

# Movements of Contingency

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Landmasses, seas and islands have repeatedly been reshaped by atmospheric and geological alterations. Made up of tectonic plates, always on the move as they float on layers of liquid lava, drifting wherever the hot mantle moves them, the Earth's crust is in itself inherently mobile. Where one plate ends another one begins, their edges form fault lines. These boundaries are where most earthquakes happen, where magma from below erupts pushing plates against or apart from each other, and occasionally, where plates are themselves carried into the mantle.

In ancient times all landmasses were gathered in a single supercontinent, Pangaea. This was long before humans populated the Earth, and only in the 16th century, as new-world maps were drawn, were the similarities or complementarities of the opposite coastlines of the Atlantic Ocean observed, with shapes that could have fit together. Later it was found that these opposite edges contained similar rocks, and eventually the theory of the wandering continents was accepted. Describing continental drift in his 1915 book on the origin of continents and oceans, meteorologist Alfred Wegener likened the tectonic plates to icebergs of lower density rock floating on higher density rock.

Over the last period of the Mesozoic era, or the Age of Reptiles, significant tectonic activity lasting a hundred million years separated the landmasses of the supercontinent. Pangaea began to rift east and separated into Laurasia and Gondwana, new oceans were formed and coasts emerged where there had been deserts. The drifting continents expanded the Tethys Ocean and resulted in the fragmentation of Gondwana, as Africa, India and Australia moved northward concurrently opening the Indian Ocean. Sliding north the new continents pushed in on the Tethys Ocean from all sides forcing it to shrink, and as India crushed into the Eurasian continent, the plate pushed up the Himalayan mountains and closed the ocean.

As it drifted north the Indian plate set off a series of eruptions of magma, which pushed basalt from deep below the crust through weak points of the mid-ocean ridges. Hence a ridge of volcanoes, which were to become the base for the Maldivian atolls, rose from the Indian Ocean. The volcanoes slowly subsided as the ocean floor settled four thousand meters below. Yet conditions were favorable for fringing reef to develop and in due time colonies of coral grew upwards, creating land around the disappearing peaks. In our time most of the Maldivian plateaus are submerged. Sedimented layers of coral stretch down halfway to the seabed where it rests on the volcanic basement. On occasion the coral rises a meter or two above the sea to form a constellation of white sand islands in the vast ocean. Under the surface eroded features, as overhangs formed by waves, bear witness of earlier shifts in sea levels. Due to fluctuations in climate the waterline has altered a hundred meters, possibly more. This, however occurred in times of deep history, prior to what we know as the Holocene, a period of milder climate that followed the ice ages, and that permitted human civilization to flourish.

The Earth's crust is shaped by surface processes produced by climate, movements of water, and living organisms, along with geological processes. The intersections of these processes are intrinsic to one another, and as topography modifies local climate, these changes also influence the water regime in which they evolve. Further there is potential feedback between

climatic and tectonic processes. Lately, with rising concerns over environmental changes, humans have been ascribed as geologic agents, and scholars in areas distant from geology discuss a new geological era of human making, the Anthropocene. Accordingly humanity as a whole has evolved from a simple biological agent to an entity wielding a geological force. Defining man as a geological agent is to scale up our imagination of the human. As our understanding of landscape has evolved from a division between stable and perturbed, to a dynamic notion of landforms where changes are essential to its nature, geological time and human chronology lose their hermeticity when mankind is designated responsible for accelerating environmental changes.

As a consequence of human induced sea level rise the Maldivian atolls are anticipated to dissolve in the ocean within this century. The surging sea is due to the expansion of warming waters, and the melting of land-based ice, caused by atmospheric alterations happening on a global scale. As land is eroded and lost to the sea, saltwater infiltrates the groundwater, and with rising sea temperatures fish plunge deep out of reach of local fishermen. Before the land literally disappears, living conditions might become unsustainable for the inhabitants of the islands, and plausibly force them to move.

Geological shifts and fluctuating sea levels have naturally shaped migratory patterns and cultural evolutions before, but the pace of change has shifted dramatically. Although control and appropriation of natural resources have always played a central role in human conflict, man-made modifications over environmental conditions have radically transformed the natural terrain in itself. Background is morphed into foreground as our Earth-bound existence is explicitly made dependent on its maintenance, and the environment ceases to be a silent and passive backdrop to human narratives. Planetary boundaries have been defined due to the fast pace of changes since the great acceleration. These boundaries are not to be trespassed, as this might trigger deviating and abrupt environmental change of unprecedented scale. Nonetheless a question that arises is whether the Anthropocene belongs on a geological scale, as it primarily conveys human relations to humans, and requires us to think of the environment in human time, and for human survival. Questioning the usefulness of the term, and its definition, which particularly stresses rising populations and scarcity of resources, the concept has also been referred to as the Capitalocene. The critique emphasizes how the ideological forces that have shaped the modern world remain obscured if humanity as a whole is held accountable for the changing climate. Environmental changes are deeply entangled with socio-economical issues. If humans are driving these developments, isn't what we are dealing with political science rather than climate science?

Human impact on the environment is aligned with commodity-centered ideologies that have facilitated strategic gains of power and wealth for a minority of the population through appropriation of resources, trade, and accumulation of capital. Planetary boundaries force us to acknowledge the fragile material condition of our atmosphere, and our shared concerns of being of this Earth, nonetheless the consequences of manmade climatic alterations affect societies asymmetrically and with little relation to each individual's responsibility of cause. For hundreds of years western ideological foundations have provided arguments for securing rights to natural resources in view of maximizing profits. These include the inherent rights of states to exercise jurisdiction over resources on land and, depending on the geological formation of the nation's continental shelf, under the sea. The securing of unimpeded overseas trade, which was based on Hugo Grotius' 1609 book *Mare Liberum* - 'The Right Which Belongs to the Dutch to Take Part in the East Indian Trade' and later legitimized through a sound legal basis, also facilitated the emergence of forces that lead to the industrial revolution and opened the way for globalization.

The greatest human impact on the environment is still produced by a well-off minority, legitimized by relations of wealth and power implemented through the rise of capitalism and accelerated by industrialization. Rather than ensure all humans basic rights, the free circulation of goods has in many cases restricted the mobility of humans and made it illicit. As nations produce clandestinity through the insistent illegalization of the growing amount of displaced persons, a gap between state and citizen is induced. At present there exists neither

policy nor protection for environmental refugees. One wonders how this is possible at a time in which we are constantly reminded of our common responsibility in altering the very composition of the atmosphere? The global polarization of rich and poor is shielded by laws created in and for the Holocene, adapted to the idea of stable coastlines and landmasses that change so slowly as to make the history of man's relation to his environment almost timeless. Aren't these laws inappropriate for the shifting territories of our time?

A new geological awareness can encourage our understanding of ourselves as part of a complex ecology constructed over millions, even billions of years. Art has a capacity to incite self-awareness of perception by making us see, consciously or bodily, how we see. It can make us conscious of how we experience the invisible qualities of an object and its potential, or the object's relation to life through likeness, an abstraction or variation which implicitly positions itself in past, present, and future life. While our relation to the surrounding in everyday life is mostly object-oriented and based on causal efficacy of action-reaction, art brings this uncanny apprehension of a dynamic unfolding to the foreground.

Art's resources lie in the domain of perception and in the sharing of the sensible, which can be apprehended by the senses. What can be seen and what can be said about something determines our experience of the world, and it is by revealing innate power structures and restrictions that art functions as a disturbance of established knowledge structures, and possibly challenges norms. In this sense the visibility or exposure of the rupture from political status is a question for art. The status of the displaced or the refugee requires us to question the naturalization of nativity and nationality, as rights assigned contingently owing to where one was born. Projecting into an uncertain future, the Contingent Movements Archive speculates on the evolution of human mobility, and on new geographies which may arise. Its archival structure raises questions of who gets to choose how landforms are represented, for what reason, and for whom? The online platform also implies a reflection on the sustainability of the digital form and the usage of cloud technologies.

Even so, the knowledge produced by art is a knowledge of its own kind. It is ambivalent, incommensurable and singular. Its imaginative forces have an efficiency of their own, which open more questions rather than deliver solutions. Importantly, art also lends the world its languages and techniques for others to appropriate. This does not reduce the significance of art, but contributes concepts for how works of art operate by distributing the sensible and creating spatial relations. It also reminds us we are part of a common world with common challenges that call for ethical and cultural changes, and that art, far from existing in a void, effectively produces communities and creates real effects in the world just as knowledge and political statements do.