

Penelope

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Abstract

Penelope is a combinatory sonnet generator film based on Homer's *The Odyssey* that addresses themes of longing, mass extinction, and migration, which are not simply relegated to the past. [1] Re-combinations of lines of the poem, video clips, and musical compositions produce a different version of the project on each run. *Penelope* was co-produced by Alejandro Albornoz (Sound), Roderick Coover (Video), and Scott Rettberg (Text and Code). Other contributors to the project include Kristiansand Symphony Orchestra oboist Marion Walker, voice actress Heather Morgan, and actors Helen Amourgi, Kostas Annikas Deftereos, and Sophia Kagadis in non-speaking roles. The video and the text were developed by Coover and Rettberg during 2017 residencies at the Ionian Center for Arts and Culture in Kefalonia, Greece. Kefalonia is reputedly the historic home of Homer.



Fig 1. *Penelope*, 2018, image © 2018 by Roderick Coover, CRchange.

The Combinatory Poetics of *Penelope*

Penelope engages with ancient narratives and poetic forms, and contemporary technology and poetic methodologies. The central

situation of the narrative is that of Odysseus's wife Penelope from Homer's epic, left behind on Ithaca for many years when Odysseus went off to fight in the Trojan wars and struggled to return. While Odysseus is off on his heroic adventures, Penelope must struggle to fend off the advances of a band of parasitic suitors vying for her attentions, hand, and Odysseus's throne. She distracts these suitors through subterfuge, delaying the arrival of the day when she will be forced to choose another to replace Odysseus, even as she struggles to believe that he will in fact return to rule at her side. Penelope is able to delay the decision of choosing a new mate by making them wait before competing for her hand until she has finished weaving a tapestry. Each day she can be seen working to complete it, but each night she returns to the loom to unweave the threads from the day before. Although it is set within a particular Homeric frame, the human concerns and emotions involved in Penelope's story are essentially universal ones of longing for loved ones, doubts for the future, struggle, loss, and perseverance in the face of adversity. These are themes which apply equally well in contemplation of contemporary struggles with catastrophic climate change, extinction, and mass migration. *Penelope* filters Penelope's story from the epic through the form of the Shakespearean sonnet. Pulling from a database of ten-syllable lines primarily written in iambic pentameter, the computer-code-driven combinatory film can produce millions of variations of a sonnet that weaves and then unweaves itself. The program writes 13 lines of a sonnet and then reverses the rhyme scheme at the center couplet. The

program thus produces Shakespearean sonnets that weave and then unweave themselves according to the same rhyme scheme, resulting in a 26-line poem.

Penelope's generativity is not based on the operations of a complex AI or neural network, but instead hearkens back to early forms of combinatory poetics. The algorithms here are not generating the lines from scratch or building them on the basis of machine learning, but instead are recombining texts and media elements in an aleatory but formally structured manner. An important inspiration for *Penelope* is Oulipian writer Raymond Queneau's *Cent mille milliards de poèmes* (*One Hundred Thousand Billion Poems*), a book of ten pages of a 14-line sonnet, with each line cut as a strip, so that the reader could substitute a line in any given position of the poem and still read a sonnet that worked metrically and semantically, resulting in 10^{14} poems. [2] *Penelope* is similarly factorial, if using a slightly more complex algorithm that results in a more varied end-rhyme scheme in successive runs of the work. *Penelope* is programmed to produce three 26-line iterations of the combinatory sonnet without repeating a line. The system produces each sonnet as an audiovisual composition before printing it to the screen.

Combinatory Sonnet, Film, and Score

Penelope not only generates combinatory sonnets but also recombines videos by Roderick Coover and the sound compositions by Alejandro Albornoz in a parallel algorithmic structure. Borrowing from traditions in avant-garde cinema and digital musical composition as well as experimental writing practice, the collaborative project thus brings three strands of practice together in one protean digital work.

Imagery

The imagery for *Penelope* was filmed in and around islands of the Ionian Sea. The cinematography and art direction follow two primary themes. Images from the natural landscape evoke ancient and enduring elements of the *Odyssey*'s sensorium, tying the present to the past in a cyclic expression of time. This

includes human relationships to the land, weaving, storytelling, olives, seafaring and goats described by Homer that continue today. Other images illustrate human use and abuse of the natural landscape, recasting enduring poetics in relation to contemporary crises of environmental destruction, waste, and mass extinction. Loss and memory in collective consciousness is also expressed through visual forms of underwater imagery of Roman shipwrecks, above ground images of earthquake destruction and ancient open tombs.

Generative Audio Composition

The sound composition was addressed under the procedures of acousmatic music tradition, which in turn continues the aesthetic guidelines and techniques of *musique concrète*; this background involves the use of collage techniques to create sound structures and discourses using pre-recorded materials which are usually subjected to various transformations. Starting from some recordings of oboe improvisations performed by Marion Walker alongside other sources, the resulting materials were 80 acousmatic miniatures with a duration of 20 seconds each, and 10 transitions. All these small compositions are subsequently combined by the algorithms in the same way as the texts and video clips. Each audio clip was individually composed to create a balance between diversity and coherent unity; this produces a unified sonic environment and at the same time provides contrast between the clips.

References

1. Homer, *The Odyssey*, trans. Robert Fitzgerald. (New York: FSG, 1998).
2. Raymond Queneau, *Cent mille milliards de poèmes* (Paris: Gallimard, 1961).

Biographies

Alejandro Albornoz is a Ph.D. candidate in the Dept. of Music at the University of Sheffield.

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