Landings: On Sounding the Earth

by Natasha Ginwala and Vivian Ziherl[1]

Landings is a long-term research project developed upon the invitation of Witte de With Center for Contemporary Art in collaboration with partner organisations Studium Generale Rietveld Academie, Stedelijk Museum Amsterdam, among others. In many ways, this project is an exercise in reading the subjective conditions by which landforms become materialized by time and socio-historical processes.

fig. 1

Questions of (and from) land have preoccupied us for some time now. We consider land not simply from the perspective of anthropogenic change—prescribing its new "general" condition therein—but more specifically as a key narrative subject in the formation of modernity. These enquiries are cultivated by accessing histories of land-use from social, cultural, and political perspectives; by closely studying the manufacturing of "rurality" (repeatedly constructed as the spectral other of the "urban") in the long shadow of modern industrialization, the politics of land ownership and resource extraction that reveal the complex of colonial legacy and its continuing mechanisms.

Through public events, display segments, and research meetings with artists, cross-disciplinary scholars, and filmmakers, *Landings* attempts a trans-historical study of various "lands," remaining invested in the circulation of Southern perspectives through alliance-making and "de-linking" (a term borrowed from semiotician and cultural anthropologist Walter Mignolo). At the same time, we query recent attempts to yet again define the present condition of the earth as the "Age of Man."[2]

Imperial Pastoral

fig. 2

fig. 3

This documentation, from the inaugural episode of *Landings* called "Imperial Pastoral: On Constructions of Rurality," featured a display from the Tropenmuseum photography collection and materials collected from all the contributors of the attendant colloquium.[3] In her keynote address, anthropologist Rosalind Morris proposed the term "imperial pastoral," which she coined in her study of the colonial administration of British Malaya. The principle figure in this study was L.A.S Jermyn, , a British Malayan administrative official who translated Virgil's *The Georgics* into Malay, "in the last, doomed days of British rule, thus providing an exemplary demonstration of a delirious and ultimately destructive imperial fantasy in the moment of its utter evacuation by history.That fantasy rested on the conflation of the ideas of "native" and "nature," and it worked to hierarchize the populations of colonized territories in a falsely temporalized sense, with rurality and peasantry assuming the place of the primordial."[4]

In *The Georgics*—a didactic poem in hexameter composed of four books, most likely written after the *Eclogues* and before *The Aeneid*, around 29 BCE—the State-poet Virgil, writing in the service of Emperor Augusts, outlines for posterity the proper relation between the Empire and its farmers. He does so by conceiving multiple roles for the text; it is at once a technical manual on pastoral industry and animal husbandry, a guide for Roman soldiers returning from battle to resume service to the Empire in the fields, a bio-social study of bee society as a potentially ideal model for human social organization, and a political treatise on how to confront the hostilities of nature. To further plot the anachronisms outlined in the politics of imperial translation and the recurrence of origins (already evident in the work of a British official translating a Roman epic and footnoting it with his own experiences of colonial life in British Malaya), we invited performance artist Olof Olsson to make a live response to *The Georgics*, engaging with the themes of forgetting, reluctance, and delay. Additional elements of the "Imperial Pastoral" episode of *Landings* included art historian Brian Dudley Barrett explaining his research on the nineteenth-century rural artist colonies of the North Sea coast, and a special lecture-presentation and archival display, "People Are the Mountain," by Filipa César, who discussed her long-term research on the role of Amilcar Cabral, agronomic engineer, revolutionary leader, and key inspiration to Guinean filmmakers such as Sana N'Hada and Flora Gomes. She brought together Cabral's soil studies and land survey maps with archival film footage of his political speeches in support of the liberation struggles of Guinea-Bissau (1963–1974). The *Landings* project is also currently studying Mangrove zones; through this particular ecology of aerial rooting we consider ideas of porosity, inversion, and unauthentic belonging, concepts unfolding within our research exhibition currently at Witte de With in Rotterdam.[5]

As future iterations of *Landings* continue to gather additional conceptual and material forces, with the remainder of this essay we would like to locate such a curatorial project within a broader economy of sensations of the earth. If *Landings* posits an iterative series of exhibitions, performances, and scholarship to provoke questions of how landforms become entangled in processes of cultural expression, what follows might be read as an itinerant primer on the becoming-sensuous of the earth.

The Singing of the Earth

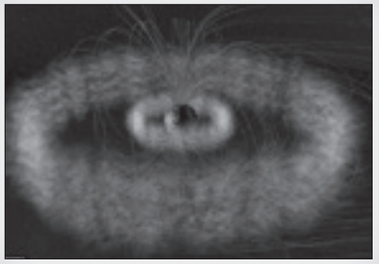

fig. 4

Any image of the earth is only ever partial, even those that appear to give a total picture; fundamentally incomplete, every image of the assumed whole is pictured from an exclusive vantage point and in a particular time. It is from this state that it performs as an ideological image-tool, mobilizing technopolitical, social, ecological, and cultural movements that proclaim various iterations of "globality," and various modes of wholeness, on behalf of the earth itself. However, the differences between night and day, between here and there, between dormant volcanoes and live oceanic plates, between drought-prone lands, special economic zones, and artificially irrigated deserts can never be adequately articulated when the earth is "revealed" as a cold sphere floating in *outer* space.

A more subtle philosophy of optics would suggest that such whole images are ocular aberrations—misunderstandings of the completeness of one's visual grasp over an entirety—since the planet's reality is unfolding on multiple planes that refuse to be gathered together within any single field of vision. It is therefore especially productive to consider the totalizing image of the earth (such as NASA's famous 1972 "blue marble" photograph taken by the crew of Apollo 17) as an "undecidable figure," in Gayatri Spivak's sense of the term. As she notes, "to learn to read is to learn to disfigure the undecidable figure into a responsible literality, again and again."[6] In order to consider such a disfiguration, we must first transition from the zone of sight to that of sound.[7]

In 2012, NASA's twin radiation belt storm probes (RBSP) captured what is known as "chorus," the singing of the Earth caused by plasma waves in the Earth's radiation belts.[Fig. 04] It is not an entirely new sound, as radio operators have heard it, at least in fragments of varying length, for many years. It has been described as the sound of birds chirping, and it therefore also known as the "Dawn Chorus." Yet this is no simple morning refrain of terrestrial avifauna—so what we might feel compelled to ask is: are we really hearing?? Chorus is not an acoustic wave; it is an electromagnetic emission, a phenomenon of energized particles in the earth's magnetosphere that have encountered NASA's RBSPs.[8] It is the simulation of a singular sound, arriving from differing fields of energy becoming "attuned." As a recording made in/of outer space, it conveys the rhythms that surround the earth as gauged by robotic circumambulation. The singing earth—the circling of plasma waves crossing orbiting spacecraft, played back on the tellurian surface as the sound of understanding—works as a reduction of the Sun-Earth system to sonorous human consumption.

What is so compelling about this sonic impression? Why does the phenomenon of attunement—when particles are brought into a shared field of tonality such that they produce an "emission" that is rendered sonorous by robotic probing—capture the human imagination so effectively? These questions demand that we attend more carefully to how human impressions of the phenomena of synthesis and synchronicity create novel ways of sensing the earth; understanding this process also helps reveal the discontinuities or dissonances of our planetary condition. Such acts of attentive listening enable a "voicing" of the earth's relation to humanity's subjective capabilities, establishing a multi-scaled site of inscription.

Sculpting Device

Moving from the extra-terrestrial acoustics of the earth, we might also consider modes of listening to the earth's interior by looking at a common instrument, the geophone,[Fig. 05] which detects seismic responses of the earth as "wave formations," and converts them into electric signals and acoustics. Whether it is used to reveal the presence of minerals, the movements of an enemy in war, underground lakes, or minor earthquakes, the geophone has long proven to be a useful tool for human listeners. Unlike the seismograph, the geophone does not contain a system of calibration; instead, it can be considered both a vessel for apprehension and a sculpting device, because it leads one to "construct" as one "hears" from the face of a mountain, the interior of a cave, or other irregular skins of the earth. While the tool of measure is solid, the act of measurement is liquid, as is the underground itself.

fig. 5

The geophone's mode of apprehension embodies the double connotation of that word: a suspicious or fearful condition when one is comprehending a scene. This is especially evident in the records of the New Zealand Tunneling Company division that arrived in France in 1916 to join the Allied Forces in WWI:

> To kneel or sit for hours at the end of a narrow gallery out under no man's land, in bad air, with only a guttering candle as protection from the ultimate dark, with every faculty concentrated on the sense of hearing alone to pick up the faint tap-tap of a miner's pick, to separate that sound from the innumerable others, men walking on the trenchboards far overhead, a sentry kicking his numbed feet against a firestep, the crash of a [German trench mortar] or the rattle of a machine gun, or even the scurryings and love affairs of the trench rats.[9]

It is strange to consider that the lives of an entire infantry division depended on listening reports aided by a geophone, especially as they delivered incredibly cryptic empirical descriptions, such as, "Enemy picking Intermittent Faint 18 deg."[10]

fig. 6 fig. 7

To further examine this obscure economy of extracting sense, we may consider this pair of images.[Fig. 6, 7] The first depicts Geert Wilders, a populist, far-right Dutch politician who throughout his time in parliament has held political process, discourse, and bodies hostage with his inflammatory words and acts. Here we find him on a recent trip to Australia, where protestors rallied against his visit. How are we to read Wilders' "forced embrace" of this iconic koala? While the image could be read as a gesture to claim an authentic belonging through the emblematic use of a naturalized "non-human," we should stress that in this image Wilders and the koala are not captured with the frontal view that generally records diplomatic history. The facial profile of this koala is abstracted, distanced from the typically charming emblem of a nation. In this performance of human/non-human diplomatic contact, we are asked to view the scenario sideways and in close-up, as a tourist snapshot. Yet with its elongated head and heavy paw (with opposable thumbs), the koala seems uncanny, an intruder rather than supplicant—an alien object. Can we escape the implied categorization of both Wilders and the Koala as "natives?" It seems that the category of alienhood may here invert conventional constructions of "belonging." Wilders' xenophobic politics of introversion and exclusion, which seeks to convert Dutch society into a paranoid condition by which all foreign elements would be perceived as a threat, is apprehended here between the human/non-human association, and suddenly encounters the added complication of borrowed authenticity—authentication as a transaction between two bodies—thus doubling and reversing both "belonging" and "alienation" as co-implied terms.

The second image, from the 1920s, is simply labeled "Man with Geophone," from the photographic records of the US Bureau of Mines. In this juxtaposition, the geophone and the koala may both be encountered as "sensing heads," instruments used for extracting a sense of place. The stethoscope-like geophone allows for the detection of the pulse of the earth's inner body, used pragmatically by the US Bureau of Mines to detect underground lakes and trapped miners. Viewing the image as a corporeal layering, the geophone is also a prosthetic extension of the human, a forensic contraption ready-at-hand for the practice of detection. Like Wilders' sens-

ing-head koala, the geophone and the allegedly rational readings of the earth instrumentalized by it are always prone to the irrational and projective errors of "overhearing."

Dragon Jar

fig. 8

Our path towards the becoming-sensuous of the earth also leads to more ancient practices, including a device believed to be the first form of seismoscope, invented during the Chinese Eastern Han Dynasty (AD 25–220) by the polymath Zhang Heng, a distinguished cartographer, mathematician, inventor, painter, and poet educated in the moral and political philosophy of Confucianism. Zhang's earthquake-detection instrument, commonly referred to as the "Dragon Jar," operates as an anticipatory vessel. The eight toads at its base reach backwards with their mouths gaping, poised in wait. Corresponding dragon heads oriented to the cardinal points emerge from the girth of the bronze vessel, each bearing in its jaws a single bronze sphere. But it is the concealed inner-workings of the instrument that have captured the attention of scientists, with persistent attempts to re-construct the device throughout the nineteenth and twentieth centuries, including British geologist John Milne in 1886, seismologist Akitsune Imamura in 1939, and most recently in 2007 by Hong-Sen Yan and Kuo-Hung Hsiao in Taiwan.

The image[Fig. 08] above depicts one of the most credible propositions to date of the instrument's actual workings. The water-filled jar acts as an amplifier of subtle vibrations in the ground surface, upsetting an inverted pendulum and producing a lateral displacement that triggers the release of one of the bronze balls. The translucent pendulum marks a phantom moment after the "act," releasing the ball from the dragon's jaw, and indicating the direction of an earthquake. As it reaches one of the toads, a sound is emitted. The toad is a bell that becomes an alarm; the instrument thus doubles as both seismoscope and seismophone.

The name of the instrument, "Houfeng Didong Yi," translates literally as "instrument measuring seasonal winds and movements of the earth," based on the Eastern Han Dynasty's understanding of winds as both oracles and causes of earthquakes. The instrument bears this cosmological narrative in its morphology, where dragons are symbols of the sky and toads symbols of the earth. Beyond this symbolic consistency, however, the accuracy of Zhang's earthquake device translated into political advancement within the court hierarchy, along with a substantial rise in riches and influence. In the last years of service under the Emperor, Zhang was promoted and became an advisor and governor, primarily in charge of administering river channels.

The effect of the device in the contemporary world is that of an imaginative proposal which once influenced the administrative life of an empire. In contrast to the Richter Scale, Zhang's instrument contends that "magnitude" is not something traceable within a visual diagram of wave-form registrations. Rather than anthropomorphizing the earth such that its persona is "read" as with a heart-rate monitor, Zhang remained committed to detecting tectonic movements through changes in rhythm, motion, and time. Such commitments are reminiscent of seventeenth-century German Jesuit polymath Athanasius Kircher, who also understood the subterranean world as a series of discontinuities and molten excesses. For Kircher, "the whole Earth is not solid but everywhere gaping, and hollowed with empty rooms and spaces, and hidden burrows."[11] Such an Earth requires an immanent contact and sensual geography, qualities afforded by Zhang's Dragon Jar.

fig. 9

But overhearing the Earth's interiors through the geophone and detecting the earth's seismic intent with the Dragon Jar also signals positions of privilege and exclusivity. Within this political economy of sensing the earth, the bodies that labour in the subterranean are also the most threatened when sensing their surroundings. In "The Miner's Ear,"[12] Rosalind Morris outlines the complex role of gold mining in the modern history of South Africa and its affective resonance in the figure of the miner, developing a careful inventory of the miner's sense of the earth: "The Miner's Ear is attuned to the sounds of catastrophe: sirens, rumblings, explosions, a gush of water where only a dripping should have been heard, coughing, the burble of fluid in the lungs or too much silence. [...] The miner's ear is attuned to what will destroy him, what is already destroying him in the moment that he hears, if he hears."[13] The miner is perennially in the process of going deaf. But this is not immediate, like the falling of a rock; it is the transformation of voice into mere sound, a peculiar deafness that corrupts the capacity for differentiation. The mine is the ultimate site of human sediment, mobilizing industrial value, channelized through the bodies compressed between the unseen and the overexposed. Yet, as Morris stresses, mining histories also call attention to symptoms and gestures of overhearing: the rumour that there is gold to be found; the rush to prospect, to speculate; the introduction of bodies into the mine; the exchange of labour for the promise of precious metal—all of these practices caught in a tangled narrative of hearsay.

fig. 10

In this stereoscopic photograph of hydraulic mining during the nineteenth-century California Gold Rush,[Fig. 10] we can see how this process of extraction involves water as a substance used to dislocate earth—to separate what is precious from what is disposable, value from waste. It poses here as a ghostly sound image. Doubled views deliver the acoustics of high-pressure pipelines coursing through the geographical terrain like veins under the skin. Hydraulics have been employed to massively scar the land and remove overburden since Roman times; gold found in the veins of exposed bedrock is extracted by diverting the erosive faculty of water. At the same time, thousands of acres of farmland have also disappeared under mineral sediment as part of the same process.

Notably, at least as far as historical contingencies go, the Brewster Stereoscope, which greatly enhanced the spread of stereo photography, was invented in 1849, the year the Gold-seekers—the "Forty-Niners"—

came to California from all over the world. Offering an illusion of depth and the promise of rendering solid the act of seeing, this invention performs a process inverse to that of hydraulic mining: a liquid, sedimentary process confronting the Earth as a simultaneous maneuvering of appearance and disappearance.

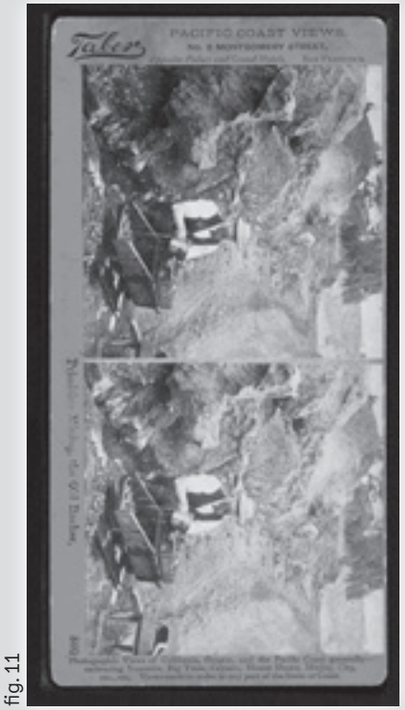

fig. 11

fig. 12

The top photograph[Fig.11] was made by Carleton E. Watkins, one of the greatest photographers of the American landscape, particularly the Californian frontier in the nineteenth century during the Gold Rush. He made a special stereographic camera, and on at least one occasion captured himself with it, posing as a "primitive" miner. It was a self-portrait he made for his children, most likely a performative sign, both of his times and of the inextricability of the mine from his life in photography. This assumed posture is echoed in the still-life portrait he makes of gold from El Dorado, California.[Fig.12] The gold's body is postured here as a vital suspension: no longer deep within the earth, it is propped up as a prized specimen, pure value and conductivity, gold as *standard*. This co-picturing of land bodies with imaging technologies conveys a figural force that compels a reckoning with the laboured land, not as abstract view of the human-made earth, but of interpenetrating and durative states. Through such composite modes of collaboration, image-study, and archival research, *Landings* seeks "Land" as a narrative protagonist of history registered through the efforts of multiple agents and their various approaches.×

Figures

1 The interior of the earth, with subterranean lakes, rivers, and pools of fire, according to Athanasius Kircher, 1678. Public domain, http://commons.wikimedia.org/wiki/File:Athanasius_Kircher_Interior_of_the_earth.jpg
2 Display of archival materials at "Imperial Pastoral: On Constructions of Rurality," at Witte de With, Rotterdam, 9 March 2013. Photo credit: Cassander Eeftinck Schattenkerk
3 Filipa César at "Imperial Pastoral: On Constructions of Rurality," Witte de With, Rotterdam, 9 March 2013. Photo credit: Cassander Eeftinck Schattenkerk
4 Also see: Timon Singh, "NASA Records Earth's 'Dawn Chorus' Produced By The Planet's Magnetosphere," Inhabitat.com, http://inhabitat.com/nasa-records-earths-dawn-chorus-produced-by-the-planets-magnetosphere Image Credit: NASA/T. T. Benesch, J. Carns, and NASA Goddard Photo and Video, http://assets.inhabitat.com/wp-content/blogs.dir/1/files/2012/09/Earth-magnetosphere.jpg
5 The geophone is used to establish the relative depth of enemy installations. It was usually placed on the tunnel floor. École de Mines, Supplément au Livre de l'Officier, 1917, http://www.flickr.com/photos/14538593@N05/4424169635
6 Man using a Geophone: NYPL Digital Library, http://digitalcollections.nypl.org/items/510d47d9-b49c-a3d9-e040-e00a18064a99
7 Geert Wilders with Koala, http://www.telegraaf.nl/binnenland/21304839/__Wilders_knuffelt_koala__.html
8 Source: http://www.shkp.org.cn/kply/shdzkpg/h000/h16/img200609180329411.jpg
9 *Fortune*, African Gold Rush, October 1946
10 Pipes supplying water for hydraulic mining (ca. 1865). Source: NYPL Digital Library, http://tinyurl.com/mvtbsfw
11 Primitive mining, the old rocker. C E. Watkins posing as miner, by Carleton E. Watkins. Source: NYPL/Wikicommons, https://commons.wikimedia.org/wiki/File:Primitive_mining,_the_old_rocker._C.E._Watkins_posing_as_miner,_by_Watkins,_Carleton_E.,_1829-1916.jpg
12 Source: http://ccdl.libraries.claremont.edu/cdm/singleitem/collection/vdp/id/304/rec/4

Endotes

1 This text is adapted from a presentation delivered to the SYNAPSE International Curators' Network at the Haus der Kulturen der Welt, Berlin, April 2013.
2 This is not to contest the paradigmatic significance of the Anthropocene, but to carefully consider the subjective positions and socio-political response mechanisms of human and non-human cultures within the geological contingencies before us.
3 "Imperial Pastoral: On Constructions of Rurality," Witte de With, Rotterdam, 9 March 2013. Guest speakers: Brian Dudley Barrett, Filipa César, Rosalind Morris, and Olof Olsson, with accompanying displays, including materials from the Tropenmuseum, Amsterdam.
4 Rosalind C. Morris, "Imperial Pastoral: The Politics and Aesthetics of Translation in British Malaya," *Representations* 99, no. 1 (Summer 2007): 159–194.
5 "Sensing Grounds: Mangroves, Unauthentic Belonging and *Extra*-Territoriality," Witte de With, Rotterdam, as part of *The World Turned Inside Out*, 25 May–18 August 2013 (and onwards). Featured works by Roberto Chabet (courtesy of the Asia Art Archive), Bonita Ely, Rana Hamadeh, Irene Kopelman, Tejal Shah, Lawrence Weiner, Terue Yamauchi and archival materials from the Tropenmuseum (Amsterdam), the North Stradbroke Island Historical Museum (Dunwich), the Biodiversity Heritage Library and the David Rumsey Map Collection.
6 Gayatri Chakravorty Spivak, *Death of a Discipline* (New York: Columbia University Press, 2003), 72.
7 If the reader is so inclined, we suggest that this section be read with the accompaniment of the sounds themselves, available at http://www.youtube.com/watch?v=QVJwq3mH7so&noredirect=1.
8 RBSP operates as two robotic spacecraft released as part of NASA's "Living with a Star" program, which seeks to study aspects of the Sun-Earth system and its direct impact on human life and society.
9 "Listening Underground with a Geoscope," New Zealand History Online, http://www.nzhistory.net.nz/media/photo/listening-with-a-geophone.
10 Ibid.
11 Athanasius Kircher, *Mundus Subterraneus* (1665).
12 Rosalind Morris expanded upon this paper for a conference organized by *Landings* as part of the 2013 Studium Generale, "Where Are We Going Walt Whitman?" held at the Gerrit Rietveld Academie in Amsterdam. The presentation also drew upon her ongoing collaboration with William Kentridge, "The Cash Book Project," undertaken with support from Seagull Books.
13 Rosalind C. Morris, "The Miner's Ear," *Transition* 98 (2008): 96–115.

Bios

Natasha Ginwala is an independent curator, researcher and writer. She is an advisor and part of the artistic team of the 8th Berlin Biennale (2014). Recent projects include "Landings" (Witte de With Center for Contemporary Art and Partner Organizations); "The Museum of Rhythm" — a segment of Taipei Biennial 2012; "Kunstvlaai: Festival of Independents", 2012 edition (INexactly THIS). She has taught on the Masters of Artistic Research (University of Amsterdam and Sandberg Institute) as well as the Studium Generale Programme at Gerrit Rietveld Academie. Ginwala has been guest editor of *TAKE on Art Magazine*, *New Delhi* (issue 5: Curation). Her writing has appeared in publications such as *Afterall Online*, *Art Agenda*, *C Magazine*, *e-flux Journal*, *Manifesta Journal* and *Mint* (*The Wallstreet Journal*), among others.

Vivian Ziherl is Curator at If I Can't Dance, I Don't Want to Be Part Of Your Revolution. Independent projects include "Landings" (Witte de With Centre for Contemporary Art & other partner organizations) and "StageIt!" (Stedelijk Museum Amsterdam). Vivian is editor of *The Lip Anthology*, Macmillan Art Publishing and Kunstverein Publishing in collaboration with Grazer Kunstverein. She led the summer school 'A Present in Print' at the Copenhagen Contemporary Art Festival (2012) in collaboration with the Royal Danish Academy of Fine Arts. She has been a contributing editor of *Discipline*, and her writing has appeared in periodicals including *Frieze*, *e-flux Journal*, *LEAP Magazine*, *Metropolis M*, *Eyeline* and the *Journal of Art* (Art Association of Australia and New Zealand), among others.