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Citation for final published version:

Brigstocke, Julian 2021. The aesthetics of sand: reclaiming Hong Kong's unsettled grounds. *Geohumanities* 7 (2) , 370 -390. 10.1080/2373566X.2020.1847679

Publishers page: <http://dx.doi.org/10.1080/2373566X.2020.1847679>

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The Aesthetics of Sand: Reclaiming Hong Kong's Unsettled Grounds

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Article accepted for publication in GeoHumanities.

Abstract

Sand is a key material foundation of modern cities. In Hong Kong, a city founded in British mercantile imperialism, the extraction of sand needed for construction and reclamation projects has always been tied up with violent dispossession. Experimenting with the forms and poetics of postcolonial and new materialist critical theory, and thinking with sand's distinctive materialities and forms of drift, this paper develops a speculative critique of Hong Kong's sandy infrastructure. Hong Kong's colonial and post-colonial authority is legitimised by a continual process of surfacing and resurfacing, claiming and reclaiming. By evoking the process of saltation, one of sand's distinctive mechanisms of movement, the paper uncovers utopian potential in sand's unsettled qualities, searching for a new ethics of ground-down grounds.

Keywords: atomism; drift; geo-poetics; ground; reclamation

The Aesthetics of Sand: Reclaiming Hong Kong's Unsettled Grounds

March 2017, Lung Mei, New Territories, Hong Kong. Under an enamel sky, diggers tear up the earth. A churn of mud lies at the edge of a jasper sea. Construction of an artificial pleasure beach is underway, following a long delay for appeals and judicial review. The rocky shoreline has been demolished, the marine ecosystem ripped apart, vulnerable species destroyed: spotted seahorse, cowfish, dragonet, urchins, starfish.¹ Sand is dredged from seabeds, causing more damage to sea life. All to add another 200 metres of sandy beach to an archipelago with hundreds of miles of coastline. In a few years from now, the beach will have to be replenished with fresh sand. Such is the allure of the sandy city.

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2018, Hong Kong Legislative Council. During a debate about a large land reclamation project called 'Lantau Tomorrow', which will build artificial islands amounting to 1700 hectares, Mr Chan Kin Por remarks that 'The land reclamation might easily make profits, dumping sand to make money.'²

Lantau Tomorrow will be the most expensive infrastructure project the city has ever seen. Throughout Hong Kong's history, land reclamation has always been its favoured spatial fix. Such gargantuan construction projects suit the property tycoons who dominate Hong Kong politics (Poon 2011). By building in the sea, rather than on existing low-density or brownfield land in the New Territories, Hong Kong's real estate tycoons can build without having to bother about existing residents' claims, demands, and memories. The sea, and the sand with which they turn sea into land, appear to harbour no history, no memory, no opposition.

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*1906, Kau Wah King Village, New Territories, Hong Kong.*³ He looks out towards the red sun, already heating the shore and creating trails of mist, and watches the junks drawing in. A group of labourers, supervised by a British batman, wade out from the boats carrying spades, and set to work. They ignore him. Enough has already been said, too much bad feeling piling up. They have been coming for three years, digging up his beach, taking the sand to use for the reclamation project down at the harbour. His parents used to describe the days before the British arrived, but he has never known anything else. He took part in the six-day war, a few years earlier.⁴ He remembers the local villagers throwing themselves upon the Indian soldiers of the Royal Hong Kong Regiment of the British Army: two groups of colonial subjects massacring each other, with the British themselves steering clear of the fray, other than to lob shells from their war ships. After the suppression of the revolt, and with the Hakka walled villages symbolically disarmed and humiliated, the British promised indigenous villagers that they could keep

their ancestral rights to the land – their ‘traditional laws and customs’, as they put it with their famous condescension. Soon, however, the British needed construction sand – lots of it – and turned up to start digging. At first, they ignored the boundary stones marking out the village’s land. Then they smashed them up. The digging went on, until here we are: the beach has all but vanished, and behind him the ruins of paddy fields, deprived of their natural protection. This year’s typhoons have brought the sea crashing over the fields, destroying his livelihood. Last year he petitioned the colonial government, pleading with them to intervene. The stores officer refused, saying that construction was vital to the success of the crown colony, and wondering why they had taken so long to complain. Imputing ulterior motives. As if writing begging letters came easily to him.

Unsettling Hong Kong

Experimenting with the forms of postcolonial historical geography, and drawing on new materialist theorisations of elemental matter, this essay explores the place of sand in practices of colonial dispossession, also asking whether abrasive energy might be found in sand’s distinctive forms of drift: in particular, saltation, a form of movement operating through hops, jumps, and bombardments. Following Jamieson (2017), it asks how sand’s materialities invite experiments with the forms of academic writing. Contributing to work that engages with elemental aesthetics (Engelmann and McCormack 2018) and granular geographies (Jamieson 2020), the essay stages an experiment with thinking with sand. In doing so, it articulates a geographical aesthetics that questions the elemental presuppositions that form the texture of thought and experience.

Sand, the most heavily consumed resource in the world after water and air, is a material that co-composes the infrastructure of modernity. With growing recognition of the serious environmental effects of sand mining, as well as the huge amount of greenhouse gases released through cement-production (globally, cement is responsible for three times more CO₂ emissions than aviation fuel), sand is now emerging as a neglected but urgent environmental issue (Beiser 2019; Lehne and Preston 2018; UNEP 2019). Sand also plays an important part in the constitution of daily life. It has a central role in tourism and recreation, for example (Carruthers and Dakkak 2020). Moreover, beaches can be important sites of contestation and resistance (Rogerson 2017). Sand is always on the move, ‘ceaselessly shifting through the action of tides, dredging, wind, rain, mining and raking’, which means sand often has an important role in constructing the intersecting rhythms and temporalities of everyday life (Kothari and Arnall 2019; see also Bissell 2020). Infinitely malleable, sand is generative of endless new forms. Sand has a playful aspect to it, inviting imagination and creativity. Indeed, Jungian psychotherapy views sandplay, an embodied connection with the earth element, as a powerful window into the unconscious (Bradway and McCoard 1997). At the same time, sand forms materials such as

cement and concrete which ‘bind urban politics, the environment, the economy and the quotidian practices of urban dwellers’ (Choplin 2020, 1979).

The historical geography of sand has not been told in detail. Forsyth explores the role of desert sand in the construction of military aesthetics and politics (e.g. Forsyth 2013, 2016). Merriman’s (2007) history of the British motorway highlights various appeals and controversies around the extraction of the large quantities of sand and aggregate needed to build the motorway. Other studies have focused on the history of beaches as sites of racialized exclusion, violence, and contestation (Perera 2009; Kahrl 2012; Durrheim and Dixon 2001; Saldanha 2007). Lai, Chau, and Lorne (2016), meanwhile, turn their attention to the ecological economics of Hong Kong’s state monopoly of sand. In this paper I trudge across some of the same ground as that study, but shift the focus from ecological economics to cultural and political issues. My question is whether thinking with the sandy substrate of Hong Kong might generate an historical analysis that disrupts the aesthetics of racialized extractive capitalism by unearthing unsettled, shifting grounds, working with the elemental swerve of matter to undermine material practices of consolidation and colonial closure. The essay is thus an exercise in stylizing an aesthetic attunement to more-than-human materialities and temporalities (Brigstocke and Noorani 2016). Working with ideas around granularity, mixture, and ‘saltation’ (a ‘hopping’ motion of granular flow), my intention is to exemplify a way of working with the gaps and discontinuities between things – the tiny in-between spaces - and with the elemental swerve of matter (Serres 2000).

Viewing Hong Kong’s unstable grounds as an assemblage of consolidated dynamic matter requires an analysis that engages with the more-than-human biopolitical materialities of race, racism, and colonialism (Yusoff 2018; Mawani 2019; Saldanha 2006; TallBear 2013; Sundberg 2014; Chen 2012; Swanton 2010). Moreover, building arguments on such unstable, shifting, or ‘hollowed’ ground (Doel 1993) demands ongoing critical engagement with the *forms* of theory. Recent work in the geohumanities offers many examples of formal experimentation (e.g. Boyd and Edwardes 2019; Vickery 2015; Magrane et al. 2019; Vannini and Vannini 2020; Wright et al. 2012; Cresswell 2019; Parikh 2020). Relatedly, some writers have argued that analysis of spatial practices has much to learn from anti-realist forms such as surrealism (Blencowe 2016), magical realism (Laws 2016), situationism (Pinder 2013), and spontaneous prose (Honeybun-Arnolda 2019). Formal experiments are especially important in expressing the experiences of colonised people, where the ground of reality has already been destroyed, demanding expressive forms that can articulate and heal the wounds of systematic racism and dispossession. As Bhattacharyya (2020) emphasizes, anti-racist writing has a long tradition of using expressive culture to remake our understanding of what intellectual work can be. W. E. B. Dubois’ (1903) *The Souls of Black Folk* provided a foundational statement of this, making use of music in his writing to style a kind of ‘synaesthetic’ social theory in which spirituals (or ‘sorrow songs’) narrow the experiential gap between collective history and individual experience (Wall 2005; Andrews, Keller, and Fontenot 2007). Gloria Anzaldúa’s (1987) *Borderland/La Frontera* made use of formal experiments

including genre-switching and multi-lingual writing to express a politics of hybridity in violent border spaces. More recently, the *Afro-Surrealist Manifesto* calls for liberation through ‘rococo’ forms: forms that operate through ‘mixing, melding, and cross-conversion’, striving to be at once beautiful, sensuous, whimsical, mystical, silly, and profound (Miller 2013). Such surrealist geopoetics uses ‘excess as the only legitimate means of subversion, and hybridization as a form of disobedience’ (Miller 2013). I also learn much from Glissant’s (1997) *Poetics of Relation*, which outlines a thinking from the shoreline: its forms constitute a tidal poetics formed from alluvial deposits of sand, silt, and mud (Wiedorn 2018). Glissant’s politics of aesthetics are an invitation to a geo-poetics that connects flows of water, sand, time, bodies, violence, and memory.

The argument of this paper moves in hops and leaps: sometimes settling in heaps, sometimes swirling in the wind, sometimes clouding the water. Sand drifts in several ways, but its most common form of flow is the hopping motion referred to as saltation. Evoking this form of flow means styling a granular mode of presentation (Jamieson 2020), articulating sand as a semi-chaotic mixture of heterogeneous materials. This generates a discordant mixture of styles, voices, forms of expression, and narrative form. At times the writing is bound by the cement of theory and exegesis; at others, it jumps around in its fluid medium. Some of the grains are tiny; others are large. Learning from the process of saltation and saltation bombardment (Warren 2013), the writing jumps across different voices, spaces, temporalities, and scales. It owes a debt to Benjaminian transfigurations of the city of modernity as ruin (Gassner 2019; Leslie 2006), but rather than blowing the city to rubble through montage, it transfigures it into a sandy *heap*. Once the wind stops blowing, saltating sand settles into intricately patterned heaps. The significance of this shift from rubble to heap is that it invites a different form, moving from Benjaminian shock and juxtaposition towards an aesthetics of connection, mimesis, and drift (Lavery, Pelissero, and Pinder 2018). In transfiguring the city as ruined landscape, I stylize a more granular critique of the city as a heap of pulverised matter: ‘a spiraling, growing pile of pieces, parts, zones, fragments, slivers, particles, elements, outlines, seeds, kernels, clusters, points, meters, knots, arborescences, projections, proliferations, and dispersions’ (Nancy and Barrau 2014, 52).

The essay begins by portraying contemporary Hong Kong as a ruined landscape: a dynamic heap of pulverised rock and eroded life. We then move on to consider the aesthetics and forms of sand. The final two sections intersperse a historical geography of the Hong Kong Sand Monopoly with contemporary debates around Hong Kong’s ongoing sand supply crisis. In doing so, I search for conceptual forms that locate the granular life immanent within the consolidated, concretised aesthetics of the modern (post)-colonial city.

A Cemetery of Landscapes

and follow me, around this fluid landscape, a sandy vista of concrete and cement and glass and electronics and bitumen and asphalt. Let me show you this cemetery of rock and shell. Allow me to present the landscape of Hong Kong to you as a sandscape, a cemetery of landscapes

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stand on an overpass on Harcourt Road, near the government buildings in Admiralty, looking out towards central Hong Kong. Peering out over 11 lanes of traffic, feel the noise rumble through your body, an arrhythmic din of cars, buses, and lorries, fossil fuels burning, horns sounding, crankshafts revolving at two thousand revolutions a minute. Sinking into the surface of things, drifting through the dreamlives of debris (Olsen 2017), feel the traffic racing across a bed of sand. Below the black, uniform asphalt surface lies a teeming multiplicity of ground-down rock: quartz, feldspar, amphiboles, micas, chalcedony, sanidine, orthoclase, microcline, plagioclase, muscovite, biotite, glauconite, pyroxene. All ground down over thousands of years, drifting inexorably towards the sea, their movement interrupted but not arrested. Supporting the weight of all this traffic is a sticky bituminous layer, somewhere between 28 and 50 cm thick, above additional layers of sand and gravel bound by cement. The bituminous layer must be thick enough, and the sandy sub-layer stable enough, to reduce the likelihood of failure (HongKongHighwaysDepartment 2013). For this, a thick concrete base layer is needed. All in all, about 90% of a road is made up of sand and gravel, reaching deep under the surface of the city towards

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sand has an important role in surfacing the everyday, wrinkling the skin of the city. A UN report warns that sand is a foundational material of global economies, yet is forgotten and uncared for (UNEP 2019). Sand is one of the most heavily consumed resources on Earth. It is a material foundation of modernity, forming a core ingredient of concrete, cement, asphalt, glass, microchips, and much else. Modernity is built on the assumption that sand is a limitless resource. And yet

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buildings thrusting into the sky, skyscrapers vanishing in the smog, their lightshows lost in the clouds. What a spectacle! Each a wonder of engineering. Symphonies of sand, light, glass, air, water, sweat, information, desire. Miracles of steel frames, reinforced concrete, outrigger systems, mega-columns, 6-metre thick concrete foundations, tunnelling deep into a concrete sea. Each building, and the land it lies on, is a ‘contortion of the unconsolidated’ (Bobbette 2016). Hong Kong’s history of landslides and unstable ground has prompted a battle with the heterogeneity of the earth, through never-ending projects of concreting and re-concreting Hong Kong’s surfaces and slopes. Similarly, the skyscrapers are largely made up of concrete (a mixture of sand, water, and cement), poured around a gridwork of steel rods,

which strengthen the concrete against bending motion caused by the wind. Wrapped around the structure is more sand, this time in the form of reinforced glass: sand melted in furnaces to the temperature of molten lava, homogenized, refined, annealed, and tempered. Within the buildings, we find a labyrinth of microchips, also made from sand: pure quartz that

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might help give shape to a postcolonial history of Hong Kong's stolen grounds?

Hong Kong has always been an in-between space, a mediator, a connector. In colonizing it, the British were motivated less by territorial gain than by commercial interests, using the Opium Wars to forcibly open a lucrative market in China. In the years before and after the 1997 handover of sovereignty to China, Hong Kong engaged in a prolonged questioning of its identity, culture, history, and future (Chu 2013; Mathews, Ma, and Lui 2008; Abbas 1997). These sparked major political controversies around heritage and memory (such as the protests about the destruction of the Star Ferry Pier), as well as two major non-violent uprisings: the 'Umbrella Revolution' of 2014, and the 'Water Revolution' of 2019-2020. In summer 2020, the process of 'mainlandization' accelerated sharply with the passing of a new National Security Law, imposed by China and bypassing Hong Kong's legislature, effectively ending the 'one country, two systems' arrangement in Hong Kong. This hugely significant event occurred after this paper was drafted, and I am unable to address it adequately here, other than to echo Chu's remark that 'it is urgent and critical for Hong Kong to have a new mode of writing about postcoloniality from a different perspective' (Chu 2018, 57). §

'Hong Kong' cityness – that is, its international or cosmopolitan status – is indistinguishable from the violence that established it as such, namely, British mercantile imperialism ... Together with its coloniality, then, economics and commerce are Hong Kong's "origins": there has never been any alternative social framework in the territory in modern times' (Chow 1998a).

Almost as soon as the British landed in Hong Kong, they began reclaiming land from the sea. Soon after the first marine lot sales in Hong Kong (in 1841, a full two years before Hong Kong was ceded to the British Empire in the Treaty of Nanking), the new marine lot owners started reclaiming land from

Victoria Harbour, able to gain ‘free’ land because of the vagueness of their land sale terms (He 2018).⁵ By 1851, the colonial administration was also beginning more systematic land reclamation projects. Colonial Hong Kong thus emerged through two complementary myths of terra nullius: not only the famous myth that pre-colonial Hong Kong was a ‘barren rock’ with no inhabitants; but also the myth that it was possible to magic new land – and vast profit – out of the sea.

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stay in the noise; feel the world tremble. In the sultry summer heat, bouncing off the surface of the road, the cars passing under you are like grains of sand in a concrete desert. Behind you, the desert narrows into several gullies of cement, as if carved out by a glacier and frozen into a motionless river. Twisted in a hall of mirrors, the dense fabric of skyscrapers gleam in gold, grey, green, white, blue, reaching out to each other in an endless circuit of distorted reflections, where

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sand is deeply intertwined with capitalist and colonial logics of extraction, land speculation, and financialization

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harbours a cauldron of microscopic life between its grains

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glitters in the raucous multiplicity of mixture, variation, granular flow, semi-chaotic form, saltation bombardment

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the hardest of rocks shatter and wear away when ground down by frost, rain, ice, or water. A grain of sand, on the other hand, is almost indestructible (Carson 1955)

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world is running out of building sand. Global extraction rates far exceed replenishment rates, and the volume of sand extracted from rivers, beaches and seabeds (often illegally) poses substantial threats to river and marine ecosystems. We face a tragedy of the sand commons (Torres et al. 2017). Yet the global construction industry assumes a paradigm of infinite sand resources. About 40-50 billion metric tonnes of sand and gravel are extracted from quarries, rivers, coastlines and sea-beds every year (Peduzzi 2014), and the construction industry accounts for over half this volume (UNEP, 2019).

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here, on Harcourt Road, we are standing on land that was only recently reclaimed from the sea. About 27% of Hong Kongers live on reclaimed land, and 70% of its commercial activities take place on reclaimed land. Throughout its history, Hong Kong's prosperity has been supported by an almost continuous series of reclamation projects that create land by pouring vast quantities of sand and concrete into the sea (He 2018). Hong Kong's dramatic economic and population growth, its place in the vanguard of neoliberalism, is grounded on a continual production of new grounds and sandy surfaces (Lai, Chau, and Lorne 2016; Ng 2006; Ng and Cook 1997), continually shedding

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show one of Hong Kong's many skins: the skin of a colonial ruin of ground-down grounds, of pulverized stone, of continually moving foundations

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ask how power in Hong Kong's dynamic landscape acts through endless regrounding, each transformation relying on more sandy substrate. Each resurfacing of the social creates an increasingly volumetric, multi-level city, a city where the very notion of ground has little meaning as it develops a sophisticated three-dimensional, architecture (Frampton 2012; Shelton, Karakiewicz, and Kvan 2013).

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search for abrasive energies within the flows and rhythms of this treacherous, unstable, playful, shape-shifting, infinitely varied mixture

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city as a living an-archive of sand that has been bound, poured, melted, claimed, concretised, reclaimed, hydrated, formed, reformed, smashed, crumbled, ruined

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a monument to consumerism, colonialism, and greed. This city, passed down like a diamond from one colonial power to another, has become a space of disappearance (Abbas 1997), suspended between two different colonial masters. It is bound up in extractivist imperialism (Mezzadra and Neilson 2019), both in the contemporary era as an importer of sand from elsewhere in southeast Asia,

and in its colonial history in which sand extraction contributed to the devastation of its waters and the dispossession of its indigenous inhabitants. It is a sandy ruin: a cemetery of mountains, a graveyard of fluid rock, drifting §

an analysis that cuts through the illusory magic of land reclamation (the trick of creating land and profit apparently out of nowhere): enlivening materials, animating archives, finding the utopian energy latent within the materialities of lively infrastructure. Such analysis can drift with the sandy skin of the city, traversing boggy, treacherous states between solidity and fluidity. It can inhabit the force of reclamation: reclamations of land from sea; of sea from land; of identity, minerality, memory, futurity, truth. It may reclaim the sandy surfaces of the city. It might inhabit multiplicity, mixture, turbulence. Drift

Sand Forms

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Sand: What do you want from us?

Julian: An interview.

Sand: What is an interview?

Julian: An attempt to gain an insightful glimpse of another (Adams and Thompson 2016, 17).⁶

Sand: Why are you interested in us?

Julian: You make the world as I know it possible. You make up the ground I walk on, the buildings that shelter me, the windows I look through.

Sand: You dig us, melt us, blast us, mould us, petrify us into consolidated forms. We, who link you to the shadowy origins of life itself.

Julian: Who are you?

Sand: We are lithic and organic, rock and bone, granite and silica and shell and mineral. We are defined by our size: particles between 0.074 and 4.75 millimetres. We owe our existence to millions of years of weathering and decay. We are what remains of cataclysmic collisions of continental basements. We are the washed-up residue of dead mountains. Most of us settled here in the immense floods of the Quaternary Period, until we were dug up by your kind over the last hundred years, and fused into concrete and glass and asphalt. We are mostly chemically inert, which you find useful for combining us with cement to make concrete. Some of us have recently travelled great distances: dug up

from seabeds, rivers, and mountain tops in China, Vietnam, Cambodia, Malaysia, Indonesia, the Philippines. Who are you?

Julian: I am from the country that seized you during the Opium Wars of the 1840s, bringing about China's so-called Century of Humiliation. I am from the country which in 1972 agreed with China to take Hong Kong off the United Nations list of 'Non-Self-Governing Territories', depriving Hong Kongers of the right to self-determination granted by the UN's 1960 Declaration on the Granting of Independence to Colonial Countries and Peoples. I first came here almost randomly, to make up the numbers on a teaching team. I became fascinated and disoriented by Hong Kong's relationship with the ground, which was unlike anything I had experienced before. I also witnessed the stirrings of Hong Kong's Umbrella Revolution, and was swept away by the surge of energy during these protests.

Sand: What do you want from us?

Julian. To help me find a voice for memories of things that are so mixed up, and so fluid, that people usually don't think they even have a history.

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Hong Kong does not fit easily into dominant postcolonial narratives. Whereas colonialism is closely associated with under-development, at the point of the handover from Britain to China in 1997 Hong Kong was wealthier (per capita) and more developed than both its colonial masters. It also is a unique political experiment, in that its 1997 'de-colonisation' was merely a transfer of sovereignty back to China, with no consultation of the local population, and with a 50-year period of autonomy under the 'one country, two systems' arrangement. Hong Kong has had no liberation movement – or at least, not until the protests of 2019-2020, which brought pro-independence movements into greater prominence until they were repressed using the National Security Law of June 2020. Since 1997, Hong Kong has existed in a state of suspension 'between colonizers' (Chow 1998b).

Sand forms suspensions in water and air, but this is not its primary mechanism of drift. In contrast to Choy's (2011) wonderful account of Hong Kong as a city in suspension, I wish to ask here whether writing Hong Kong in a condition of *saltation* might succeed in disrupting the aesthetics of the contemporary global city. What can we learn from sand's own distinctive forms of drift? Might critical theory and new-materialist theory learn from sand's hops and leaps to expand the in-between spaces, the swerve of dynamic matter? Might this help critical theory to dwell longer in boggy ground, to avoid falling into problematic metaphysical oppositions between solidity and fluidity, stasis and process, being and becoming? Can recovering the history of Hong Kong's sandy infrastructure counter the ideological myth that 'reclaimed' land – and the marine environment that it displaces and destroys – somehow has no history, no past, no memories to be recovered?

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Fragment from a Screenplay. "The Adventures of Friar Sand." (Rejected.)⁷

EXT. HONG KONG BEACH.

CRUNCH. CRUNCH. CRUNCH. Some men are digging up sand on the beach. In the background, villagers look at them with hostility. A quick flash of light: a sword? Tripitaka, Pigsy and Monkey make their way along the beach. They stop at a beach café called River of Flowing Sands.

AAAIIEERRRRREEEEEE. A fight has broken out between sand diggers and villagers. CRASH. Two combatants tumble onto the table and disturb the food. Pigsy hurls them into the sea. Now both sides turn on the pilgrims. Tripitaka hides under the table, while Monkey and Pigsy nonchalantly fight off waves of villagers and diggers wielding swords, knives, staffs, and guns.

Sound of wind, and sand shifting, and then a haunting noise: the singing of the sands. It rumbles and shifts smoothly in pitch. It sounds like a cross between an aeroplane engine, a didgeridoo, and a theremin. It becomes louder and louder.

The fighting stops. Sudden SILENCE.

Focus on individual grains of sand, of kaleidoscopic shapes and colours and sizes. Wind. Grains shake and jump into the air. Sometimes they seem to hover for a moment in mid-air. Some leap out of view; others fall, rest for a few moments, and then leap up again. Saltation.

MONKEY

A demon! Oh, Master! In which incarnation did you incur such ordeals of bondage, that you must in this life face monster-spirits every step of the way! It's so hard now to rid you of your sufferings. Don't worry. The heavenly army itself is no match for me.

The wind blows harder. Patterns emerge in the saltating sand. Saltation bombardment begins: the grains of sand hit each so violently that they start to create huge clouds of turbulent, chaotic sand. Friar Sand appears in the water. He has a fearsome appearance: red beard, balding head, a wooden staff, and a necklace of human skulls.

TRIPITAKA

Help!

MONKEY

Eeeeeee, I can't fight in water!

Pigsy gives him a long look and plunges into the sea. Long fight - stalemate. Pigsy is exhausted, and retreats back to the paddy field.

FRIAR SAND

Come back, coward!

PIGSY

Who are you who dares block the holy path of the Tang Monk?

FRIAR SAND

Why did you not say? I have been waiting here, under the instruction of Bodhisattva Guanyin, for a holy monk to call upon me for help. How can I help you, master?

TRIPITAKA

Thank you Friar Sand. Please teach us everything you know. Pigsy here can leap across clouds. Monkey, with his steely gaze and iron eyes, can transform into anything in the universe. But none of them move and change as you do.

FRIAR SAND

I will teach you to drift; to move in hops and leaps. Watch. A grain is lifted off the surface by the wind or water, accelerated by the fluid, and then pulled downward by gravity. See it hop! We move by small leaps, in a continuous dance with a fluid medium. Now let the wind blow a bit harder, and watch how each grain of sand, when it lands, kicks up others into the air. Now we have a cloud of sand! A chaotic, turbulent flow of matter: dust storms, avalanches. Saltation bombardment: perhaps this is the weapon you need.

Dispossession

Sifting the archives of Hong Kong's Colonial Sand Monopoly, which was established in 1935 to ensure a secure supply of sand to enable Hong Kong's construction boom, I find traces of a long history of dispossession of indigenous Hong Kong villagers by sand digging. As the colonial administration, needing ever-increasing amounts of construction sand to feed Hong Kong's building boom, dug up

villagers' beaches, they found their paddy fields engulfed with sea water. Colonial sand extraction deprived indigenous villagers of their livelihoods, leaving them destitute and

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1933, *Annual Report on the Social and Economic Progress of the People of the Colony of Hong Kong*. 'The demand for sand continues to be keen ... The denudation of the beaches in the District by sand thieves continues to cause concern. In spite of much hard work and extra precautions on the part of Police launches, and heavy sentences on offenders when convicted, the nuisance is still only partially checked. Maximum penalties are now being exacted in an effort to stamp out this offence'.⁸

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1937, *New Territories*. 'Northward, navigation is impeded by rocks, and villages are mostly small and unimportant, except Tai Pak and Yi Pal ... These are Hakka villages. The villagers here protected their fine beaches by piling stones in the water 100 yards off shore, so that sand junks could not get near; if they did, the villagers repelled them with guns' (Schofield 1983).

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1931, *E.R. Hallifax, Colonial Secretary*: '[O]bservation of the Crown foreshores in the Colony tends to the conclusion that the sandy beaches from which sand has been removed under Government permits do not recuperate to any appreciable extent, and that sand in the Colony must be more carefully conserved ... It is not at present proposed to withdraw or refuse permits to take sand in proper cases, but all applications for permits will require careful consideration'.⁹

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2018, *Mr Abraham Shek, Hong Kong Legislative Council*. 'With these 1700 hectares of reclaimed land, we are blessed with an opportunity of a lifetime, not only to design but to actually build a sizable residential and commercial hub from scratch. If we do it right, President, ELM [East Lantau Metropolis] can emerge as an envy of the world'.¹⁰

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1920. *E.W. Hamilton, responding to complaints from villagers about sand digging*: '... [It] would be thoroughly bad policy to take any action which will hamper building in the Colony or increase the price thereof. I have visited the place with the Building Authority who tells me the sand is singularly good quality. It remains then to decide on a definite line of action'.¹¹

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sinking into the sand and the mud, the boggy ground, neither solid nor fluid, semi-choate, drifting, forming patterns, creating resonance, a passionate embrace, the joy of the multiple, raucous, noisy, jumbled, mixed, myriad (Serres 1995)

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One study suggests that in 2011 alone, 34.48 million cubic metres of sediment were extracted from the Mekong river in Laos, Thailand, Cambodia and Vietnam (Bravard, Goichot, and Gaillot 2013). Of that quantity, about 90% was sand. This sand is exported to nearby countries like Singapore, China, and Hong Kong. Devastating environmental impacts are well documented.

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1935, An Ordinance to Protect the Sand Supplies of the Colony and to Regulate the Sale of Sand. ‘No person may take sand from any land, foreshore or sea bed, not under lease from the Crown, without having previously obtained a written removal permit or sale and removal permit applicable to such sand from the Controller of Stores’.¹² Any person contravening the law shall be liable to a fine of one thousand dollars and imprisonment for six months.

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In 1935, Hong Kong’s acute sand crisis culminated in the formation of the Colonial Sand Monopoly. All Hong Kong sand was now placed under the control of the colonial administration, and digging for sand without a permit was made illegal. The government fixed the price of sand, allowing itself a small profit from the sale. The formation of the Colonial Sand Monopoly is testament to the importance of controlling the extractive infrastructure underlying Hong Kong’s growth. It is well understood that control of land has always been the heart of Hong Kong’s political and economic governance (Mizuoka 2018; Haila 2000; Poon 2011); what is less well explored are the histories of the material foundations of this land (though see Bobbette 2016; He 2001; Lai, Chau, and Lorne 2016). Construction needs trumped every other consideration, and Hong Kong’s sand monopoly did little to protect villagers’ livelihoods.

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1922, Sha Lo Wan, Lantau Island. ‘Sand shortage was serious from 1924 to 1926, when concrete was coming into fashion for building, and between the demands of builders, and the interests of New Territory cultivators of land behind the sand banks, there was acute conflict, which sometimes grew into a shooting match. One such conflict took place at Sha Lo Wan in Northwest Lantau; this village was very jealous of the fine sandbank protecting its fields, and had licenced gun owners; so the crews, who had no permit for that beach, were driven off without their sand’ (Schofield 1977).

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1965, *Sha Lo Wan, Lantau Island*. 'Work has started on the removal of sand from a small bay on the north coast of Lantau Island ... The villagers of Sha Lo Wan have expressed some anxiety about the removal of sand from the area and, in particular, from the beach in front of the village.'¹³

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'There is opacity now at the bottom of the mirror, a whole alluvium deposited by populations, silt that is fertile but, in actual fact, indistinct and unexplored even today, denied or insulted more often than not, and with an insistent presence that we are incapable of not experiencing' (Glissant 1997, 111).

Exhaustion

The Colonial Sand Monopoly maintained exclusive control over the colony's sand reserves, operating at a small profit, for almost fifty years, during a period of rapid growth in population, wealth, and urban development. During the 1950s, a private enterprise called the Yau Wing Company stepped up to fulfil the surging demand for sand on behalf of the colonial government. On its own initiative, it took the gamble of purchasing (at vast cost) modern barges and dredgers, and in 1960 it offered to carry out a free sand survey for the colonial administration, knowing that it was the only company with the means to dig for any sand that it discovered.¹⁴ This survey found a large quantity of sand on Hong Kong's seabed. In return for the geological survey, Yau Wing was given a contract renewal for three years without having to tender. After this, they received several additional government contracts to supply additional sand from China. Their dominance of the sand market eventually proved highly controversial. By the 1960s, the Monopoly was widely attacked, due to the uncompetitive nature of its contracts.

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1956, *Controller of Stores*. 'During the year complaints have been received about the quality of the sand which is provided by the Stores Department, but I am afraid that it will have to be realized that the sand resources of the Colony have been so desperately depleted during the past few years because of the enormous demands for building, that it is becoming more and more difficult to supply good quality building sand ... The alternative is to import, and Government will place no hindrance in the way of those who can bring in sand from elsewhere.'¹⁵

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Sand's granularity and treachery draws me away from a search for solid foundations, towards more atomist materialisms (Bachelard 2018; Serres 2000). Let us suppose that nature is made up of two fundamental principles: atom and void. Like grains of sand, atoms are found in an infinite variety of shapes and sizes, each indestructible, indivisible, and surrounded by a void. At first, in a state of dead repetition, atoms follow parallel paths without colliding or interacting. This flow gives way to sudden turbulence, where a certain atom's small deviation in direction sets up a catastrophic chain of collisions – not unlike a saltation bombardment. Eventually this chaotic movement of atoms stabilizes into a vortex pattern (Brown 2002). Our world was formed out of this vortex, with myriad combinations of atoms coming out chance encounters and held by the regular movement of the flow (Webb 2006).

The clinamen – the swerve, the deviation, the minimum angle – marks the indeterminacy of all forms. Things are born in deviation. They are constituted out of tiny angles of difference from equilibrium. There would be no things in this world, no solidity, no concrete, but for the elemental swerve of all matter...

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Hong Kong Standard, 1965. '[I]n at least one sector of its affairs Government still operates in a manner which is highly questionable. Any monopoly in a key commodity needs to be handled with great care by Government ... It seems most unsatisfactory that the original sand contract should have been arranged by private treaty in a manner so veiled from public scrutiny ... Making arrangements behind closed doors may have been a satisfactory way of doing things at one time in this Colony's history. This is no longer true today.'¹⁶

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1969, Legislative Council. 'The Government has had the future of the Sand Monopoly's present arrangements for the supply of sand under review for some time. However, the position remains complicated by the fact that the only continuing sources of supply are external to the Colony'¹⁷

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In 1981, the Colonial Sand Monopoly was finally disbanded, returning sand to the open market, at first sourced mainly from China, and more recently, from other nearby countries. In interviews with one of the only environmental activist organisations to take interest in the supply of sand, I am told that although many neighbouring countries have banned sand exports, the supply chains of sand are opaque, and illegal sand importation is rife. My interviewee shows me vials of recent construction sand which they have forensically traced to Vietnamese beaches. With Hong Kong's sand supplies exhausted, the geography of colonial dispossession has expanded over greater distances. The movements of Hong

Kong's unstable grounds have acquired a wider, more expansive geography, exporting social and environmental dispossession to neighbouring countries.

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2013, *Dong Nai River, Vietnam* '... [I]llegal sand exploitation by local residents and authorities along the Dong Nai River has increased rather than diminished in the last decade, despite efforts to ban it ... Although illegal sand exploiters, after being detected by inspectors, rammed their boats against barriers or even resisted those who were on duty, no one was arrested ... [L]ocal residents who have lost land to the river because of sand exploitation said the situation was hopeless. Farmers in Bien Hoa city's Quyet Thang Ward said their pomelo and mango gardens located along the river disappeared due to landslides ... Land erosion caused by sand exploitation has narrowed land plots of local residents and even swept away several houses' (VietnamNews 2013).

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thinking as multiplicity, mixture, and variety, and labouring with the discontinuities, gaps and voids between things

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Whereas solids teach us about form and assembly, and liquids teach us about change and flux, thinking with granular materials lead us on a path towards the limits of experience, towards the impalpable and invisible, the relation between atom and void (Bachelard 2018).

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guided by a cosmic pessimism. Sand reminds us that it is the fate of all forms to decompose

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the mute world, the voiceless things, the inert foundation supporting the shimmering spectacle, all the things that humans have ignored, are starting to find their voice and impose themselves on our awareness (Serres 1995, 3)

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2018, *Hong Kong Airport*. Building work on the third runway suffers major delays, and astronomical cost overrun, due to difficulties with sourcing enough sand to carry out the land reclamation. 'Apart from the Mainland sources, the reclamation contractor has been exploring other overseas sources of

sand supply. A trial delivery from Malaysia has arrived in early November 2018. Further deliveries from Malaysia and the Philippines are also being arranged'.¹⁸

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Malaysia, 2018. '...Malaysia's newly elected prime minister once said that illegal sand miners were "digging up Malaysia and giving her to other people." During his previous term in office, he tried to fix what he viewed as an aggressive assault on Malaysia's heritage: the selling of its sand ... [I]t appears the ban was at best only minimally effective, and in most years completely illusory' (Banergee 2018).

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2018, Legislative Council. 'Apart from possible impacts on marine ecology, reclamation will not affect the interests of anyone. Then why do they oppose reclamation?'¹⁹

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a abrasive force in this nascent, sandy state, in the minimal angle between equilibrium and drift. An energy to be grasped in the discontinuities between individual grains and atoms ... turning away from thinking with concrete foundations, into the granular flow to which all concrete will, one day, return. Dwelling with semi-solid matter: mixtures, granules, varieties, angles, drift

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history is co-extensive with nature, and knows no progress. Equilibrium is only ever temporary, and always declines into drift. Nature and history can only be seen as they are written: as birth, natality, drift, swerve

Settling

In this paper I have offered an experiment with the forms of postcolonial critique in the geohumanities, taking inspiration from new materialist thinking to offer a non-representational historical geography of Hong Kong's sand. Exploring the central (but under-acknowledged) role of sand in modern extractivist capitalism, as well as evoking a disruptive energy in sand's distinctive forms of granular drift, I have attempted to transfigure the Hong Kong skyline, an iconic landscape of 20th century capitalism, into a ruined sandscape: a cemetery of pulverised, ground-down materials. Sand does not come from nowhere, but has a history – a history that is frequently bound up with colonial and neo-colonial forms of dispossession and devastation. Hong Kong is a city, founded on violence and imperial mercantilism, that continually regrounds itself through processes of construction, concretisation, and consolidation. This resurfacing of the everyday is a powerful form of enclosure (Grydehøj 2015).

In doing so, I have foregrounded the importance of formal experimentation in critical theory and the geohumanities. Close attention to the material properties of spaces, objects, and histories demands a simultaneous experiment with form. Developing the aesthetic forms of critique is not just a question of style – of making theory more vivid, compelling, accessible, or even more hermetic (Glissant, for example, claimed a ‘right to opacity’). Rather, certain ideas and insights are impossible to articulate without finding the forms in which they are sayable and thinkable (Roberts 2019). By establishing a playful, mimetic relationship with sand’s distinctive forms of drift, I have suggested, it is possible to reclaim the granular life immanent within the consolidated, concretised, yet always unstable grounds of contemporary Hong Kong.

Acknowledgements

Readers of early drafts of this article, including Claire Blencowe, Günter Gassner, and Suha Babikir Hasan, offered enormously helpful encouragement and insight. Thanks also to participants in the Symposium on *Spaces and Politics of Aesthetics* at Cardiff University; in the *Truth, Fiction, Illusion: Worlds and Experience* conference in Klagenfurt; and in the inspiring lecture series organised by Anna Grear and Dot Kwek, *Imagining the Eco-Social: New Materialist Reflections for the Anthropocene*. I am grateful also to the anonymous peer-reviewers for their constructive and helpful suggestions.

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¹ Material in this fragment derives from a research interview with a prominent environmental campaigning group in Hong Kong.

² Mr Chan Kin Por, Hong Kong Legislative Council Debate, 'Motion of Thanks', responding to the Chief Executive's annual Policy Address, 9 November 2018. <https://www.legco.gov.hk/yr18-19/english/counmtg/hansard/cm20181107-translate-e.pdf#nameddest=mbm01>

³ This fragment is a fictional retelling of a letter sent on 23 May, 1906, to colonial administrators complaining of sand digging. Hong Kong Government Records Service, 'Sand Removal of From Foreshore at Kau Wa King Village', HKRS58-1-36-13.

⁴ On the six-day war, see (Hase 2008)

⁵ (He 2018)

⁶ Etymologically, the word 'interview' derives from the French 'entrevoir' (to have a glimpse of) and s'entrevoir (to see each other)

⁷ This fragment follows in the tradition of irreverent adaptations of the great Chinese novel *Journey to the West*, a spiritual journey in which the Tang Monk gathers together tutelary shape-shifting deities (Monkey, Piggy, Dragon-Horse, and Friar Sand) to guide and protect him in his quest. Throughout the book, it explores structures of order and authority through the use of 'demonic others'. It is a deeply elemental book, not in the Empedoclean sense that dominates Anglophone geographical writing (identifying the unchangeable roots of substance as fire, earth, air, water), but in the Chinese Wu Xing tradition of elements (wood, fire, earth, metal, water) as dynamic forms of transition.

⁸ 'Report on the New Territories for the Year 1933', Appendix J, *Annual Report on the Social and Economic Progress of the People of the Colony of Hong Kong during the Year 1933*, p.20.

⁹ Colonial Secretary E.R. Hallifax, 27 March 1931. 'Stone and Rubble on Foreshores', Hong Kong Government Records Service, HKRS58-1-135-75.

¹⁰ Mr Abraham Shek, Hong Kong Legislative Council Debate, 'Motion of Thanks', 9 November 2018.

¹¹ 'Unauthorized Removal of Sand From Foreshore Near Mui Wo, Lan Tao Island Proposed Resumption of Lots 511 & 547', Hong Kong Government Records Service, HKRS58-1-95-10.

¹² *An Ordinance to Protect the Sand Supplies of the Colony and to Regulate the Sale of Sand*, passed into law in 1935. Available <https://www.elegislation.gov.hk/hk/cap147>

¹³ Newspaper clipping, unidentified source, 1965. Hong Kong Government Records Service, 'Stores Department – Sand', HKRS931-6-392.

¹⁴ See the account by the Financial Secretary, in Legislative Council, 26th March 1965, as well as various letters in HKRS931-6-392.

¹⁵ 19 February, 1956. 'Price of sand - 1. Petition from Ho Lu Kwong, chairman of the building contractors association ltd. Against the increase of 2. Claim for refund in respect of increase in price of sand.', Hong Kong Government Records Service, HKRS229-1-194.

¹⁶ Clipping from the *Hong Kong Standard*, March 13 1965. In Hong Kong Government Records Service, 'Stores Department – Sand', HKRS931-6-392.

¹⁷ 'Reply by the Honourable The Acting Financial Secretary in Legislative Council on Wednesday, 2nd July 1969'. In HKRS931-6-392.

¹⁸ *Update on the Development of the Three-Runway System at the Hong Kong International Airport*, 30 November 2018, Legislative Council Paper No. CB(4)274/18-19(01)

¹⁹ Mr Leung Che-Cheung, Hong Kong Legislative Council Debate, 'Motion of Thanks', 9 November 2018.