Topologies of Air: Shona Illingworth's art practice and the ethics of air

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 "Away and away the aeroplane shot, till it was nothing but a bright spark; an aspiration; a concentration; a symbol": with these words Virginia Woolf described an airplane flying over London in 1925.[1] Her words capture the awe and potential with which airspace was endowed at the beginning of the twentieth century. Woolf's description still resonates today. However, its associations are now tinged with nostalgia, as our relationship with the skies has substantially changed. Pollution has altered the atmosphere with dramatic ecological effects that endanger living environments and human health. Air bombing has imbued it with apprehension; nuclear explosions and radioactive spillage have produced long-lasting contamination. What in 1925 stood as a new frontier of expansion has turned for many into a site of concern, oppression, and surveillance, if not oppressive fear. For us, in the 2020s, the skies have become precarious, an intricate web of unstable gaseous locations traversed by contrasting discourses, hegemonies and an ever-impending sense of foreboding. The mapping of these diverse airspaces, their discursive articulations and the forms of dominance that regulate them is the subject of Shona Illingworth's immersive multi-screen video and sound installation, *Topologies of Air* (2020).

Illingworth is not new to an exploration of atmospheric environments. Indeed, the environment as an aggregate that "encompasses both the physical and the atmospheric"[2] underpins much of her research practice which focuses on a multidisciplinary analysis of how events and their affective resonances define the environments in which we live. In *Topologies of Air*, Illingworth does not engage with the atmosphere of a specific place, but rather with

the very notion of airspace and of its topological subdivisions by examining their conditions

and the discourses predicated on them. In mathematics, the term topology refers to the study

of the spatial properties and relations of geometrical figures as they undergo continuous

deformation. By extension, it also refers to the study of a locality, and to how the constituent

parts of a network are connected or arranged.[3] Because topology, as Steven Connor observes,

is concerned with spatial relations (i.e., continuity, insideness, outsideness, disjunction and

connection), "with what remains invariant as a result of transformation, it may be thought as

geometry plus time, geometry given body by motion." [4] The relational inseparability of

space-time-motion resonates with a consideration of airspaces, of their connectedness and

malleability, their physical and affective morphologies, their historical and contemporary

significances — when, in other words, we question the *topoi* and *logoi* of air.

In what follows, I shall examine the formal and thematic development of *Topologies of Air*

in relation to Illingworth's art practice. In particular, I shall outline an internal research

trajectory whereby *Topologies of Air* emerges from Illingworth's critical engagement with

the atmosphere as a site of ethical concern and of physical and emotional immersion.

Accordingly, the aim put forward in the Airspace Tribunal, part of the research development

of this work, to establish a new human right to protect from threats from the air and outer

space, is rooted in Illingworth's extensive investigation of airspaces. In this sense *Topologies*

of Air and the Airspace Tribunal continue Illingworth's art research practice and its critique

of hegemonies.

Topologies of Air: a video and sound installation

Topologies of Air opens with images of soft cloud formations in a blue sky as they pass

through the three screens of the installation. Dissonant abrasive notes mix with the sound of

air currents, upsetting the expansive depth of these images. A digital rendering of the earth's

electro-magnetic fields emerges from behind one of the cloud formations in the central screen

and floats in space. At the same time, we hear the words of astrophysicist Ilias Fernini,

The sun

sends this solar wind

a huge amount of these highly charged particles

and they may disturb

this upper atmosphere

so if you send a signal through this upper atmosphere

the signals cannot pass through

or it can be absorbed

or it can be refracted

that's why our atmosphere

is not stable.[5]

This initial sequence well exemplifies the seamless relation of the three screens and the ways

in which the voiceover interacts with the visual and acoustic components of *Topologies of

Air*. Neither the images nor the voiceover, mostly from contributors to the Airspace

Tribunal's hearings, are illustrative of one another; rather they are adjoining and intersecting

texts that associatively interweave with each other. Through such a palimpsestic structure of

images, sound and voices, Illingworth examines diverse topologies of air in different

historical periods and locations, across shifting scales and critical perspectives, as the video

unfolds thematically on issues concerning ecology, airspace and outer space surveillance and

their economic as well as military exploitation, and air violence. Throughout, the kinetic

qualities of images (speed, internal shifts of scale and focal points) together with the ways in which sounds interplay with them intensify the feeling of being drawn into the "airspace" of the work itself.

Images of flickering leaves filmed from the ground alternate with aerial views of cityscapes and brightly lit urban skylines, satellite images of the earth and the atmosphere, and images taken by drones. Shifts of scale and viewpoint are congruent with how airspaces are subdivided in the troposphere – the part of the atmosphere closer to the earth – the stratosphere and outer space, and with the forms of access, hegemony and knowledge production that characterize each of them, including their different gaseous formations, strategic and economic relevance. Myths and stories are also ways of understanding the skies across cultures and epochs, suggesting other ways of perceiving the immersive space that surrounds us. Historically, the skies have been a referent for our own positioning on earth and for grappling with questions about the existence of life on this planet. Today, as tree physiologist Sebastian Pfautsch observes, access to airspaces afford us the collection of ecological and other data:

Climate change, sea level rise
absolutely rely on access from above and the view from above
all these processes we are documenting from above
at different spatial and also temporal scales
related to deforestation, illegal mining, agricultural activities, soil, coastal erosion, human trafficking
but also urban planning, infrastructure assessments that we actually use aerial technology now for, terrestrial mapping of various manmade and natural ecosystems, all rely on access from above

At the same time, according to Sophie Dyer, airspaces are also indicative of the inequalities and supremacy that underpin air violence:

In terms of the kind of optical regime

where there's a kind of asymmetry of power

and an asymmetry of access to satellite information

that's intelligence, surveillance and reconnaissance,

which is absolutely integral

to contemporary air dominated campaigns

that kind of intelligence

that is gathered through drone feeds and satellite imagery

is what will then determine

if the strike takes place or not

so that kind of asymmetry of power

is shifting even further

towards governments and for profit companies

being those who have the commanding aerial perspective

Throughout *Topologies of Air*, Illingworth engages with the complexities and contradictions that denote today's perception and understanding of airspaces to convey a multilayered picture of consequential effects and affects.

The feelings of elation about the development of aviation in the first decades of the twentieth century, rendered through the inclusion of archival film footage of crowds cheering, are contrasted with the impending and ever-expanding threats posed by the

economic and military exploitation of the atmosphere. We are reminded of the original "aspiration" that accompanied the first flights as a "step into a new element".[6] In this new element bodies could "move free in three dimensions" in what was deemed as "the beginning of a new aerial age" that would bring a "new way of life" characterized by the promise of "democracy, equality, and freedom."[7] "Flight" – as Peter Adey puts it – "would elicit a new way to express our relation with air. It could liquefy the solid footing of the ground, yet somehow make the air that bit more tangible, that bit more 'there.'"[8] Air, however, also made itself felt. War images of parachutists drifting in midair before landing on enemy soil and of air-raids allude to the military deployment of aviation and the fear with which the air began to be imbued.[9] Illingworth colors these archival images purple-red, thus intimating their emotional charge as a new kind of pollution that is affective rather than environmental. *Topologies of Air* then shifts to archival film footage of NASA Voyager program in the 1970s and of the European Space Agency suggesting the postwar international race for the colonization of outer space. These images are juxtaposed with those taken by drones and satellites: a reference to the complex economic, military and governmental matrixes of power and control that dominate today's airspaces from the troposphere to outer space.

Within this layering of historical and contemporary outlooks on the skies, Illingworth examines how our existential connection to airspaces has been altered by technological advancements and by what can be regarded as diverse forms of pollution – environmental, emotional and informational pollution. We see images of an oil field in Bahrain as we hear geologist Giusi Maggi describing her fascination with the atmosphere's make-up. This sequence is juxtaposed with satellite views of the earth and images of gas flares being burnt off in the oil field alluding to the release of toxic gases. The focus shifts to slow-motion images of two children leaping in the air on a purple-red background. The slow speed of the frames heightens the lightness of their bodies, dark ghostly shadows suspended in mid-air. As

in the case of the historical footage on the beginnings of aviation, the tinted images are suggestive of contamination, specifically of the high levels of monoxide and toxic gasses polluting the atmosphere worldwide. The internal movement of these images reminds us of Tim Ingold's description of the pattern of the weather as one "that is continually being woven in the multiple rhythmic alternations of the environment – of day and night, sun and moon, winds and tides, vegetative growth and decay, and the comings and goings of migratory animals."[10] Ingold underlines the continuity between soil, sea and air, the terrestrial and the atmospheric. Airspaces are inseparable from life on earth. However, they are also the sites of contested practices, raising the question of how to adequately address the complex patterns of economic and political control that put them at risk. As human rights expert Conor Gearty comments,

We are at the moment being poisoned on a daily basis

there is maybe some connection to be made between the atmosphere up here as it were

from which things can fall on us

and the atmosphere around us that can infiltrate and destroy us

Cosmic dust, the curved skyline at the artic and the image of an atomic explosion introduce a reflection on radioactive contamination. Radioactivity, with its long decay, is emblematic of atmospheric annihilation or what Svetlana Alexievich refers to as "a catastrophe of time."[11] Red-coloured and slow-motion images of children in uniform that Illingworth filmed in Peace Square in Hiroshima traverse the screens. The children appear as ghostly silhouettes, while the voiceover (in Japanese with subtitles) includes excerpts of conversations that Illingworth conducted with survivors of the nuclear bombing in August 1945 about their personal memories. We hear an elderly man recollecting when as a child he was begged to

share the small peach he was holding by people burnt by the heat of the atomic explosion; we hear of a woman who waited her entire life for the return of her disappeared daughter never locking her front door for fear that she might not be able to enter the house. The internal connections across the three screens remind us of the associative interaction of memories, while interference and repetition suggest the rupture that trauma causes to remembering with its insidious recurrence. Illingworth interacts the close-up of a girl walking toward the camera with those of the closing doors of a tram and the images of the leaping children. The slow fading of the frames creates a feeling of estrangement while shadowy silhouettes linger as afterimages. The intensified color of the footage filmed in Hiroshima alongside the recollections of survivors of the atomic bombing creates an indefinite and liminal vision where past and present overlay, and the future alluded to by the children is already compromised by an ongoing catastrophe of which we are amnesic. In this indeterminate temporality images and sounds of burning intersect street shots of Hiroshima. It is as if fire were consuming the video footage itself, while low pulsating metallic frequencies cut through Illingworth's repetition of frames. Gabriele Schwab refers to the notion of "nuclear necropolitics" to explain the type of violence and long-lasting contamination of nuclear armaments. Necropolitics describes the relationships between sovereignty and the power to rule on life and death; nuclear weapons, as Schwab argues, add "a new and sinister dimension to this power. The power of nuclear weapons can now be used to dictate not only who may live and who must die from a nuclear attack but also how some people must live with and die a slow death from the lingering effects of nuclear contamination."[12] This results in the control of bodies and minds exercised by what can be regarded as a new pervasive form of colonialism and of its related politics of fear.[13] The dark silhouettes of children in *Topologies of Air* are the ghosts of our own present. As Schwab observes,

The waves of invisible radiation that had infiltrated the survivors' bodies continue the warfare indefinitely and out of sight, so to speak. Beyond its immediate annihilating destruction, the atomic work of death continues to operate as a form of slow violence inside the bodies of victims […]' and as 'a spectral haunting from both the past and the future.[14]

This haunting alludes to both the past of nuclear contamination or the contingent threats of climate change and contemporary chemical wars. The sequence concludes with bright fluorescent lights among tree branches that refer to the phosphorous blue lights of decaying bodies that filled the air of Hiroshima and were seen as if they were floating spirits.

In *Topologies of Air*, Illingworth encompasses scientific and animistic understandings of the atmosphere through the plurality of voices included in the voiceover and by creating changing visual "paths of movement"[15] – to use Ingold's phrase – to articulate what Toral Gajarawala refers to in the voiceover as "a decolonial cosmology" that encompasses different belief systems and forms of knowledge about the skies to unlearn,

a certain hubris

that says one specific version of the cosmos

is universal

The constant changes of scale from ground to aerial views and the internal movement of the images themselves contrast the scopic paradigms typical of universalizing visions from above. Understanding emerges, instead, through movement and an awareness of the shifting sensations that the immersive space of *Topologies of Air* creates. Within this changing affective environment, we hear the call of shaman and spokesperson for the Yanomami people in Brazil, Davi Kopenawa Yanomani, who voices the cry of the earth asking for

protection. The images on screen show people moving in an urban environment, on whom Illingworth superimposes a rain of digital codes to address today's instability of airspaces as sites of surveillance, economic and military control, ruled by the collection of the metadata produced by mobile technologies and used to map the increasingly detailed life patterns of millions of individuals. These digital traces swirl around the earth like a weather formation. The initial digital renderings of the globe return as information systems and machine-to-machine communication assemblages. We are reminded of the potentials of technological connectivity, but also of the erosion of privacy effected through digital surveillance and of the disappearance of the last remaining spaces of unsupervised freedom. *Topologies of Air* concludes with the words "the future is internal" as the digital rendering of the electro-magnetic fields of the globe dissolves into images of the sky accompanied by the chirping of birds.

Atmospheres: Illingworth's immersive art practice

To stay with this concluding sequence as the complex fabric of images, words and sounds that Illingworth has unfolded still swirls and envelops us means to stay in the space that *Topologies of Air* has generated and with the questions that the work has raised, as we make them our own. For those familiar with Illingworth's practice this is not unusual. *Topologies of Air* has created its own distinctive atmosphere while critically engaging with what makes atmospheres themselves. In this particular case, one is asked to unpack the intricate relations of place, time and discourse that characterize the vast gaseous wrap that we call the skies. The themes Illingworth deals with in *Topologies of Air* are enormous. They are massive in scale and complexity because their globality and temporal span encompass both past and future with the magnitude of their potential impact – be it ecological consequences on eco-

systems, military, political and economic control, or the effects of the dominance of airspaces on our individual lives and emotional well-being. The engagement with such themes is not new for Illingworth for it has developed out of her extensive research and interdisciplinary collaborations informing her art practice. Hence, *Topologies of Air* is the result of an artistic trajectory that investigates airspaces across a number of works.[16] Here I shall focus specifically on two video and sound installations, *Balnakiel* (2009) and *Lesions in the Landscape* (2015) by considering the role of collaboration, the notion of atmosphere as a thematic thread, and the formal relations of image, sound and movement in these works. These are not distinct aspects but rather interrelated facets of Illingworth's practice.

Both *Balnakiel* and *Lesions in the Landscape* well exemplify Illingworth's collaborative methodological approach whereby the research process underpinning the creative process develops in dialogue with experts in diverse fields over extended periods of time. Hence, Illingworth's examination of memory, particularly in relation to trauma and amnesia – subjects that are critical to the Airspace Tribunal itself – is grounded on her long-term collaboration with cognitive neuro-psychologist Martin Conway in *Balnakiel* and more recently with neuro-psychologist Catherine Loveday in *Lesions in the Landscape*. *Balnakiel* examines the affective geography and spatial politics of Balnakiel, a former military camp near the village of Durness in the north of Scotland, whose strategic position has been geopolitically key during the Second World War, the Cold War in the 1950s and during the War on Terror in 2010s. The area, which is considered especially advantageous as it enables a 360° live range of control, is used for the training of British, NATO and allied forces to be deployed in conflict zones across the world. In *Balnakiel* Illingworth explores the historical legacies of the nineteenth century Clearances, the tense relationships between the local inhabitants and those who moved into the region in the 1960s and the military through the affective landscape of the place. Throughout, Illingworth references a spatial understanding

of memory that is volumetrically layered and continually changing to map the intersecting of past and present, of local and global dynamics of influence and control, of internal and external points of view.[17] The dialogues with Conway grew around and took the form of a series of drawings that delineate how memory in its different articulations for both the individuals and groups who live in the area defines their relationships with the surrounding environment. These drawings, together with others which chart the military use of the airspace and the simulation of training operations, underpin the conceptual development of *Balnakiel* as Illingworth layers these diverse kinds of mental maps, whose coordinates are emotional and sensorial as well as cognitive, onto time-based (filmic and photographic) documentation of the region to create the associative structure of the work. Illingworth's collaboration with Conway is thus dialogically embedded within the artistic investigation and formal development of the final work.[18]

Such a methodology is also recognizable in *Lesions in the Landscape*, a three-channel video and sound installation in which the geological, socio-cultural and political history of the island of St Kilda, a volcanic archipelago west of the Outer Hebrides in the North Atlantic, and its erasure at the beginning of the twentieth century is intersected with an individual's experience of amnesia. For this work Illingworth collaborated with both Conway and Loveday and with Claire – a woman suffering from retrograde amnesia (the inability to remember the past), anterograde amnesia (the inability to form new memories) and prosopagnosia (the inability to recognize faces). This core collaboration was further expanded to include experts in disciplines as diverse as archaeology, geology, genetics, military strategy and media studies. Contributions were mapped across a series of five forums that addressed embodied experience through different forms of practices (clinical, scientific and artistic) consolidating the decentering approach that is at the core of the Airspace Tribunal.

Topologies of Air was, in fact, first conceived as part of an artist research residency in the Outer Hebrides in 2012, at the same time of *Lesions in the Landscape*, and developed as a series of blueprints that led to extensive research and the collaboration with human rights expert, Nick Grief. For the Airspace Tribunal, Illingworth chose the overtly performative format of legal hearings, which is congruent with the aim of this project, and an understanding of human rights as a living instrument.[19] The hearings build an interdisciplinary body of evidence and first-person testimonies from those who experience violations of airspaces, that is further captured by the voiceover of *Topologies of Air* whose short extracts retain the vividness of the hearings' presentations enlivening the ideas put forward with warmth and passion. Through this multiplicity of voices Illingworth's project further unravels the complexity and interrelationship of the issues presented not from singular disciplinary standpoints but rather from diverse and even divergent positions capable of encompassing multiple perspectives, manifold forms of knowledge and cultural interpretations. In this sense, through her collaborative research practice Illingworth develops a decentering approach that strives toward a "decolonial cosmology" as methodologically built within the work itself.

In *Topologies of Air*, the formal features of viewpoint, scale and movement are integral to the articulation of such methodology in ways that are already evident in *Balnakiel* and *Lesions in the Landscape*. Both works testify to Illingworth's extensive investigations of airspaces, especially in terms of their diverse constructions and forms of dominance, and of the types of approaches she has developed to deal with air as a filmic subject. In *Balnakiel* the shift of planes and viewpoints is indicative of how Illingworth harnesses the physical features of the landscape as a medium in which the environment actively interacts with the social, economic and cultural components that characterize this place and its contested appropriations. This is matched by the use of sound and movement, as evinced in a sequence

in which the camera follows the movement of a girl spinning with a rope on the flat roof of one of the barracks that testify to the militarization of the region. The intermittent horizontal sound of the rope slicing through the air mixes with the deafening downward thrust of a helicopter engine and a series of rising sound frequencies. The viewpoint of the girl spinning interweaves with that of an external observer as color and black and white images seamlessly intercut producing a visual and acoustic vortex for the viewer while low frequency sounds compress the installation space itself. The effect is a physical sense of oppression.[20] In *Topologies of Air*, the militarization of air and its latent foreboding continue as important themes in Illingworth's investigation of airspaces, encompassing both the local and global interface of contemporary geopolitics whereby the effects of events in one location reverberate across atmospheric planes as well as longitudes. Hence, images of a blue sky and the sound of a jet taking off slowly change to those of clouds that morph onto eroded ground, and then further shift to a landscape at dawn on which a horizontal line of fog lingers as the camera focuses on a desiccated tree. Over the background sound of one repeated cutting note we hear the voice of a former Iranian conscript and now artist, Maijd Rabet, recounting the effects of a chemical attack.

It's out of imagination

nothing alive

nothing, animals, sheep, cows, kids, women, men

all bleeding from mouth and nose

you can feel how they died from pain

our imagination is about the bombing, bullet and

but that was chemical weapons

and that's nothing alive there

nothing

it's I think stuck in my memory I never can

forget it

The images of dawn morph again onto closeups of dry cracked earth that gradually shift to those of a dense low cloud, then to high aerial views and a sequence shot in the departure lounge of Sharjah airport. Illingworth links these images to video footage of GR4 Tornado jets bombing Garve Island in the Cape Wrath Range close to Balnakeil, as a pilot reports back to the Control Tower,[21] and intersects them with footage of a US Predix drone swarm coordinating a simulated hunting operation. The deafening, terrifying noise of this machine-led operation connects the preponderance of air control examined in *Balnakiel* with the de-humanized violence of the current militarization of air and ecological damage of chemical contamination.

Here is also evidence of how Illingworth harnesses movement – as both what we see on screen and the internal flow within a frame – to deal with atmospheric disturbance and render the dynamic volumes typical of air topologies. The repeated sequence in *Topologies of Air* of two children leaping is comparable to that of the girl spinning with a rope in *Balnakiel*. In both instances, Illingworth focuses on the kinetic force of these buoyant activities, whose playfulness seems at odds with the contexts in which they are presented. Both movements have a propelling force that Illingworth uses to generate disturbance through the manipulation of the images themselves (shifts of color/black and white in the first case, and different gradations of color and alteration of the image speed in the second). This intensifies the sensations respectively of rotation and of upward thrust and the momentous suspension of the bodies in mid-air. Although as a viewer, one feels the energetic pull of the leap or rotation, the effect is one of vertigo and compression. Oppression is felt as an impending

presence. Illingworth refers to them as "liminal images" to stress their intentional indeterminacy, impasse and disturbance.[22]

Liminality is an important feature in *Topologies of Air*, especially in relation to the palpable rendering of air itself conveyed through the internal speed and flow of images. Illingworth modulates the single frames by layering them on specific sounds that are removed in the final work, but that nonetheless affect them by shaping the quality of the movement of images on screen. Hence, the impression of being drawn into the boundlessness of air through the uplifting movement of aerial views is contrasted with the warping of this movement within and across the screens whether through the impending condensing of air into matter or through shifts of scale and approximation. As a result, movement itself acts as latency within the images and across the three screens. The "radioactive signature in the geological record", referring to the radioactive nuclides found in the Antarctic ice, figuratively corresponds to the emotional signature of fear and trauma in the atmospheric layers that have been increasingly occupied, exploited and contaminated with pollution and violence. The dynamic expanding and folding of images thus embody the multidimensionality and intersecting temporalities underscoring the discursive understandings of airspaces.

In *Topologies of Air* Illingworth also continues an exploration started in *Lesions in the Landscape* of shifting scales, from the magnitude afforded by satellite images to the ground detections of GPS systems, from the local parameters of a place, event or experience to their global resonances, implications or impact. Evacuated in the 1930s and a UNESCO heritage site, St Kilda is today a key military outpost as a satellite-controlled area and a military testing zone for new generations of weapons – the archipelago and the surroundings are a silent airspace area extending for 30,000 square kilometers. Such strategic importance dates back to 1959 when the area became key to Britain's nuclear program. St Kilda is also an

archaeological site and the local Soay sheep are studied for their genetic profile in research on the effects of climate change on bio-systems. Illingworth includes references to the military telemetry tracking weapon testing, to exchanges between American and Russian operatives who co-operatively guide a supply ship docking onto the International Space Station, and to the ground mapping of St Kilda's archaeological traces through GPS. An amalgam of inputs, whose varying degree of accuracy is relative to the level of approximation that can be technically achieved, the signal data define the virtual and shifting parameters of specialized knowledge and the different "vision" that they afford: the scale of military testing and the airspace program suggest interchangeable, if not conflicting, geopolitical alliances and an evolving picture of power relations across the globe while the micro scale introduces indeterminism and uncertainty. These spatial scales further intersect different forms of duration and temporal constructions that relate to Illingworth's exploration of memory. Duration as the extended timeline of the geological formation of the island is rendered through a recurring sequence that shows a slow-motion filmed sequence of crumbling rocks cascading into the sea that suggest a petrification of time and further relate to views of the archaeological remains that date back 4,000 years testifying to the cultural erasure of the people who lived on St Kilda. By contrast, the collecting of micro data on military testing is situated in the infinitesimal contingency of constant obsolescence while its relevance is projected in the near future of potential military operations. Petrification and cultural erasure thus act as signs of the amnesia denoting this supposedly remote and yet strategically critical place. Within these diametrical perspectives, St Kilda is suspended in the indeterminacy of the isolation that characterizes the immobility of its cultural construction as a heritage site and of the related idealized presentation of its past.[23]

This seamless integration of and shift across different spatial and temporal scales also underscores *Topologies of Air* where it is amplified in both range and span to render the

granular effects of climate change and environmental pollution as well as the increasingly dense mass of metadata swirling around the globe. The short obsolescence of such metadata contrasts with the duration of radioactive, chemical and emotional contamination that reaches from past events into the future. As suggested for *Lesions in the Landscape*, the visual and sonic interweaving of macro and micro data tracking defines the parameters of diverse constructions of airspaces and their meanings both past and present. The cross-cultural conception of the skies as limitless and liminal to our existence on earth has been replaced, as archaeologist Steffen Terp Laursen observes in *Topologies of Air*'s voiceover, by "a more manifest sense of the sky above us" afforded by technological and scientific advancements. At the same time, as Schwab argues, the atmosphere is increasingly imbued with ontological, epistemological and psychological fears, as it bears the mark of latent events whose vastness contends with the immanence of space and history and with the boundaries of knowability and representability.[24] As digital media expert William Merrin comments, artificial intelligence and surveillance data collection have also become phenomena comparable to climate change for their complexity and impinging presence. Such technologies, according to media sociologist Andrew Hoskins, are increasingly dehumanized and deindividualized, generating "a sudden mass vulnerability, an exposure that seems impossible to contain." The interface that today happens with "the outside of the body" could shift within the body itself, merging inner and outer information as Merrin's concluding claim, "the future is internal", seems to imply.

Rather than with the empty openness and awe with which the skies have been traditionally endowed, we are confronted with the saturation of information that characterizes the contemporary perception of the atmosphere. Airspaces are thickening on us as sites of alienation and otherness, as ecosystems are put at risk by atmospheric changes and by the insidious contamination of matter and affect. What ensues is a feeling of foreclosure. The

appearance and fading of fluorescent flakes, of a vaporous lingering line of fog on the horizon or the overlaying of a digital rain of data are visual signifiers of such insidious presence that Illingworth renders more acutely unsettling and liminal by the ways in which sounds distort the immersive atmosphere of the work. The spatial compression and subliminal disturbance that acoustic interference causes — a characteristic in Illingworth's practice — counteracts the views from above and the hegemonic perspective that typifies them. While, within the context of the work, individuals increasingly disappear in the trace of metadata that they leave behind, we, as viewers, are swathed by the affective textures of these topologies of air as they evaporate from the screens in the *unheimlich* view of a blue sky.

An ethics of air

"[T]here is something very special about having the freedom to look up at the sky without feeling threatened," writes Nick Grief about the proposed human right to live without physical or psychological threat from above. Such a right, as Grief explains, "would be a qualified right, not an absolute one" meant to strengthen international humanitarian laws by regulating airspaces.[25] This raises the question of the critical, rather than legal, significance of such a proposition in relation to *Topologies of Air*. As Conor Gearty maintains,

The language of human rights

is among the very last of the languages available to us

to fill a gap in our understanding of the world

which is rooted in equality, esteem and empathy

I would add that art-practices are another of those languages. In *Topologies of Air*, Illingworth generates new understandings by integrating a plurality of voices, viewpoints and

experiences across diverse epistemologies, scales and timeframes. The topologies of air that emerge are like volumes in motion whose spatial and temporal co-ordinations intersect affectively and discursively, though they remain unfixed in the circulation of meanings that association and emotional resonance generate.

Topologies of Air, as suggested, decenters hegemonic visions through shifts of scale, movement and acoustic disturbance, thus deconsolidating single or exclusive forms of knowledge production by inflecting multiple ways of experiencing and comprehending the skies, encompassing understandings that would otherwise remain marginal, as shamanic insight or indigenous rituals. Such an approach resonates with Maria Puig de la Bellacasa's argument regarding the necessity to consider soil through practices of care that involve different scales and timeframes.[26] In a time when the erosion of commons and liberties by governments and corporations restricts what Jacques Rancière refers to as the "distribution and redistribution of places and identities, […], of the visible and invisible,"[27] both *Topologies of Air* and the Airspace Tribunal create what Gearty refers to in terms of human rights language as "a momentum for change without necessarily, in singular acts, achieving change."[28] While the body of evidence gathered through the Airspace Tribunal can be used to achieve legal change, the immersive space of *Topologies of Air* dynamically holds the multiplicity and plurality on which intimate connections and empathic responses can ensue as viewers engage with the complexities of today's topologies of air. Puig de la Bellacasa writes about soil: "Modes of soil care and soil ontologies are entangled: what soil is thought to be affects the ways in which we care for it, and vice versa."[29] The same could be argued for airspaces as their ontologies, epistemologies and ethics cannot be separated nor considered within limiting approaches. "The freedom to look up at the sky without feeling threatened" calls for ways of talking about and looking at the skies that "are rooted in equality, esteem and empathy." *Topologies of Air* creates a space for empathic understandings of the skies and

a recognition of responsibility as a "relation always already integral to the world's ongoing inter-active becoming and not-becoming."[30] It is in such a space that the possibility of a human right to protect the freedom to live without physical or psychological threat from above is a vision for an ethical reconfiguration of our immersive relations with airspaces, a way for reimagining the contemporary topologies of air.

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[1] Virginia Woolf, *Mrs Dalloway*, (London: Penguin, 1925/1996), 57.

[2] Jill Bennett, "Atmospheric Affects: Past Events and Present Feeling," in Shona Illingworth, *The Watch Man Balnakiel* (London: Film and Video Umbrella, 2011), 158-168, 159.

[3] Topology, *Oxford English Dictionary*, https://www.oed.com/view/Entry/203426?redirectedFrom=topology#eid

[4] Steven Connor, "Topologies: Michel Serres and the Shape of Thought," *Anglistik,* no. 15 (2004): 105-117, 106.

[5] Shona Illingworth, *Topologies of Air*, video and sound installation, 2020, voiceover. If not otherwise indicated all quotations are from this work.

[6] Sven Lindqvist, quoted in Illingworth, *Topologies of Air*, voiceover.

[7] Lindqvist quoted in Illingworth, *Topologies of Air*, voiceover.

[8] Peter Adey, *Air: Nature and Culture*, (London: Reaktion Books, 2014), 55.

[9] Peter Sloterdijk, *Terror from the Air*, trans. Amy Patton and Steve Corcoran (Cambridge, MA: SemioText(e) The MIT Press, 2009), 22-28.

[10] Tim Ingold, "The Atmosphere", *Chiasmi International*, no. 14 (2012): 75-87, 76.

[11] Svetlana Alexievich, quoted in Illingworth, *Topologies of Air*, voiceover.

[12] Gabriele Schwab, *Radioactive Ghosts* (Minneapolis and London: University of Minnesota Press, 2020), 18.

[13] Schwab, *Radioactive Ghosts*, 18-19.

[14] Schwab, *Radioactive Ghosts*, 192-193.

[15] Ingold, "The Atmosphere", 82.

[16] These include *The Watch Man* (2007), *Balnakiel* (2009), *216 Westbound* (2014), *Lesions in the Landscape* (2015), *Time Present* (2016).

[17] Caterina Albano, *Memory, Forgetting and the Moving Image*, (Basington: Palgrave Macmillan, 2016), 101-109.

[18] Shona Illingworth and Martin Conway, "Balnakiel Survey," in Illingworth, *The Watch Man and Balnakiel*, 73-107.

[19] The first three Airspace Tribunal hearings were held between 2017-2020 in London, Sydney and Toronto. Related events included the Sky Forums that Illingworth organized during two residencies at, respectively, the Sharjah Art Foundation in the United Arab Emirates and the Bahrain National Museum.

[20] Caterina Albano, "In the Spaces of Memory," in Illingworth, *The Watch Man and Balnakiel*, 108-119. See also "At the Edge: Balnakiel a video and sound installation by artist Shona Illingworth" in *Memory Studies*, no. 6: 4 (2013): 404-417.

[21] Email communication with the artist, 01.04.2021.

[22] Email communication with the artist, 01.04.2021.

[23] Albano, *Memory, Forgetting and the Moving Image*, 109-121. Sounds also reference to macro-micro, including the buzzing sound of an energy generator on the island and the sonification of an electroencephalogram of Claire.

[24] Gabriele Schwab, The Airspace Tribunal, The Power Plant, Toronto, 4 November 2020, author's notes. https://www.thepowerplant.org/ProgramsEvents/Programs/Other-Programs/Airspace-Tribunal-(1).aspx

[25] Nick Grief, "The Airspace Tribunal and The Case for a New Human Right to Protect the Freedom to Live without Physical or Psychological Threat from Above", *Digital War* no. 1 (2020): 58-64 https://doi.org/10.1057/s42984-020-00023-w

[26] Maria Puig de la Bellacasa, *Matters of Care: Speculative Ethics in more than Human Worlds*, (Minneapolis: Minnesota University Press, 2017), 9-17.

[27] Jacques Rancière, *Aesthetics and Its Discontent*, trans. Steven Corcoran, (Cambridge: Polity Press, 2009), 24.

[28] Conor Gearty quoted in Grief, "The Airspace Tribunal", no page number.

[29] Puig de la Bellacasa, *Matters of Care*, 692.

[30] Karen Barad, "Quantum Entanglements and Hauntological Relations of Inheritance: Dis/continuities, SpaceTime Enfoldings, and Justice-to-Come," *Derrida Today*, no. 3.2 (2010): 240-268, 265.