



VLF receiver, Brunt Ice Shelf, Antarctica

## ABOVE / BELOW

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### i – ABOVE

For thousands of years before the advent of rapid global transport, people wondered why swallows vanished in winter, then reappeared in spring. In Europe, even in the nineteenth century, it was commonly understood that the birds would hide somewhere nearby, concealed so completely that no human could glimpse them. Perhaps they crept into the hollow enclosures within tree-trunks, or maybe they submerged themselves in the mud at the bottom of a pond or river and slept, breathing through some secret amphibious organ until the weather warmed up again. Swallows are dark-feathered and tiny, and they fly with a dipping and skimming motion out over water, so these theories were not as bizarre as they may now sound. They were drawn from observation, fair and rational, on the basis of everything that a human could know about these birds from the ground.

This experience of mystery feels remote now, at a time when tagging and geolocation enable scientists to trace an individual pair of swallows from a specific nest in northern Spain, to Gabon, and back.<sup>1</sup> Tiny cameras can take us inside the nest or down a bird's throat to tour its innards. We can watch a swallow's stomach microbes swimming on a microscope slide or monitor a typhoon, via satellite, as it crosses the birds' migratory path. From my home in the north of England, I can stream and spin a 360-degree-view of a road on the shores of a lake in Congo where the local swallows go in winter.

The tool – camera, satellite, or microscope – makes a wormhole into another reality, so that the person looking down it sits in several different realities at once. This imparts the illusion of overview: an impression that I can see across the many scales on which my life takes place. It's easy enough to feel aloof from the state of bewilderment that could lead a person to believe, for example, that small birds hibernate in the village pond. Just occasionally, though, this clarity of vision is disturbed.

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Outside the Langen Foundation, near the city of Neuss in northern Germany, a tall concrete wall curves like a dam, surrounding the viewer who walks up the path toward the main building. As you approach, you hear a fragile sound in the distance. Then suddenly the noise becomes overwhelming

*As Above, so Below* (2024) is a stream of audio, bounced and reflected between the mirroring walls so that it has no apparent origin. The noise rains down and blows around, emerging everywhere. It makes a whistling and clattering, like ice blowing over snow. There are ghostly cries, chirps, a damp breezy sound,

<sup>1</sup> Juan Arizaga et al, 'Following year-round movements in Barn Swallows using geolocators: could breeding pairs remain together during the winter?', *Bird Study*, vol. 62, no. 1, pp. 141-145.

like a rainforest at night. There is a forceful ripping sound of wind tearing feathers, like migration into a headwind over the sea.

The work sounds like birds, and then trees, and then insects and flowing water, and then a different bird. But what you are hearing has come from somewhere quite different: lightning activity and geomagnetic storms in the high atmosphere, captured by a large radio antenna on the south polar ice shelf, and recorded by the British Antarctic Survey. The artists recomposed these recordings to make the spacey, ethereal arrangement that reaches your ears. You are listening to magnetic fields that are ordinarily inaudible to humans. When you hear it, you feel that you recognise it, but you don't.

When I first listened to *As Above, So Below*, I thought of the birds that vanished in winter, and the human beings groping to make sense of it. With the sound work, as with the disappearing birds, the truth contradicts the rational explanation. The swallows are not in the hollow oak on the village green – their tiny bodies are off crossing oceans and continents. The cries and calls that sound like familiar birds or insects derive from something larger and stranger – something you can't ever truly hear.

These experiences instil an awareness of something that happens between every person and their world. The organism draws on all her senses to form an impression, an understanding, of the world that environs her. But sometimes this impression is manifestly wrong. When that happens, you have to question what to trust.

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The sculpture series *Grenzgänger* (Crossers, 2024) was created from antique and ancient artworks, held in museum online archives, which were 3D-scanned, then recomposed from machine-printed fragments into glassy, porcelain-like hybrid beings. One has antlers for limbs; another, the tall canine ears of the god Anubis and the round breasts of a marble Venus; others, twiggy appendages on feathered bodies. *Grenzgänger* live beneath overpasses and in shallow waters: adaptive creatures of no fixed place or species, indigenous to liminal spaces.

In a white-walled studio, a bronze Meiji-era Japanese sculpture of a heron stands on a table, and a flashing laser scanner moves around it. Behind it, a large screen slowly acquires its image, at first two-dimensional, incrementally gathering depth as the camera moves. There is something planetary about the orbiting camera and the flashing lights, as though the bird has been caught in a solar storm. Onscreen, the picture moves and deforms – a brief, dreamlike apparition yawns on the screen, like when somebody leans back on a Zoom call and the top half of their face is mashed into pixels. The heron becomes a floating head with no beak or body. Then something new appears. The image flickers. The new creature has the head of a heron.



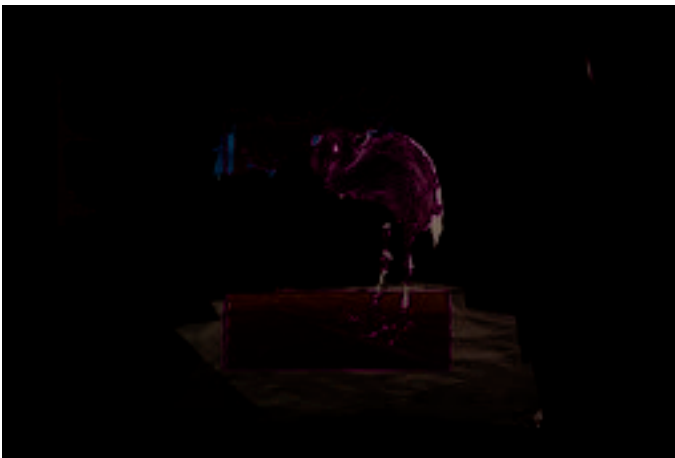
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1 Study of a chimera by Ferdinand Laufberger (1869)  
2 Objects of the MAK collection waiting to be 3D scanned  
3 Pfeilstorch (1822)  
4 Screenshot of 3D scanning software

## ii - BELOW

The new creature has the hindquarters of a sphinx. The image flickers. Another, smaller model now stands low on the table in the white-walled studio – a compact, winged body made of dark wax. The object, modelled in the eighteenth century, has neatly feathered wings and a broad human face. Behind her, on the screen, the heron-sphinx Grenzgänger is coming into being. But the sphinx is a strange being to hybridise ... she is already hybrid. So why is she here?

Hybrid beings have populated humans stories from the oldest known mythologies to futurist science fictions. The artists point out that sphinxes themselves take several different morphologies: masculine and leonine in Egypt, feminine and winged in Ancient Greece. These myths are expressions of actual bodily life, where hybrid being is a biological reality. Complex evolution was triggered by the merging of two microbes, host and parasite. All life is hybrid.<sup>2</sup>

The 3D scanner 'reads' the form of the object, heron or sphinx, and translates it into a gridded shape: an image of volume that has no depth, weight, or environment. This image appears free-floating onscreen. Looking at this bodiless index of a body, I thought of ghost nets: disused fishing gear, lost from boats, that can drift aimlessly through the ocean for decades. A ghost net is a species of non-being. It has lost its meaning and purpose, and it has literally been lost: nobody knows where it is. Nonetheless, it moves materially through the world, ensnaring fish, turtles, other plastic junk.

The scanned and remodelled creatures also leave traces on the world, and the world leaves its trace on them. These traces are elusive, moving like ghost gear, like migrating birds, through the blind spots of human perception. The scans are chopped and distributed to memory chips, where they are stored in packets of information, some separated, some together. They are held on hardware made of metals, minerals, and plastics, inside a server farm beside a dam in a pine forest, or in a desert silo, or in the industrial unit at the end of the street. Meanwhile in the gallery space and on the museum archive shelf, the 3D scan's physical twin can be touched by damp in the atmosphere, and particles of plastic from bubblewrap and packing tape, and the microbes on a curator's fingertips. The next time they are scanned, they will be minutely altered. The material and virtual environments enter and reshape one another, back and forth. Troika's work induces an awareness of this animation: the germs and microchips, mythologies and evolutionary histories, server farms and distant mines. The places and stories we know of but can't quite touch – intimate but unreachable – contemporary equivalents to the early-modern experience of the space inside a hollow tree, or the mud at the bottom of the local pond.

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2 Endosymbiosis theory via UC Berkeley's 'Understanding Evolution' portal, [www.evolution.berkeley.edu/it-takes-teamwork-how-endosymbiosis-changed-life-on-earth/evidence-for-endosymbiosis/](http://www.evolution.berkeley.edu/it-takes-teamwork-how-endosymbiosis-changed-life-on-earth/evidence-for-endosymbiosis/) [accessed 20 Jan 2024].

People came to understand migration slowly, as they travelled further and faster around the globe, which meant that they could bear witness to the phenomenon with their own eyes, at their own scale. The knowledge developed slowly, from conjectures and hypotheses, sightings of birds out at sea, and many different points of experience that coalesced to a shared sense of world. One famous moment of revelation occurred in northern Germany in 1822, when a white stork landed in a village near the Baltic coast. The stork was alive but it had a slender spear impaled in its neck, and the spear came from central Africa. The *Pfeilstorch*, 'arrow stork' as the bird was named, was exemplary evidence for migration: the weapon embedded in the live body offered more eloquent and more forceful testimony than any prior explanation.

The spear becomes the perfect instrument here, intertwining technology, vision, and violence. This vexed and mobile complex of relations is apparent everywhere in 'Pink Noise'. In the storm of bird sounds that are not birds. In the rolling eyes and pinned limbs of the marble sculptures of hunted animals (*Buttercup (Canticle of Creatures)* (2024)). In the antlered, feathered, winged, cherubic, ghostly, spliced and remodelled forms of the *Grenzgänger* that hide out under the walkways inside the galleries and stand, half in and half out of the artificial lake whose raised waters make a shallow flood on the ground floor. In *Electroprobe Installation #5* (2014, 2024), which amplifies the sound of the whispers and clicks that are emitted from defunct hardware, gathered by a sensitive magnetic microphone.

The works here emit disturbances, jumps, flashes, and glitches, landing with the viewer like signals from the live world that lies beyond witness. When magnetic fields and solar storms sound weirdly like bird cries, this creates a disturbance in perception that is not necessarily random. Birds sense magnetic fields. Many forms in the universe scale up and down. The configuration of seeds in a flowerhead conforms to the same mathematical principle as the constellation of solar bodies in a galaxy. So the soundwork itself suggests a speculative, temporary connection between the bird's experience of the atmosphere, and the noises that can be made in its larynx.<sup>3</sup> What it receives and what it sends out. As above, so below.

Sphinxes appear in many stories, though they change species and genders. What characterises the sphinx – what makes a sphinx a sphinx – is the habit of speaking in riddles. This form feels right for Troika's work: a riddle is somewhere between a truth, a punchline, and a story. It comes with a slanting, sudden experience of understanding: mysterious, then exposed in a moment of revelation, like a moving beam of bright light, then mysterious again. These exposures do not follow the pathways of rational sense but they have an intuitive integrity, drawing common sense up against the generalised knowledge that embeds itself in mobile experience like a weapon in a live body.

3 From an interview with the artists: 'Did birds hear these to us inaudible sounds of the universe and by mimicking them – like the Lyre bird – developed their language and vocabulary?'