



Karen ann Donnachie

karenann.donnachie@unimelb.edu.au
VCA, University of Melbourne, Melbourne,
Australia

Andrea (Andy) Simionato

andy.simionato@rmit.edu.au
RMIT University, Melbourne, Australia

See What Tomorrow Brings Near, Borrow My Disease: H MV-V is the fifth performance by a custom-designed robotic phonograph which can remix vinyl records in real time using analogue techniques originating in DJ culture of the 1970s, such as breakbeating, backspinning, sampling, and scratching. In parallel to producing a continuously evolving soundscape, the automated-art-system performs simultaneous computational processes (which we call ‘nonhuman listening’) by monitoring the audio output in order to adjust and even modify its own behaviours. For *H MV-V*, we focused the system’s ‘nonhuman listening’ towards potential words and phrases produced when the vinyl record is rotated in an anticlockwise direction, constituting an automated search for ‘backmasked’ lyrics sometimes associated with ‘hidden meanings’ (whether intentional or otherwise).¹ The emergent language, composed into statistically probable phrases, is displayed in real time on a screen situated alongside the robotic phonograph. Furthermore, the system ‘rewards’ the listener by extending any loops which contain a rich source of phonemes. In this paper we will briefly outline the project, and attempt to situate it within our own creative practice of ‘computational unknowing’.

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1. Backmasking became a sensation from the 1960s through to the 1990s with fans and critics ‘discovering’ backmasked messages in work as varied as The Beatles to Weird Al Yankovic and Prince (see Woody & Andy 2025).

Fig. 1. *HMV-V*, Donnachie and Simionato, 2026. Presentation video:
<https://vimeo.com/1165282845>



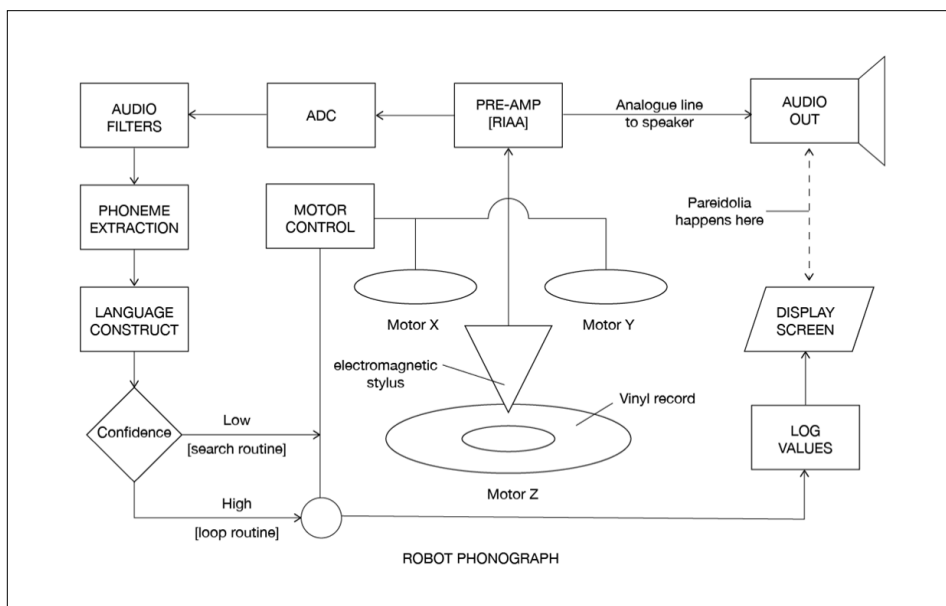
Glitch Turntablism

This work is situated within and extends our own experimental practice which explores the combinatorial potential of language within existing literary sources, which in turn forms part of a broader enquiry into ‘computational unknowing’.

The conceptual framing of the *HMV-V* can be traced to our earlier automated-art-systems which used computational processes to alter existing publications. For example, concepts underpinning *HMV-V* link to the *Library of Nonhuman Books* where a mix of Computer Vision and Natural Language Processing algorithms were used to detect and isolate words within the pages of existing (paper) books – a process we describe as ‘nonhuman reading’ (Donnachie and Simionato 2019). Working within the medium of audio recordings rather than print media, *HMV-V* also uses algorithmic processes to detect latent language by analyzing the nonlinear and reversed playback of existing vinyl records and presenting any newly ‘discovered’ words as lyrics on a screen. Where the non-human books resulted in isolated words on the page, the *HMV-V* system repeats the ‘uncovered’ backmasked audio sample as a looping sequence, allowing the emergent ‘phantom’ lyrics to become a powerful suggestion to the listener who may perceive them despite their initial implausibility (an effect called pareidolia).

The design of the *HMV-V* machine, with its distinctive counter-balanced dual-arm stylus, emerged while experimenting with another work called *I Don’t Know What I Think Until I Read What I Write* (Donnachie and Simionato 2025). A robotic scribe which attempts to search for glyphs within non-Euclidean space using the rotary movement of stepper motors to move a calligraphic brush. By adapting this earlier work to move an electromagnetic stylus across the surface of a vinyl record instead of a brush across paper, we stumbled upon a highly efficient and unique range of motions for ‘playing’ vinyl records in non-indexical ways we likened to gestures used by DJs of the 1970s, such as back-spinning, sampling, and scratching.

Fig. 2. Flow diagram of the automated-art-system, *HMV-V*.



Nonhuman Listening

The ‘nonhuman listening’ system overlaying the robotic phonograph is designed to detect audio generated by its stylus moving at different speeds, angles, pressures and directions across the surface of a vinyl record. This (analogue) audio signal is initially passed through standard circuits for pre-amplification [RIAA] and transformation into digital data [ADC] before processing by our custom-coded software in real time.

Once digitised the audio data is decoded and prepared for processing via Librosa and Pyaudio libraries, while the Numpy-based Fast Fourier Transform [FFT] spectral noise filtering and signal refinements enhances the real-time audio stream for subsequent analysis.

Acoustic events detected by this initial analysis are processed for phoneme recognition and language construction with both Allosaurus and Kaldi (Vosk), with the outcomes of the system’s iterative, context-aware meaning generation then output to a screen in sync with the audio (or at least with negligible latency).

The resulting phonemes, words and potential phrases are finally logged, along with the phonograph’s relative motor positions and speeds.

The often slowed, distorted or slurred nature of the speech emerging from the backmasked audio (similar to speech produced by individuals suffering from ‘dysarthria’) is not easily recognised by standard speech recognition systems.² In order to accommodate and improve voice detection within these highly distorted audio inputs, we extended the phonetic detection of the model by using TensorFlow to re-train for improved translation (mapping) of the acoustic vectors of the captured

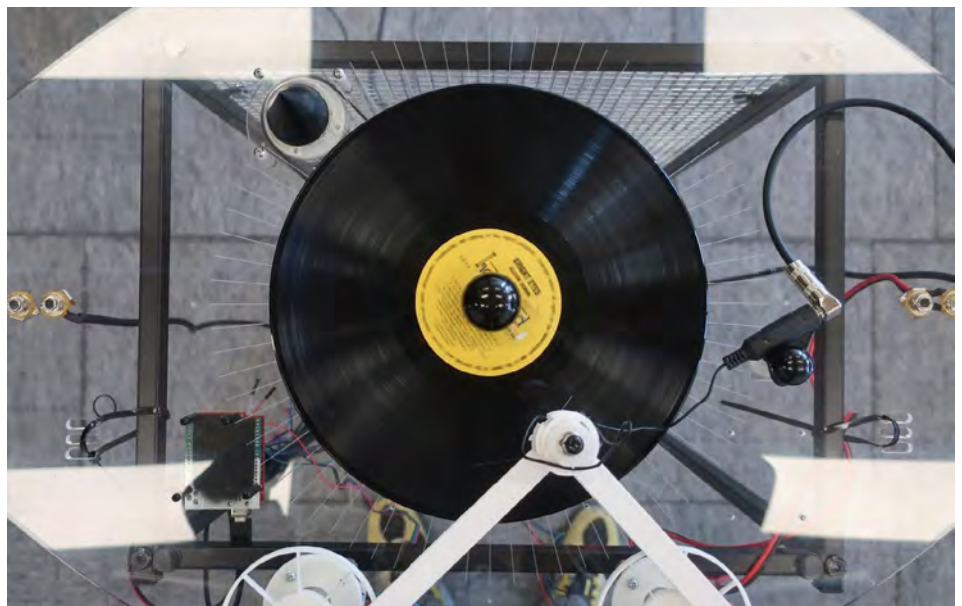
2. In fact, early versions of our pipeline proved underwhelming in their ability to identify emergent language through our automated-art-system. These early results stemmed from attempts to use existing speech-to-text engines on our ‘backmasked’ language. Furthermore, existing ‘off-the-shelf’ and AI-enabled tools were poorly matched to the limited CPU capacity of the Raspberry Pi, and would often ‘collapse’ into repetitive nonsensical words, or present phrases unrelated to the audio.

audio. This bespoke and expanded mapping of phonemes was then incorporated into our local Vosk library.³

It is worth noting that other than this early training of the phoneme recognition, the system does not use any auto-regressive or ‘generative’ AI for its language detection at run-time. The words displayed are constructed almost entirely *from* audio analysis and phoneme mapping, rather than statistical probability and context. An auto-regressive model in this specific use case tends to create entirely new sequences of words, prioritising the generation of a fluid (‘natural’) text over the direct mapping of words to phonemes, often hallucinating new words to ‘resolve’ the sentence, particularly in the absence of any unambiguous or predictable meaning in the (backmasked) audio. Combined with the hypnotic effect of phoneme-rich audio-looping samples, this ‘old-fashioned AI’ approach may contribute to the pareidolic perception of emergent language in the recording.

Janky-Hermeneutics

Fig. 3. *Hermeneutic Machine Variation I: Bright Eyes (HNV-I)*, Site-specific installation & performance in *NotFair2026*, Melbourne, Australia. Photograph by Donnachie and Simionato.



The historical invention of the phonograph simultaneously evokes a sense of “immediacy” (it is one of the earliest examples of a seemingly direct, unmediated connection to a past performance) and “hypermediacy” (the invention draws attention to the technology that shapes the sound) (Bolter and Grusin 1999). The assumption that the raw, acoustic data provided by a recording is sufficient for a simple, self-evident interpretation of musical or spoken content has been widely internalised over the 20th century. Indeed, the famous logo for the *original* HMV (His Master’s Voice company) was a small dog listening to a phonograph playing a record, its head inquisitively cocked to one side as it seems to confound the recording of the voice with the presence of its master.⁴ Our

3. The process at the core of Vosk is otherwise known as a Time Delay Neural Network (TDNN), which places this tool in the category of *classification*, rather than AI *generation*.

4. *His Master’s Voice* https://en.wikipedia.org/wiki/His_Master%27s_Voice



Fig. 4. Francis Barraud, *His Master's Voice*, 1900. Photograph/Image. Library of Congress, USA.

own *HMV* (Hermeneutic Machine Variation) re-instates the tension between these two perceptions; requiring a type of interpretive (hermeneutic) analysis to understand how the sound is being produced and experienced, and how this contributes to the making of meaning.

Arguably any technological reproduction introduces a new context, material limitations, and sonic characteristics that inherently require interpretation. This work problematises such attempts by the listener to interpret the vinyl recording by reconfiguring the phonograph and medium as decoding tools.⁵

Our (robotic) phonograph is deliberately designed to not be a neutral conveyor of sound. We therefore introduce hermeneutically 'janky' concepts; not only by adopting and introducing technology that actively disrupts, disturbs, even destroys the sound it reproduces, thus demanding the listener engage in active interpretation, but also by including processes of auto-suggestion which influence and problematise our perception of the audio recording and the technology itself.

Like other technologies which have rapidly become ubiquitous, current (so-called) intelligent systems such as AI are often granted the privilege of neutrality, insinuating their presence into the everyday tasks we perform across digital and physical worlds – especially when those tasks happen through voice and conversational AI agents, sometimes called chatbots. Yet, these systems carry the potential to suggest *how* we interpret these worlds. Through entangled 'nonhuman listening', words and phrases may be perceived, meaning made (and unmade), and new realities emerge. Will we be able to discern our master's voice?

Fig. 5. *Hermeneutic Machine Variation I: Bright Eyes (HMV-I)*, Performance at *NotFair* exhibition, Melbourne, Australia, Donnachie and Simionato, 2026.



5. There is, of course, a well-documented *avant garde* lineage of such experimentation in postproduction (Bourriaud 2002), to which we are indebted, such as through the works of pioneers such as Paul Hindemith's and Ernest Toch, John Cage, DIY punk recordings and experimental sound artists such as Maria Chávez, Christian Marclay, and Philip Jeck (see Harris 2017).

Note on the Title

The title of this work is in part taken from the 1965 album by the folk-group Peter, Paul and Mary *See What Tomorrow Will Bring* (1965). The lyrics of the chorus of the song “Betty & Dupree” from the album, when played backwards (i.e. backmasking) were interpreted through the automated-art-system’s ‘nonhuman listening’ as ‘Near, Borrow My Disease’. By combining the forward and backmasked versions, we formed the title of this Hermeneutic-Machine-Variation to be performed by the robotic phonograph on the occasion of the 2026 edition of xCoAx. Like all of our uses of found publications, we wish to underline that the authors and publishers of the original books, magazines and records have not granted us permission to use their work, nor do they endorse our projects in any way.

Acknowledgments. This artwork uses a number of open-source libraries, software and tools – Debian OS; Python; and multiple open source Python libraries such as Librosa, and Fast Fourier Transform tools, for acoustic analysis, refinement, and Analogue-to-Digital Conversion; Allo-saurus phoneme recogniser; Kaldi speech recognition and Vosk speech-to-text; TensorFlow for phoneme recognition dictionary refinement; Natural Language Toolkit (NLTK); Vader sentiment analysis. Images in this document are of a prototype of the robotic phonograph which was part of a larger site-specific installation and performance by the artists in *NotFair2026*, Melbourne, Australia, curated by Brie Trenerry, Ashley Crawford, Darren Tan and Liss Fenwick. <https://notfair.com.au/>

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