

## **Dwelling with Uncertain Ground: Ontological-ecological terrain studies, Venice**

Matthew Dylan Anderson

### **1. INTRODUCTION**

Ubiquitous uncertainty manifests in the rising seas, intensifying weather, and shifting ecologies that destabilise the ground we walk on and sense. These unstable grounds mediate relations between our bodies and the dynamic conditions of earthly existence. They also confront architecture with the limits of its assumptions and techniques. Architecture perpetuates conventions that emphasise control, permanence, and isolation – human from more-than-human, building from ground – dulling our ability to engage with what it's really like to live down here on Earth. We struggle to engage conditions that continuously unfold through movement and interdependence – conditions that are complicated, unpredictable, and mysterious.

This essay approaches uncertainty as an unresolvable quality of dwelling. We are terrestrial creatures and ground is our primary locus of human dwelling – the physical, cultural, and conceptual terrain where material and ephemeral forces converge and life on Earth happens. Ground is dynamic and contingent on its own spatio-temporal scales. Ground accommodates us while it moves, settles, erodes, and responds to forces that exceed human intention. To dwell with ground is to be involved in its ongoing transformations, attending to it – thinking, working, and writing with it to investigate earthly ways of living with uncertainty and connectivity in specific places and times.

Across histories and geographies, uncertain grounds have sheltered communities forced to move. Here, lifeways and building practices attuned to instability emerge – habitational and ritual formations that evolve with uncertainty. These practices hold valuable insight – dwelling as lively involvement in the forever changing conditions of a place.

The Venetian Lagoon is one such refuge – a terrain shaped by silt and subsidence, water and movement. Geo-hydrological forces and intergenerational human effort coproduce Venice's ground. As the city persists, its communal grounds – campi – reveal these processes as warping, rifting, and sinking topographies that mediate human experience and earthly flows [ill. 1].



[ill. 1] Figure 1. Campo di Sant' Agnese, Venice, 5.10.2022. (Photograph by author.)

Through artistic research combining hand-held 3D scanning and ceramic material experimentation, this project challenges architectural registration and representation techniques' capacity to engage with such uncertain grounds. The works aim to reproduce instabilities experienced in-situ on three sites in Venice through iterative durational processes resulting in new ceramic grounds. These words begin to situate the works within a conceptual framework – *dwelling with uncertain ground*.

## **2. GROUND, DWELLING, AND ONTOLOGICAL-ECOLOGICAL TERRAINS**

Ground is often regarded by architecture as a stable substrate for settlement or occupation – engineered to receive or take on architectural form. Such a position suppresses the reality that ground is not stable. It is continuously shaped by geological, hydrological, and material processes, historical events, and human effort unfolding across multiple spatio-temporal scales. To engage ground as it is, requires a shift toward recognising it as an active participant – first in dwelling, then architectural design.

Dwelling is more than settlement or occupation. It describes ongoing involvement with the conditions of a place and attentiveness to its transformations. Rather than stabilising ground through abstraction or technical mastery, dwelling with ground involves remaining open to its uncertainties

and movements. In this way, architecture approaches perspectives in environmental humanities that understand places as relational and processual, produced through continuous interaction between human and more-than-human actors.

Deborah Bird Rose's concept of *ontological-ecological terrains* provides a generative framework from which to reconsider ground in this way. Rose develops the concept to describe terrains where immense ecological processes, cultural practices, and ethical relations are inseparably entangled in specific places and times. Rose's indigenous informed concept affords collaboration with uncertain ground and emphasises its instability as a vital quality. For Rose, such terrains are 'ecological' because they are always in connectivity and flow. Being ecological here means being with. Rose writes that "thinking ecologically means thinking with, and from within, the world", not "from the outside, over and above and against..."<sup>1</sup>. This research understands *dwelling with* on similar terms.

Rose employs 'ontological' to question the qualities of reality, understood in this research as the persevering dynamics that produce uncertainty. 'Terrains' grounds ecological processes and ontological readings in real places and times – situated and interactive across scales. They are a condition we experience and inhabit. For Rose, "'Terrains' thus invites us to remain emplaced and avoid abstractions"<sup>2</sup>.

Rose's terrains offer architecture a way to engage uncertainty without relegating it to risk or dysfunction. Where uncertainty is accepted as a constitutive quality of being alive on Earth, ontological-ecological terrains emphasise that dwelling emerges through emplaced attentiveness and care across time – dwelling with. This challenges architectural practices that abstract sites into stable data and fixed content, and that remain remote. To engage uncertainty, we must rather develop registration and representation techniques that are accountable to the vitality of a place.

Approaching ground through and as ontological-ecological terrains reframes architectural engagement with site. It calls for practices that attend to ground's movements, instabilities, and temporalities as qualities, and that acknowledge architecture's participation in these processes. Here, architecture itself becomes a practice of dwelling with – remaining involved, responsive, and situated in specific yet changing conditions.

### 3. VENICE

Venice is often framed as an anomaly – a city at risk, an artifact under threat, a cautionary tale of humans' susceptibility. These framings isolate the city from the conditions that produced and continue to produce it. Historically, the Venetian Lagoon functioned as a refuge for displaced populations seeking solace in its unstable terrains. The city as we experience it today emerged and evolved through the population's ongoing adaptation to tides, siltation, and subsidence. Venice's durability is its ongoing capacity dwell with its uncertain substrate. The city's ground is an active participant in its formation [ill. 2].



[ill. 2] Figure 2. Campo di Sant' Agnese, Venice, 5.10.2022. (Photograph by author.)

Venice's processes unfold across multiple spatio-temporal scales, from daily tidal cycles to silt carried from mountains, and centuries of gradual sinking and refilling. Human labour operates in continuous dialogue with more-than-human forces. The ground in Venice is repeatedly made and re-made. The campi – Venice's communal open spaces – offer specific sites of sensuous encounter with this condition. They reveal the ground's instability through subtle and ongoing deformation. Surfaces slope and ripple. Wells and trees hold ground up. Stone pavements sink. These topographies mediate movement, gathering, and social life – human and animal – while registering Venice's ongoing negotiation with water and gravity.

Experiencing the campi through walking, pausing, and repeated return attunes us to ground's sensuous and temporal qualities. The body feels and is guided by slopes and ripples, changes in texture, and variations beyond immediate perception – the results of slow and cumulative processes. Each return reveals something new and something lost. Here, through ground, we experience life unfolding through relational entanglements across generations – something Deborah Bird Rose describes as the shimmering, indeterminate qualities of existence [ill. 3].



[ill. 3] Figure 3. Campo di Sant' Agnese, Venice, 5.10.2022. (Photograph by author.)

Approached as ontological-ecological terrains, Venice's campi resist being reduced to urban typologies, maps, or spatial diagrams – flattened to static data or form. They are sites where ecological processes, social practices, and material histories intersect in ways that cannot be stabilised or predicted. Attending to these terrains requires registration and representation techniques open to movement, uncertainty, duration, and involvement.

#### **4. REGISTRATION AS ATTUNEMENT, MATERIAL, TIME, AND TRANSFORMATION**

Where ground is dynamic and relational, then architectural registration cannot remain neutral, purely descriptive, or distant. Measurement, documentation, and representation techniques must

rather participate in the circumstances they engage. This research experiments with registration as a practice of attunement – embodied and situated engagement with uncertain ground.

Hand-held 3D scanning is a central component of this approach. Mobile scanning is inseparable from movement. The scanner registers both the surface geometry and image data of Venice's campi, the operator's gestures and rhythms, interruptions, changing light, atmospheric disturbance, geolocation glitches, weak signals, data storage limits, animals, other humans, leaves, furniture, water, stone – everything that remains still or moves over the course of the scan. The resulting digital models contain distortions, gaps, and overlaps as records of these interactions. This project treats these as traces of real relational conditions – registered through ground, human body, and device acting together in a specific time and place.

The scans become intermediaries in a sequence of iterative translations that extend the act of registration across temporal and material domains – generatively moving away from Venice's campi towards something new. The scans' digital meshes and image data undergo both human and machine processing before being CNC-milled into Styrofoam blocks. Subsequent casting in plaster and clay, glazing, and firing result in new ceramic grounds. Each medium introduces another register of time and uncertainty. Its own will is balanced with deliberate, responsive intervention – avoiding abstraction to draw continued attention to the terrains' vibrant, unruly energies. During processing, pouring, drying, and firing, the digital and analogue materials shrink, warp, and crack in response to software operations, gravity, heat, and their own composition. Glazing alters the new grounds through gravitational, chemical, and thermal interactions. The new grounds refuse alignment. They do not sit flat or resolve their edges. Attempts to correct these conditions would erase the processes through which they came about.

Through these processes, the new ceramic grounds evolve from Venice's campi through sequential transformation and engaged instability. Ground's uncertain qualities – susceptibility to movement, distortion, and gravity – are reproduced materially and temporally. Each translation is shaped by collaboration between human intention and material agency. This process foregrounds uncertainty as productive. Registration becomes a way of staying with how specific grounds behave. In this way, the works challenge architectural registration and representation techniques to remain open to the vitality of these grounds and activate uncertainty and connectivity as design partners.

## **5. ARTISTIC RESEARCH AND ARCHITECTURAL KNOWLEDGE**

Artistic research offers architecture ways of evolving practices and techniques to combine thinking and making, and registration and participation. In this project, knowledge emerges through sustained involvement with materials, tools, processes, and the Venetian terrains. Awareness is produced by working uncertain ground through different media over time.

The techniques of 3D-scanning, milling, casting, and firing work as negotiations between human intention, technological mediation, and material behaviour. Registration and representation occur here as provisional arrangements that remain responsive to movement, distortion, and loss and gain of information. This orientation affords architecture new sensitivities – attention shifts towards changing topographies, temporal processes, bodies' encounters with ground through movement and repetition, and subjective judgements made in-situ and in process. It also foregrounds the inability of any single representation to fully account for the complexity of an ontological-ecological terrain.

This introduces new responsibilities – to work with uncertain ground is to acknowledge architecture's participation in ongoing processes of transformation, maintenance, and care. Artistic research offers ways to materialise this participation, situating architectural knowledge production within the ethical and material realities of specific times and places.

In this context, Venice remains an unstable terrain. The campi will continue to sink, shift, and be repaired. This project neither resolves these conditions nor proposes solutions. The works – generated through dwelling with uncertainty – both register, represent, and evolve the campi.

Venice's campi are felt, and thereby teach, through emplaced experience. The new ceramic grounds hang on a wall in Aarhus and do something similar. By looking closely and touching the ceramic grounds something is sensed and learned about them – something unstable, but not abstract. These techniques suggest other ways of designing – coproducing – where authorial voice is diminished and human and more-than-human agencies join forces, allowing new forms to emerge. Aesthetic conventions are challenged and this experience provokes new ontological and ecological awareness.

Architectural registration and representation are often assessed by their capacity to reduce uncertainty. In this work, registration and representation are considered successful when they fail to do

so. Architecture remains limited if it can only accept tools and processes that behave. Claims of neutrality and objectivity in architectural registration and representation obscure this fact.

## **6. CONCLUSION**

Returning to the shimmering qualities of existence, where knowledge and experience continuously unfold through relational processes, this project centres uncertain ground as a site of insight and encounter and explores artistic research's capacity to reinvigorate registration and representation techniques to engage uncertainty and connectivity. To dwell with uncertain ground is to accept that things never really settle. Venice's campi demonstrate how dwelling nevertheless persists through continuous adjustment, care, and attentiveness – ground demands ongoing involvement.

The works discussed in this essay explore how architectural registration and representation can engage and learn from such conditions without resolving them. Uncertainty – pursued through digital and analogue material transformation – is allowed to inhabit the works as a generative force. Registration and representation become practices of negotiation, where knowledge emerges through participation.

Understanding ground as ontological-ecological terrains reframes architectural practice as an ethical and sensuous engagement with the world as it is – dynamic, contingent, and shared across generations. Dwelling with ground asks architecture to remain present, to attend carefully, and to accept responsibility within conditions that cannot be fully controlled. In a time defined by multiple uncertainties, dwelling with uncertain ground refuses to treat unruly places as problems for architecture to resolve. Instead, it offers the time and space for new practices, techniques, and forms to emerge.

## **Bibliography**

Frichot, H el ene. 2019. *Creative Ecologies: Theorizing the Practice of Architecture*. London: Bloomsbury Visual Arts.

Haraway, Donna J. 2016. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham, NC: Duke University Press.

Rose, Deborah Bird. 2011. *Wild Dog Dreaming: Love and Extinction*. Charlottesville: University of Virginia Press.

Rose, Deborah Bird. 2022. *Shimmer: Flying Fox Exuberance in Worlds of Peril*. Minneapolis: University of Minnesota Press.

## **Bio**

Matthew Dylan Anderson is an Oslo-based architect and ceramicist from the Gold Coast, Australia. His practice, research, and teaching explore how architectural and artistic methods can attune humans to ecological dynamics and reveal the material and immaterial vitality of specific places, especially watery places, linking histories with emerging futures. Matthew holds a Master of Architecture from the Oslo School of Architecture and Design – AHO, and a Bachelor of Design Studies from the University of Queensland. He is tenured assistant professor at AHO and guest teaches internationally including UCLouvain-LOCI, Brussels.

## **Notes**

1. Deborah Bird Rose, *Shimmer: Flying fox exuberance in worlds of peril* (Edinburgh University Press, 2022), 15.
2. Rose, *Shimmer*, 15.