



# AI Hauntology and the Hauntographic Method

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The discourse around creative AI is populated by spectralities and otherworldly presences. Some of these arise in the political and ethical issues that the technology brings forth, while others haunt the works of artists and designers. This tendency towards the eerie and uncanny, emerging also in my practice, echoes the aesthetics and methods of an artistic movement known as sonic hauntology. In this paper, I explore Derrida's and Fisher's notion of hauntology as an epistemic framework questioning the limits of the metaphysics of presence. I then apply this paradigm to creative AI, and elaborate on the possibility of AI's inherent hauntological potential, arguing that the hauntological in AI arises from the disjunctures that the technology brings forth as it operates with and within the culture. Finally, I introduce AI hauntography, a research methodology combining artistic practice and observation to investigate the phenomenological aspects of creative AI as they intersect with the broader sociopolitical discourse.

## 1. Introduction

The notion of AI Explainability (XAI) acquires different meanings in its diverse fields of application. Among the machine learning (ML) community, explanations usually refer to the reasons behind the model's outputs in classification and prediction tasks (Bryan-Kinns et al. 2024). Other scholars propose instead a notion of explainability involving "everything that makes ML models transparent and understandable" (Liao et al. 2020), including the context in which the system is deployed (Privato and Armitage 2023).

In the arts, the notion of explanation becomes more nuanced, providing, according to Bryan-Kinns et al. (2024), an "insightful counterpoint to more functional explanations of AI." Explanations encompass here the embodied understanding of a system as we navigate it, rather than the plain, causal accounts of its workings (Armitage et al. 2023), its materiality, glitches included, as integral to the work of art (Kight et al. 2023), and even concerns regarding AI's energy consumption and the ethics of data collection (Jääskeläinen 2023).

In line with this, Arora and Sarkar critique a narrow view of XAI in the arts by noticing that, since art is concerned with the sublime, explanations become ornamental to the artistic intention; such anthropocentric perspective should be replaced with the notion of *sense-making*, intended as a relational and immanent "system of echoes, of resurrections and resonances" (Arora and Sarkar 2023). This view reframes XAI as applied to the arts beyond the mere understanding of the model's workings, whose opaqueness becomes part of the technology's potential for expression.

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1. [www.youtube.com/watch?v=8oVdPa-JoE6c](https://www.youtube.com/watch?v=8oVdPa-JoE6c)

2. [www.youtube.com/watch?v=sc90jL-6Mjqo](https://www.youtube.com/watch?v=sc90jL-6Mjqo)

3. <https://www.artemigioti.com/works/TYTS.htm>

4. [www.youtube.com/watch?v=lcGYEX-Jqun8](https://www.youtube.com/watch?v=lcGYEX-Jqun8)

5. There is, of course, an unescapable subjectiveness in this statement. As I will argue, this does not represent a problem to the framework I propose, which is founded upon one's direct engagement with the model. Nevertheless, this perception has been reported by a number of independent artists within the IIL research network.

6. <https://sirchutney.medium.com/artificial-intelligence-is-powered-by-ghosts-fe00979914cc>

7. <https://en.wikipedia.org/wiki/Loab>

Indeed, as hard-core research focuses on breaking the black box, in a playful re-enactment of its algorithmic indeterminacy, AI art often engages with the unexplainable, the ambiguous and the uncanny as valuable and prolific epistemic angles.

This process is at work, for instance, in Dadabots's music, with models trained on corpora of raw sounds uncannily reconfiguring their stylistic traits into infinite, inhuman audio streams.<sup>1</sup> Similarly, Herndon's Godmother merges the artist's voice with eerie percussive sounds, combining their otherworldly resonances with overlapping close-ups of the artist's face as viewed by a machinic observer,<sup>2</sup> Gioti's online-learning composed system evokes fears of machinic substitution haunting a group of singers with their vocal remnants,<sup>3</sup> and, in the symbolic domain, Carré's Mr. Shadow summons Irving Berlin's and Cole Porter's creepy doppelgängers.<sup>4</sup>

A certain haunting has emerged in my practice as well. I began my research at the Intelligent Instruments Lab (IIL) focusing on XAI, by contextualising this notion in the artistic domain and working on interfaces and mapping methods that would make the experience of interacting with Neural Audio Synthesis (NAS) models intuitive and engaging. But as I iteratively trained and performed with these models, building my composed systems around their peculiar affordances (Privato et al. 2024), these became increasingly uncanny, evoking invisible materialities through the interactions of hidden magnets (Privato et al. 2023), incorporating drawings of ancient Icelandic spells (Privato et al. 2023b), and overlapping creepy human voices and otherworldly, dreary sonic presences (Privato 2024), almost suggesting an intrinsic tendency of AI to evoke spectralities of diverse nature.<sup>5</sup>

With these hauntings in mind, I began exploring the wider debate around AI, realising that the pronounced eeriness I noticed in my and other artists' works parallels with the summoning in the political, technical and aesthetic discourse, of ghosts of different kinds: some of these are metaphorical, lurking behind the disembodied authorship of AI co-creation (Draxel et al. 2023), some bear the signs of the human labour that sustains the technology,<sup>6</sup> and others, ethereal and ubiquitous, haunt the web through the viral diffusion of improbable narratives.<sup>7</sup>

One might here extend Arthur C. Clarke's notorious quote, arguing that even though sufficiently advanced technologies may be indistinguishable from magic, they sooner or later stabilise within the culture turning into something less of a mystery and more of a tool. But even though the disruptive novelty of the technology, coupled with the tendency of modern media to produce otherworldly resonances undoubtedly contributes to the emergence of ghosts-in-the-machine of different kinds (Butsch 2001), an additional mechanism might be at play with creative AI, one that echoes the instances of a short-lived, inhomogeneous artistic movement formalised by Mark Fisher under the umbrella term *sonic hauntology* (Fisher 2013).

In what follows I elaborate on this insight, framing the discourse on hauntology from Derrida to Mark Fisher and beyond, applying this framework to creative AI at large, and discussing how it enters my practice as a musician and instrument designer. This will help us delineate a *hauntographic method*, that by embracing a perspective on explanation as "sense-making" (Arora and Sarkar 2023), investigates AI's technical and social phenomenology through the hauntological disjunctures it produces.

Fig. 1 Hexorcismos' Semilla.ai,  
2023.



## 2. Hauntology

“Time is out of joint.” These words, uttered by Hamlet in witnessing the apparition of the father’s ghost, embody the dyschronia that grips the protagonist, distorting the perception of the existential timeline through an inexplicable subversion of the universal laws of causality. With this quote and the bewildering impossibility it bears begins Derrida’s *Spectres of Marx*, summoning Shakespeare’s ghost to make the case for a different yet comparably otherworldly spectre: that of historicity itself (Derrida 1994).

In deeming Fukuyama’s claim of history coming to an end with the crisis of the Soviet Union (Fukuyama 1992) as neo-evangelic rhetoric, and as such ideology in disguise, Derrida argues that Marxism was a spectre in the first place, a ghost haunting Europe from the very first lines of the Manifesto, through which Marx called “for the transformation to come of his own theses.” It is in the paradoxes inherent to the repression of historical time programmed into the neo-capitalist cultural hegemony, in the temporal disjunctions caused by the historical impossibility of neoliberalism’s self-proclaimed universality, that Derrida’s notion of hauntology finds its foundations.

As intrinsic to the condition of the post-ideological man, this haunting is inseparable from the aesthetic, cultural and political movement embodying the end of the grand narratives that goes by the name of postmodernity, characterised, according to Lyotard, by a fundamental scepticism towards the past, the waiver of established traditions, and a generalised loss in the stability of meaning (Lyotard 1984). Building on this, Jameson argues that postmodernity subverts and flattens time through a *nostalgia mode*, a longing for cultural and aesthetic narratives escaping the individual’s existential history, a “reconstructed, stereotyped and re-actualised version of the past attained through the recovery of its voided simulacra” (Jameson 1993).

This notion of nostalgia, a central topic also in Fisher’s aesthetics, confronts us with an element of incidentality, which we will revisit in our discussion on AI. Žižek effectively describes this mechanism when, in interpreting Marx and Freud, he writes that “the way to the truth of a system (of society, of the psyche) leads through what necessarily appears as a ‘pathological’ marginal and accidental distortion of this

8. This disarticulation is not just temporal, it is also present in the etymological duality of the word "haunting", coming from the Middle English "hanter," as "to inhabit," and from the Old French and Old Norse, "hanter" and "heimta," respectively "to go back home" and "to bring home." If the ghost embodies this paradox within the intimacy of the household, hauntology may be seen as its political expression.

system: slips of the tongue, dreams, symptoms, economic crises" (Žižek 2009). Nostalgia's paradoxical pastiche, precisely as it aims for its own legitimisation, brings forth a ghost; through the haunting of its manifest historical impossibility, the postmodern is revealed as ideology in disguise, as the "reflex and the concomitant of yet another systemic modification of capitalism itself" (Jameson 1993).

It should be clear by now that the spectres hauntology is concerned with are not of an otherworldly nature; they are rather the remnants of the futures promised by the unfulfilled postmodern terminal prophecy, and the echoes of that which never came to be ("a spectre is haunting Europe," writes Marx in the Manifesto) and yet operates in the present through its paradoxical absence. Nostalgia compresses human existential history in between these planes, as the quintessential manifestation of the hauntological: the temporal disjunctures it generates by overlapping modern values and sociocultural norms on a continuously re-actualised past, the artifices and paradoxes of its programmed rumination, including the subtle "out-of-jointness" that permeates a considerable part of the modern cultural production are viewed, through the hauntological lenses, as symptoms of a temporally disarticulated longing,<sup>8</sup> as the failed mourning (how does a ghost die?) for the futures that never came to be.

## 2.1 Sonic Hauntology

Fisher's *Metaphysics of Crackle* identifies an aesthetic counterpart to Derrida's critique of the metaphysics of presence in the creative processes applied by an inhomogeneous group of musicians and producers at the beginning of the 21st Century (Fisher 2013). In the works of William Basinski, *The Caretaker* and the artists gravitating around the British Ghost Box Label the processes of nostalgia are harnessed and subverted into instruments of critique. Hiss, white noise, clicks and crackles, re-introduced and overlapped onto the transparency of the modern digital medium as phonographic remnants, unsettle "the very distinction between surface and depth, between background and foreground," bringing forth temporal disjunctures in the listening experience. Such dyschronias operate in two distinct ways: (i) in the temporal domain, by overlapping the modern digital medium with the phonographic one, and (ii) in the ontological plane by revealing the technical frame of the recording substrate.

Time is, again, out of joint. The re-introduction of the phonographic trace is accompanied by the extensive use of novel sampling techniques such as pitch shifting and time stretching: in a play of divergent temporalities, the acoustic remnants of Fordism's aesthetics overlap with electronic sounds from the second half of the 20th Century, in themselves signifiers of envisioned and miscarried futures, into dream-like, eerie and destabilising soundscapes. These artifices address the question of memory after the advent of the ideology-in-disguise embodied by the neo-liberal narrative of history coming to an end. Nostalgia is here subject to a paradoxical reversal: "Whereas [the latter] glosses over the temporal disjunctures, the hauntological artists foreground them by displacing the longing towards the futures that never came to be as a consequence of postmodernity's terminal temporality."

Fisher's sonic hauntology takes up with Derrida's critique of the metaphysics of presence, wherein meaning is assigned and interpret-



9. The connection between “white men hauntology” and Afrofuturism, according to Fisher, is to be found in the African diaspora, a collective trauma that breaks and folds the historical and existential continuum.

ed in relation to a body, that is, a body in the “now.” By complementing ontology rather than opposing it (in French, hauntology is indeed a homophone to ontology), sonic hauntologists focus on absence and ambiguity, as their sonic spectres (dis)embody presence and absence beyond their opposing significations, and through the temporal paradoxes of the phonographic remnant haunt the exclusion of absence that is foundational to ontological thought.

Indeed, hauntology’s focus on ambiguity and absence ideally complements ontology in fields such as media studies, since media technologies “disrupt the notion of presence, [and] impose upon themselves fundamental limits to their critical engagement” (Rufo 2005). We may as easily extend this reflection to generative AI, in that the processes by which it statistically models collective human knowledge and the traces that these produce bring forth a novel, unprecedented disruption of presence.

### 3. AI Hauntology

A striking example of hauntology as applied to AI is Petr Valek’s AI-generated post-communist imagery (Fig.2), haunted by anthropomorphic tractors, uncanny retrofuturistic aliens and eerie folklore creatures posing motionless for an impossible observer. In these faded photographs, time seems to halt and space to fold, recombining distant causalities into zoomorphic agro-technological beings, suspended concrete structures hosting eerie creatures, cryptids holding hands with hooded kids and Afrofuturistic nightmares haunting bare Eastern-European landscapes. In Valek’s AI-generated images, one could arguably discern a close reading of Fisher, in the parallel he draws between “white men hauntology” and Afrofuturism,<sup>9</sup> wherein “time was always-already out of joint for the slave, and Afrofuturism and hauntology can now be heard as two versions of the same condition.”

Fig. 2 Petr Valek’s AI-generated Artwork, 2023.



But it is within the sonic domain that Fisher’s spectres are explicitly reframed into the AI discourse, with Rubinstein indicating AI-generated music as the natural heir of the sonic hauntology movement (Rubinstein 2020). Rubinstein postulates that similarly to how sonic hauntology’s

eeriness stems from how it uses new technology to “remediate older sonic artefacts in ways that deliberately upset how the past is usually represented,” generative AI reassembles the timeline of the source material in novel, eerie ways, and, through temporal disjunctures and logical discontinuities, re-enacts the contradictions hiding underneath capitalism’s a-temporalities.

If sonic hauntologists achieve the technological uncanny through the reconfiguration and juxtaposition of past aesthetics and the deliberate exposure of the medium, in AI-generated music the hauntological reconfigures as the potential of the technical form. In other words, temporal uncertainties and sonic anachronisms emerge as direct emanations of the algorithm’s inner workings, independently and sometimes beyond the user’s intentions. Through this mechanism, a technology often (and with good reasons) seen as the embodiment of techno-capitalist accelerationism and power centralisation might potentially reconfigure as a favourable terrain for the emergence of a new critique, harnessed by artists to rearrange the past beyond the shallowness of the post-modern pastiche.

This ability to “repurpos[e] the technologies used by capital to implode its cultural logic from within” is presented by Rubinstein as a unique property of music AI, as opposed to other artistic and non-artistic fields of application. Yet, more recently Roberts observes the emergence of disjunctures and anachronisms comparable with those of sonic hauntology’s old days in experimenting with AI image-making, and through a close reading of Fisher’s work frames a series of re-occurring features defining the images as strongly hauntological: his co-generated designs exhibit remnants from the 3D palimpsest used to prime the network, they evoke anachronisms as if drawn from alternative timelines, present quality degradation as if reconstructed from a blurred memory, and suggest feelings of familiarity and otherness (Roberts 2023). These features, whether architecture-dependent or related to AI’s structural invariances, might be all ultimately referable to another Derridean concept, the notion of trace as the paradoxical embodiment of an absence, the symptom of a haunting that, in Derrida’s terms, “exceed[s] a binary or dialectical logic, the logic that distinguishes or opposes effectivity or actuality (either present, empirical, living—or not) and ideality (regulating or absolute non-presence).” But as I dug into creative AI’s workings, and especially in its real-time application in musical practice and instrument design, where the agency of a system acquires particular relevance, I came across unique hauntological traces, at least partially distinct from those of the sonic hauntology movement.

### 3.1 AI Crackles

As we have seen in 2.1, Fisher distinguishes between an ontological and a temporal plane by which the crackle operates. AI activates ontological disjunctures that are quite similar to those of sonic hauntology, since through the mobilisation of digital remnants we become aware of the algorithmic frame that produces the experience. On the temporal plane, whereas in sonic hauntology hiss and clicks, static noise and low-fi audio re-engage the phonographic medium with the digital present, with generative AI this process is reversed, and the digital transparency of the dataset is re-configured, here and now, by the algorithmic support. Time is, once more, out of joint: as the embodiment of the postmodern

into the 21st Century, AI's endless statistical rumination flattens the multiple planes of existence of the source material into the present, and within the constraints of its own technical evolution.

This inversion operates as the hauntological agency displaces from the human actor to the algorithmic one. Both Rubinstein and Robinson insist on this point, which also emerged in my practice, with the systems I was designing, composing and performing with, suggesting eerie narratives as I iteratively engaged with them. It is beyond the scope of this paper to provide a thorough analysis of these underlying processes (our aim is in fact to trace a methodology for this), nevertheless, for this discussion, I introduce two, intertwined macro-areas where AI's hauntological traces have emerged in my practice: one regarding the architecture's internal workings, and one concerning the frictions of the model with the broader social context.

The former type of trace emerges in the negotiations between AI's inherently twofold algorithmic and data-driven nature. Generalising, whereas our experience of subject, background, sound, timbre, or structure is contextual and holistic, AI architectures have little to no understanding of context, and model a limited amount of features from the dataset they are trained with; in addition, since they are designed to recognise patterns, AI algorithms learn correlations where causation is not necessarily present (Cristianini 2020).

The list may extend, encompassing other model-specific constraints, the methodologies applied in the curation of the dataset and the process of training, all contributing to the generation of partial and decontextualised outputs that ultimately produce the sense of out-of-jointness, the technological uncanny from which the hauntological arises. This first, machining process of trace-making was evident as I performed with *Stacco* (Fig. 3), an interface I developed together with Giacomo Lepri and based on neural synthesis (Caillon 2021), in the unintelligibility of the models trained on human voices, in the not-quite-right character of the sounds, and in the artefacts I would encounter when exploring less populated, liminal areas of the latent space. This led me to develop, in an iterative process of magnification of these hauntological traces, a performance in which I turn the instrument into a magnetic Ouija board, with whom I summon the sonic spectres lurking in the foldings of the model's latent space (Fig. 3).

**Fig. 3** Mouja, Nicola Privato. Fabryka Sztuki, Poland, 2023.



The second, higher-level process of trace-making is instead at play in the system's mobilisation of the data: the active reconfiguration of knowledge, performed, more or less in real time, in response to the user's inputs. Hauntological traces emerge here beyond the duality of dataset and algorithm; we may see these as meta-remnants, so to say, in that instead of bringing forth the technological substrate or the spectral partiality of the data, through the agency of the interface they evoke their human simulacra. The hauntological disjuncture at play is between the presence of a disembodied form of knowledge and the absence that such disembodiment brings forth. The spectre operates here an acting void, an empty attractor affecting the present, much like the Marxist spectre, by virtue of its own absence. The traces that this produces depend on a multiplicity of contextual and cultural factors, such as the degree of agency of the system, the context in which it operates, the methodologies applied for curating the data and the user's acquaintance with it. In a way, generative AI is seen here as a medium in disguise, although one endowed with a high degree of agency (Huxor 2022).

These traces arose with striking evidence as I worked on an installation in Nelson, Lancashire, for the British Textile Biennial together with artist Eva Sajovic (Fig. 4). For this work, exploring participatory practice and cultural heritage, we created four interactive e-textile columns, embedding speakers in each of them and around the structure, thus turning the installation into a large-scale musical instrument. We then trained four neural synthesis models using machinic and natural soundscapes collected by people from the community in a series of sound walks around the abandoned mills, and assigned a model to each of the columns. Before the training, I spent time interviewing the participants, asking the reasons behind their choices in the recording phase, associating sounds with places, places with stories, and stories with people. Once I mobilised the data through the models, I found myself immersed



in the disembodied fragments of those stories and people, echoing the lived experience and existential bonds of the community through the multiplicity of their temporal planes. These traces drastically informed the interaction and sound design of the work, which became a sort of distorted mirror, re-enacting the sociotechnical paradoxes that shaped this area and its community since the first industrial revolution.

**Fig. 4** End of Empire, Nicola Privato and Eva Sajovic. British Textile Biennial, 2023.



### 3.2 Hauntological Potential

The discussed idea of AI's intrinsic hauntological potential echoes Parisi's framing of AI as an alien subject, a space of thinking beyond the "servo-mechanic model of cybernetics" confronting a human-centred notion of cognition (Parisi 2019) and, according to Coleman, "in opposition to the reproduction of the same" (Coleman 2021). Nevertheless, the processes of trace-making described in 3.1 remind us that the hauntological acquires its consistency as the human and the algorithmic actors interact: extending Calvino's far-seeing reflections on the possibility of cybernetic literature machines, spectres emerge "only if the [...] machine is surrounded by the hidden ghosts of the individual and of his society" (Calvino 1967).

Building on this relationally constructed spectrality, Calvino deems the ability of his speculative literary machines to recombine human knowledge as valuable in that, by operating beyond cultural constraints, they are capable of intersecting the collective unconscious (the repressed, the removed), and of re-assembling the human past the cultural diktat of hegemonic thinking. Yet, little did he know that the cybernetic systems he imagined would have been modelled to statistically reconfigure the same knowledge he wished to expand, ultimately reproducing the very biases and cultural norms that constitute those boundaries.

To accommodate AI's hauntological potential within these technical constraints, we need to return to hauntology's Derridean roots, wherein the ghost, rather than from a deliberate expressive intent or an intrinsic property of the model, emerges as a side-effect of the reality check be-

10. <http://attempto.ifi.uzh.ch/site/docs/ontograph/>

tween the system's workings and the zeitgeist; extending Žižek's quote, the hauntological in AI arises from the machinic slips of tongue, the hallucinations, and the temporal and causal disjunctures produced by the system as it operates with, within and against the culture.

As the quintessential embodiment and magnification of nostalgia's schizophrenic pastiche into the 21st Century, in a ceaseless reconfiguration and friction of human culture against itself, AI reenacts, uncovers and multiplies the paradoxes and contradictions of the postmodern. These symptoms individuate hauntological traces pointing back to the technical object, to the ghosts of its techno-cultural agency. In my practice, I activate and investigate these spectralities through the method of *AI hauntography*.

#### 4. The Hauntographic Method

Similarly to how hauntology complements ontology through the disruption of presence, hauntography may be seen as complementary to *ontography*, a methodology formalised by scholars traceable to the Object Oriented Ontology (OOO) school of thought.

Harman assigns to ontography the task of dealing with the “limited number of dynamics that can occur between different things” (Harman 2021); Bogost frames it instead as the “revelation of object relationship without necessarily offering clarification of any kind.” Examples are verbal and visual lists, exploded views (Fig. 5) and ontographic machines such as video games mapping abstract gestures to encyclopedic accounts of things (Bogost 2012). Beyond OOO, Ontographs acquire different nuances, such as in the case of Kuhn's graphical notations,<sup>10</sup> depicting self-contained worlds and the relationships within their units. Yet, in all these examples we may discern a common tendency to produce more or less articulated artefacts accounting for categorical multiplicities within a common ontological framework.

On the other hand, the notion of hauntography has seen little theoretical formalisation as of yet. Besides works in which spirit photography is described as hauntography, Rich's Shipwreck Hauntography is by far the main academic contribution to the concept (Rich 2021). Within the field of shipwreck archaeology, Rich defines a hauntograph in continuity with the discussed ontology-hauntology dualism, as the “ontograph for the revenant,” and hauntography as the speculative practice of “imagin[ing] the uncanny spatial and temporal ambiguities and tensions of a liminal object that is both present and absent.” The author approaches hauntography through artistic practice, by tailoring artistic processes to shipwreck observations; these methods include the burning and breaking of raw bones, the use of semi-transparent digital images, printmaking with cyanotypes, reliquaries, and grouping objects.

OOO's open critique of anthropocentrism makes it a fitting framework for a methodology involving humans, artefacts and spectres such as hauntography; yet, as Frauenberger points out, the fact that OOO tends to dismiss relations as ontologically relevant can be problematic (Frauenberger 2020). Translating this in hauntological terms, by accounting for the spectre per se, as a non-relational unit of absence, we lose sight of the causal and temporal planes it bridges through the semantic disjunctures it brings forth. In my framing of hauntography, I therefore operate a substantial deviation from OOO-derived ontography-hauntography dualism, viewing hauntography as complementary to other

non-anthropocentric, relational ontologies such as Barad’s agential realism and Latour’s Actor-Network Theory (ANT) (Latour 2005), sharing with the former the radical relational take on the intra-active generation of meaning and matter, and with the latter the consistent methodological approach.

Whereas in Barad’s onto-epistemology being and knowing are fundamentally inseparable (Barad 2003), in the case of haughtography knowing is inseparable from and dependent upon ontology’s haughtological shadow. In other words, knowledge is gained by mobilising and observing the paradoxical liminalities of the subject’s ontology. In this *haughto-epistemology*, rather than “imagining and reflecting upon temporal tensions and ambiguities” as in Rich’s case, through practice-based research we activate and observe the haughtological within the subject, and unfold our practice around its traces (see 3.1).

On such premises, I define the object of haughtological investigation as a **haughtogram**, a construct encompassing the unresolved tensions, echoes and resonances that are liminal to the ontology of a subject, and **haughtography** as the practice of activating a haughtogram, observing and following the haughtological traces it produces. As we encounter such traces, we incorporate them in our practice, we magnify them, and follow their manifestations as they ripple from the phenomenological to the social. We then use our observations and reflections to reconfigure the ontology of the object of investigation. The theoretical and/or practice-based outcome of the haughtographic process may be defined as a **haughtograph**.

Fig. 5 Todd McLellan. Example of an Ontograph according to Bogost.



## 5. Conclusions

This contribution delineated a broad picture of haughtology, encompassing those critical and aesthetic theories that, through the notion of spectrality, question and complement the metaphysics of presence. If part of this writing may be seen as a high-level example of haughtography in its own right, it should be noted that my aim here is to provide a com-

prehensive theoretical foundation for this methodology, applicable in particular (but not exclusively) to creative musical AI. In future works, I intend to undertake a systematic investigation of the spectral processes of specific AI-based systems and musical assemblages.

AI haughtograms are inherently unstable, liminal entities, whose traces emerge from the frictions against established ontologies. For this reason, the practice-based methods used to activate and incorporate the haughtological in one's work and the qualitative approaches to data collection and analysis may vary according to the context. Among such, it is worth mentioning ANT, which provides a rigorous yet flexible qualitative methodology within mixed sociologies involving human and non-human actors, spectral ethnography, where traces emerge in *ghost texts* as invisible dialogues between people and their material surroundings (Armstrong 2010), critical heritage practices, searching for colonial hauntings inside cultural artefacts, and critical Marxist theory, where haughtology came to be in the first place.

Within this variability of means, as we engage with AI haughtography we want to activate a series of processes: (i) by magnifying AI's haughtological disjunctures, we expose the statistical flattening of the source material and the constraints of its algorithmic manipulation; (ii) through the activation of the haughtological in AI, we investigate the social and cultural impact of this technology; (iii) in this exercise, we develop new artistic works and technical objects, in themselves epistemic tools within a rhizomatic process of knowledge production.

Heidegger distinguishes between an instrumental and an ontological account of technology: whereas the former deals with the role of technology in fulfilling human desire, the latter focuses on the role of the technological spirit in structuring a world in terms of exigencies of planning and control (Feenberg 2023). Only an ontological account, argues Heidegger, can shed light on the issues raised by modernity. And yet, to reconfigure the technical, we need to engage with the liminal, with the removed and the repressed, with the hauntings of its ontological stability: haughtology's unique ability to adopt ambiguity as a privileged epistemic apparatus frames it as an ideal methodology to make sense of AI's contradictory nature in our present.

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