation at Organizmo: in dialogue with BS and AG in the company of a fire—mambeando within La Casa de Pensamiento.*

The situated practice of *mambeando,* derived from *mambear*, refers to the ritual consumption of coca powder, traditionally used in ceremonial spaces by Colombian Indigenous ethnic groups illustrates the distributed embodiment and affective relations shared between ancestral technologies (Santos, 2019). *El mambe* (a plant body), *el fuego* (an elemental body), and GT, BS, and AG (human bodies)—challenging the assumption that identities can be neatly separated or categorized. Through this alchemical wayward process that refused to strip sounding entities from their relations, data capture within *Sounding Territories* became a gesture of resistance to normative encodings that fix identities through computational processes (Baumer et al., 2024).

This unsettling of relations challenges the logic of stability within algorithmic systems. Field recordings that enliven data and entangle bodies contest the assumption that categories must remain stable or discrete for computation to function effectively (Markham, 2013), instead highlighting how ambiguous datasets create pathways for novel forms of sounding that subvert normative computational logics that rely on fixed, discrete categories. Rather than rejecting coherence entirely, this tactic reframes stability as just one of many possible pathways in the politics of dis/identification. In doing so, it prompts critical HCI scholars and designers to balance the practical need for identification in AI outputs with more relational possibilities in the making of algorithmic systems.

5.2 Tactic 2: Subverting ontological centres in the model's latent space

The resistance to stability within the training data carried through to the model's latent space. Technically, RAVE's architecture conceptualizes latent space as a low-dimensional representation prioritizing stability and predictability. Yet, the experiment revealed another possibility: the latent space as a generative terrain where human and nonhuman sounding entities continuously fold into one another. A "bee" may transform into "water," creating "bee-water"—expressions that become through relations, never fully settling into singular categories.

In the design of the model's architecture, we worked with its tendencies toward homogenization that marginalizes identities outside dominant norms, pushing them toward probability distribution tails or toward dominant representations. As Markham (2013) cautions, such abstractions can render lived realities unrecognizable. Dis/identifying latent space produces hybrid counter-identities or identity-in-difference that resist legibility (Muñoz, 1999). Thus, the model embodies a logic that intentionally disrupts ontological centers by interweaving different entities, recoding normative regimes of legibility and stability within the latent space (Bey, 2022). This created constellations of relational entities —for example, "fire-conversation-bird-wind" categorized as "NX"—that resist singular classification. This approach directly challenges the anthropocentric perspectives in HCI that treat human and nonhuman entities as having stable centers that can be decentered and thus recentered (see Section 2.2). Instead, *Sounding Territories* takes up *mestizando*, a term that signals an ongoing process of mixing, bridging, and moving between cultures (Anzaldúa, 2014). By invoking dis/identification, the sonic model's latent space becomes a terrain where "who" or "what" is sounding cannot be traced to a single point of origin, embodying the pluralistic politics of the possible on which it rests.

5.3 Tactic 3: Attuning to latent relations through embodied interaction

Shifting from representations to attunements reframes AI design as a process of co-performance and co-emergence through latent relations, rather than a system of classification aimed at predictability. Treating La Casa de Pensamiento as a physical instantiation of the model's latent space, RD's movement scores—tracked through the gyroscope and gesture-control interface—wove together the actual and virtual dimensions of the latent space. Her gestures interfaced between physical presence and the model's

generative capacities, mapping and remapping the virtual latent space onto the actual site (Figure 8).



Figure 8 RD exploring gestural movement with the latent space in La Casa de Pensamiento.

Movement here was operative in navigating the latent space relationally rather than analytically. As RD reflects, "The sound feels spatial, and I have imaginations of being in a forest... then submerged under water," illustrating how the model fosters ongoing renegotiations of identity and space. During this co-performance, RD posed a reframing question: “Am I being moved by the model, or is the model moving me? Or are we moving together?” The answer lies in the question itself, underscored by the polyphonic composition of human and nonhuman sounding bodies moving-with each other. Rather than linear cause-and-effect, RD's movement could be understood as "minor gestures" of co-performance, merging-with sound rather than acting upon it (Manning, 2016).

RD's engagement revealed a body that was no longer singular or purely human. She described her interactions as taking place with a digital body, a computer body, a more-than-human body, a searching body, a purposeless body, a lost and present body, an interdependent and intersubjective body. These experiences align with Manning's (2016) assertion that the virtual is never the opposite of the actual; rather, it is how the actual resonates beyond the limits of its realization. This relational attunement addresses the gap in embodied HCI approaches that, while foregrounding relationality and fluid identities, often overlook the explicit politics of embodiment (Garrett et al., 2024; see Section 2.3). RD’s descriptions reveal how latent relations transform normative codings of the human body, redistributing agency and performativity through sound, movement, and computational mediation.

These three tactics demonstrate how dis/identification can recode AI through a queer politics in HCI research and design: an invitation to, in Muñoz's (1999) words, "continue disidentifying with this world until we achieve new ones" (p. 200). *Sounding Territories* shows how unpredictability and illegibility, rather than constraints to be minimized, could

become essential features woven into the very architecture of AI design, creating pathways for more fluid, relational, and generative human–AI entanglements.

6. Conclusion

In *Sounding Territories*, we draw on Muñoz (1999) by performing dis/identification to attune to sites "where meaning does not properly line up" (p. 78–79), thus illuminating tensions within algorithmic identification in more-than-human practices. Rather than opposing AI's logics from the outside, disidentifications disturb, remix, and recode algorithmic identifications, reworking AI from within the system being transformed. Our autotheoretical experiment at *Fundación Organizmo* illustrates how dis/identification might unsettle dominant classification logics. By collecting field recordings that foregrounded relational entanglements, and training a sonic model later activated through gesture-based interaction, we observed how human, nonhuman and computational entities co-perform to generate alternative identity formations.

Three key tactics emerged:

- *Unsettling identities in data capture:* challenge logics of stability by foregrounding relationality within data and modeling practices.
- *Subverting ontological centers in the latent space:* by refusing singular classification hierarchies and recognizing distributed agency across human and nonhuman actors.
- *Attuning to latent relations through embodied interaction:* through co-performance that acknowledges fluid bodies, emergent soundings, and ongoing identity negotiations.

These tactics demonstrate that identity arises through relations (Glissant, 1990) rather than as predetermined categories. At each step of algorithmic identification, identities can be recoded to account for minoritarian positionalities, shifting AI legibility toward new relational possibilities. Rather than framing AI design solely within responsibility and inclusion discourses, which can reinforce normative identity codes, disidentification reveals cracks in dominant logics, making space for relational ontologies and the transformation of AI-entangled identities. As a co-performance enacted by GT alongside BS, BK, and RD, these disidentifications represent a political position, over an aesthetic choice.

For design research, *Sounding Territories* demonstrates how autotheoretical and situated approaches to AI development can generate alternative epistemic and ontological commitments within computational systems. For more-than-human design, the work offers dis/identificatory coding as a methodological orientation that shifts from decentering toward

relational entanglement. For critical AI studies, it shows how the politics of classification can move beyond critique to tactful intervention in the design of datasets and model architectures that shape interactions.

These tactics extend beyond the case explored here. Dis/identificatory tactics could apply to the design of text-based generative models, robotics, or urban informatics, domains where binary logics and rigid classifications still structure computational reasoning. Exploring how fluid and relational identities can be nurtured through AI's design and development opens possibilities for reconfiguring both computational practices and the sociopolitical contexts in which they operate. Embracing a politics of dis/identification, we suggest, not only recodes algorithmic systems but also reshapes the conditions under which they participate in the making of worlds.

7. References

Alaoui, S. F., & Matos, J. M. (2021). RCO: Investigating social and technological constraints through interactive dance. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (pp. 1-13). ACM Press.

Amaro, R. (2022). *The black technical object: On machine learning and the aspiration of black being*. Sternberg Press.

Amaro, R., & Khan, M. (2020). Towards black individuation and a calculus of variations. *E-flux Journal*, *109*.

Amoore, L. (2020). *Cloud ethics: Algorithms and the attributes of ourselves and others*. Duke University Press.

Anderson, L. (2006). Analytic autoethnography. *Journal of contemporary ethnography*, *35*(4), 373-395.

Anzaldúa, G. (2019). *Borderlands/La frontera: The new mestiza* (4th ed.). Aunt Lute Books.

Anzaldúa, G. (2014). La conciencia de la mestiza: Towards a new consciousness. In A. R. Hurtado (Ed.), *Chicana feminist thought: The basic historical writings* (pp. 271–274). Routledge.

Baumer, Eric PS, Taylor, A. S., Brubaker, J.R., & McGee, M. (2024). Algorithmic subjectivities. *ACM Transactions on Computer-Human Interaction, 31*(3), Article 35.

Bell, S. A. (2020). The informatics of domination and the necessity for feminist vigilance toward digital technology. In P. Sotirin, V. L. Bergvall, & D. L. Shoos (Eds.), *Feminist Vigilance* (pp. 23-42). Palgrave Macmillan.

Bennett, J. (2010). *Vibrant matter: A political ecology of things*. Duke University Press.

Bey, M. (2021). *Black trans feminism*. Duke University Press.

Braidotti, R. (2011). *Nomadic theory*: *The portable Rosi Braidotti*. Columbia University Press.

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative research in sport, exercise and health, 11*(4), 589-597.

Butler, J. P. (2002). *Gender trouble: Feminism and the subversion of identity*. Routledge.

Caillon, A. & Esling, P. (2021). *RAVE: A variational autoencoder for fast and high-quality neural audio synthesis*. arXiv. https://doi.org/10.48550/arXiv.2111.05011

De la Cadena, M. (2010). Indigenous cosmopolitics in the Andes: Conceptual reflections beyond "politics". *Cultural anthropology, 25*(2), 334-370.

Desjardins, A., & Ball, A. (2018). Revealing tensions in autobiographical design in HCI. In *Proceedings of the 2018 Designing Interactive Systems conference* (pp. 753-764). ACM Press. https://doi.org/10.1145/3196709.3196781

Desjardins, A., Tomico, O., Lucero, A., Cecchinato, M. E., & Neustaedter, C. (2021). Introduction to the special issue on first-person methods in HCI. *ACM Transactions on Computer-Human Interaction, 28*(6), 1-12. https://doi.org/10.1145/3492342

D'ignazio, C., & Klein, L. F. (2023). *Data feminism*. MIT press.

Escobar, A. (2020). *Pluriversal politics: The real and the possible*. Duke University Press.

Espinosa, G. (2014). *Latino Pentecostals in America: Faith and politics in action*. Harvard University Press.

Finn, E. (2018). *What algorithms want: Imagination in the age of computing*. MIT Press.

Fournier, L. (2021). Autotheory as feminist practice in art, writing, and criticism. MIT Press.

Forlano, L. (2023). Living intimately with machines: Can AI be disabled? *Interactions, 30*(1), 24-29.

Forlano, L. (2017). Data rituals in intimate infrastructures: Crip time and the disabled cyborg body as an epistemic site of feminist science. *Catalyst: Feminism, Theory, Technoscience, 3*(2), 1-28.

Forlano, L. (2016). Decentering the human in the design of collaborative cities. *Design Issues, 32*(3), 42-54.

Forlano, L., & Glabau, D. (2024). *Cyborg*. MIT Press.

Frauenberger, C. (2019). Entanglement HCI The Next Wave? *ACM Transactions on Computer-Human Interaction, 27*(1), Article 2.

Frauenberger, C. (2021). What are you? Negotiating relationships with smart things in intra-action. In M. Rozendaal, B. Marenko, W. Odom (Eds.), *Designing Smart Objects in Everyday Life: Intelligences, Agencies, Ecologies* (pp. 75-90). Bloomsbury Publishing.

Fritsch, J., Tsaknaki, V., Ryding, K., & Hasse Jørgensen, S. (2025). 'Breathing-with': A design tactic for the more-than-human. *Human–Computer Interaction*, *40*(1-4), 89-103.

Garrett, R., Kisić-Merino, P., Núñez-Pacheco, C., Sanches, P., & Höök, K. (2024). Five political provocations for soma design: A relational perspective on emotion and politics. In *Proceedings of the Halfway to the Future Symposium* (pp. 1-8), Article 30.

Galloway, A. R. (2021). The Gender of math. *differences*, *32*(3), 1-24.

Geronazzo, M., & Serafin, S. (Eds.) (2023). *Sonic interactions in virtual environments*. Springer Nature.

Giaccardi, E., Redström, J., & Nicenboim, I. (2025). The making(s) of more-than-human design: Introduction to the special issue on More-than-human design and HCI. *Human-Computer Interaction* 40(1-4), 1-16.

Giaccardi, E. & Redström, J. (2020). Technology and more-than-human design. *Design Issues* 36(4), 33-44.

Giaccardi, E., Cila, N., Speed, C., & Caldwell, M. (2016). Thing ethnography: Doing design research with non-humans. In *Proceedings of the 2016 ACM Conference on Designing Interactive Systems (DIS '16)* (pp. 377–387). ACM Press.

Glissant, É. (1990). *Poetics of relation*. University of Michigan Press.

Guyan, K. (2022). *Queer data: Using gender, sex and sexuality data for action*. Bloomsbury Publishing.

Hacking, I. (1990). *The taming of chance*. Cambridge University Press.

Haraway, D. J. (2016). *Staying with the trouble: Making kin in the Chthulucene*. Duke University Press.

Hinds, J., & Joinson, A. N. (2018). What demographic attributes do our digital footprints reveal? A systematic review. *PLOS One*, *13*(11), e0207112.

Höök, K., Eriksson, S., Juul Søndergaard, M., Ciolfi Felice, M., Campo Woytuk, N., Kilic Afsar, O., Tskanaki, V., . & Ståhl, A. (2019). Soma design and politics of the body. In *Proceedings of the Halfway to the Future Symposium 2019* (pp. 1-8). ACM Press.

Jenkins, T., Le Dantec, C. A., Disalvo, C., Lodato, T., & Asad, M. (2016). Object-oriented publics. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 827-839). ACM Press.

Juul Søndergaard, M. L. (2025). What mosses can teach us about design fabulations and feminist more-than-human care. *Human–Computer Interaction 40* (1-4), 43-64.

Keyes, O. (2018). The misgendering machines: Trans/HCI implications of automatic gender recognition. In *Proceedings of the ACM on Human-Computer Interaction 2,* Issue CSCW, Article 99 (pp. 1-22). ACM Press.

Keyes, O., Hoy, J., & Drouhard, M. (2019). Human-computer insurrection: Notes on an anarchist HCI. In *Proceedings of the 2019 CHI conference on Human Factors in Computing Systems* (pp. 1-13). ACM Press.

Kingma, D. P., & Welling, M. (2019). An introduction to variational autoencoders. *Foundations and Trends® in Machine Learning*, *12*(4), 307-392.

Krause, B. (2008). Anatomy of the soundscape: Evolving perspectives. *Journal of The Audio Engineering Society 56* (1/2), 73-80.

LaBelle, B. (2018). *Sonic agency: Sound and emergent forms of resistance*. Goldsmiths Press.

La Delfa, J., Garrett, R., Lampinen, A., & Höök, K. (2024). How to train your drone: Exploring the umwelt as a design metaphor for human-drone interaction. In *Proceedings of the 2024 ACM Designing Interactive Systems Conference* (pp. 2987-3001). ACM Press.

Lee, F. (2022). Ontological overflows and the politics of absence: Zika, disease surveillance, and mosquitos. *Science as Culture*, 33(3), 417–442.

Lewis, J. E., Abdilla, A., Arista, N. et al. (2020). Indigenous protocol and artificial intelligence position paper. *Project Report. Indigenous Protocol and Artificial Intelligence Working Group and the Canadian Institute for Advanced Research, Honolulu, HI.*

Lewis, J. E., Arista, N., Pechawis, A., & Kite, S. (2018). Making kin with the machines. *Journal of Design and Science*. https://doi.org/10.21428/bfafd97b

Light, A. (2011). HCI as heterodoxy: Technologies of identity and the queering of interaction with computers. *Interacting with computers*, *23*(5), 430-438.

Lu, C., Kay, J., & McKee, K. (2022). Subverting machines, fluctuating identities: Re-learning human categorization. In *FAccT'22: Proceedings of the 2022 ACM Conference on Fairness, Accountability, and Transparency* (pp. 1005-1015). ACM Press.

Manning, E. (2016). *The minor gesture*. Duke University Press.

Markham, A. N. (2013). Undermining 'data': A critical examination of a core term in scientific inquiry. *First Monday 18* (10): 323-50.

Massumi, B. (2021). *Parables for the virtual: Movement, affect, sensation*. Duke University Press.

Morrison, L., & McPherson, A. (202). Entangling entanglement: A diffractive dialogue on HCI and musical interactions. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (pp. 1-17). ACM Press.

Muñoz, J. E. (1999). *Disidentifications: Queers of color and the performance of politics*. University of Minnesota Press.

Nowotny, H. (2021). *In AI we trust: Power, illusion and control of predictive algorithms*. John Wiley & Sons.

Nicenboim, I., Oogjes, D., Biggs, H., & Nam, S. (2025). Decentering through design: Bridging posthuman theory with more-than-human design practices. *Human–Computer Interaction 40* (1-4), 195-220.

O'Shea, L. (2021). *Future histories: what Ada Lovelace, Tom Paine, and the Paris Commune can teach us about digital technology*. Verso Books.

Perovich, L. J., & Zizzi, N. (2024). Feeling data through movement: Designing somatic data experiences with dancers. In *Proceedings of the Eighteenth International Conference on Tangible, Embedded, and Embodied Interaction* (pp. 1-11). ACM Press.

Preciado, B. (2013). *Testo junkie: Sex, drugs, and biopolitics in the pharmacopornographic era*. The Feminist Press at CUNY.

Sanches, P., Howell, N., Tsaknaki, V., Jenkins, T., & Helms, K. (2022). Diffraction-in-action: Designerly explorations of agential realism through lived data. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* (pp. 1-18). ACM Press.

Santos, B. (2019). *Curación como tecnología: Basado en entrevistas a sabedores de la Amazonía*. Idartes.

Scurto, H., & Fiebrink, R. (2016). Grab-and-play mapping: Creative machine learning approaches for musical inclusion and exploration. *In Proceedings of the 42nd International Computer Music Conference (ICMC 2016).*

Scurto, H., & Postel, L. (2023). Soundwalking deep latent spaces. In *Proceedings of the 23rd International Conference on New Interfaces for Musical Expression (NIME'23)*.

Scurto, H., & Chemla, A. (2023). Deeply listening through/out the deepscape. In *Proceedings of 28th International Symposium on Electronic Art (ISEA 2023)*.

Shaheed, N., & Wang, G. (2024). I am sitting in a (latent) room. In *Proceedings of the International Conference on New Interfaces for Musical Expression* (pp. 333-338).

Turtle, G.L. (2022) *Mutant in the Mirror*: Queer becomings with AI, in Lockton, D., Lenzi, S., Hekkert, P., Oak, A., Sádaba, J., Lloyd, P. (eds.), *DRS2022: Bilbao*, 25 June - 3 July, Bilbao, Spain. https://doi.org/10.21606/drs.2022.782

Turtle, G. L., Giaccardi, E., & Bendor, R. (2025). *Undoing Gracia*: Queering the self in the algorithmic borderlands. *AI & Society*. https://doi.org/10.1007/s00146-025-02661-8

Vallverdú, J. (2014). What are simulations? An epistemological approach. *Procedia Technology 13*, 6-15.

Tahiroglu, K., & Wyse, L. (2024). Latent spaces as platforms for sonic creativity. In *Proceedings of the 16th International Conference on Computational Creativity, ICCC* (Vol. 24).

Acknowledgments

Our deepest thanks to movement artist and educator Romany Dear, visual artist and researcher Bárbara Santos, Ana María Gutiérrez, and the team at Fundación Organizmo for their generous support, curiosity, and accompaniment in the research and development of *Sounding Territories*. The experiment would not have been possible without you. We also extend our gratitude to the reviewers and friends whose feedback shaped the review and editing process. This work is part of the DCODE Network. The project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie Grant Agreement No. 955990.

About the Authors:

Grace Turtle is a PhD candidate at Delft University of Technology (DCODE Network) researching queering AI and (re)orienting design practice towards co-predictive relations. They co-lead the Master's programme Monstrous Futurities at the Sandberg Institute, and work across critical design, foresight, and AI.

Błażej Kotowski is a sound artist and researcher working in experimental music, generative AI, and sound synthesis. He is a PhD

candidate at the Music Technology Group at Universitat Pompeu Fabra, where he develops machine-learning systems for creative sound design and musical interaction.

Elisa Giaccardi is a Full Professor at Politecnico di Milano and director of the Design Intelligences Institute. Her international career spans five countries and 25 years of research at the intersection of design, technology, and post-humanist thought.

Roy Bendor is Associate Professor of Critical Design and Director of the Design for Interaction Master's programme at Delft University of Technology. His research explores the capacity of design to disclose and promote alternative social, political and environmental futures.