ARCHIVING THE TECHNOSPHERE

A BERGSONIAN MANIFESTO AGAINST CONSERVATION IN THE AGE OF THE ANTHROPOCENE

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ABSTRACT

Human behaviour has manifested within the geology of Earth itself, leading scientists to propose a new epoch, The Anthropocene. In this age, we live atop an entirely man-made stratum, known as the Technosphere; consisting of all the structures we have built in order to survive. The ontological understanding becomes apparent that our present behaviours determine the archive of us in the Earth for millennia to come. There is a responsibility for the legacy of humankind beyond our lifetimes, in a geologically deep time frame. It becomes vital to understand in this context the impact that our preserving behaviours in the present may be having in the geological deep-future– what if by preserving our behaviours today we are perpetuating an unintended legacy? The uncertainty and risks the future holds should inform our behaviours now; our curatorial efforts should consider the future as much as the present.

Henri Bergson's philosophy serves as a theoretical framework for understanding the human experience of time and memory; within which we can reconsider archiving practices in the built environment. Through contemplating the consequences of conservation in the present and the future, the vast unknowns ahead encourage a rethinking of our heritage practice. Developing a theoretical approach through Bergson, paradoxical quirks of the present heritage institutions emerge. With this in mind, this thesis takes the form of a manifesto *against* conservation practices, for the sake of the heritage and thus legacy of the Anthropocene.

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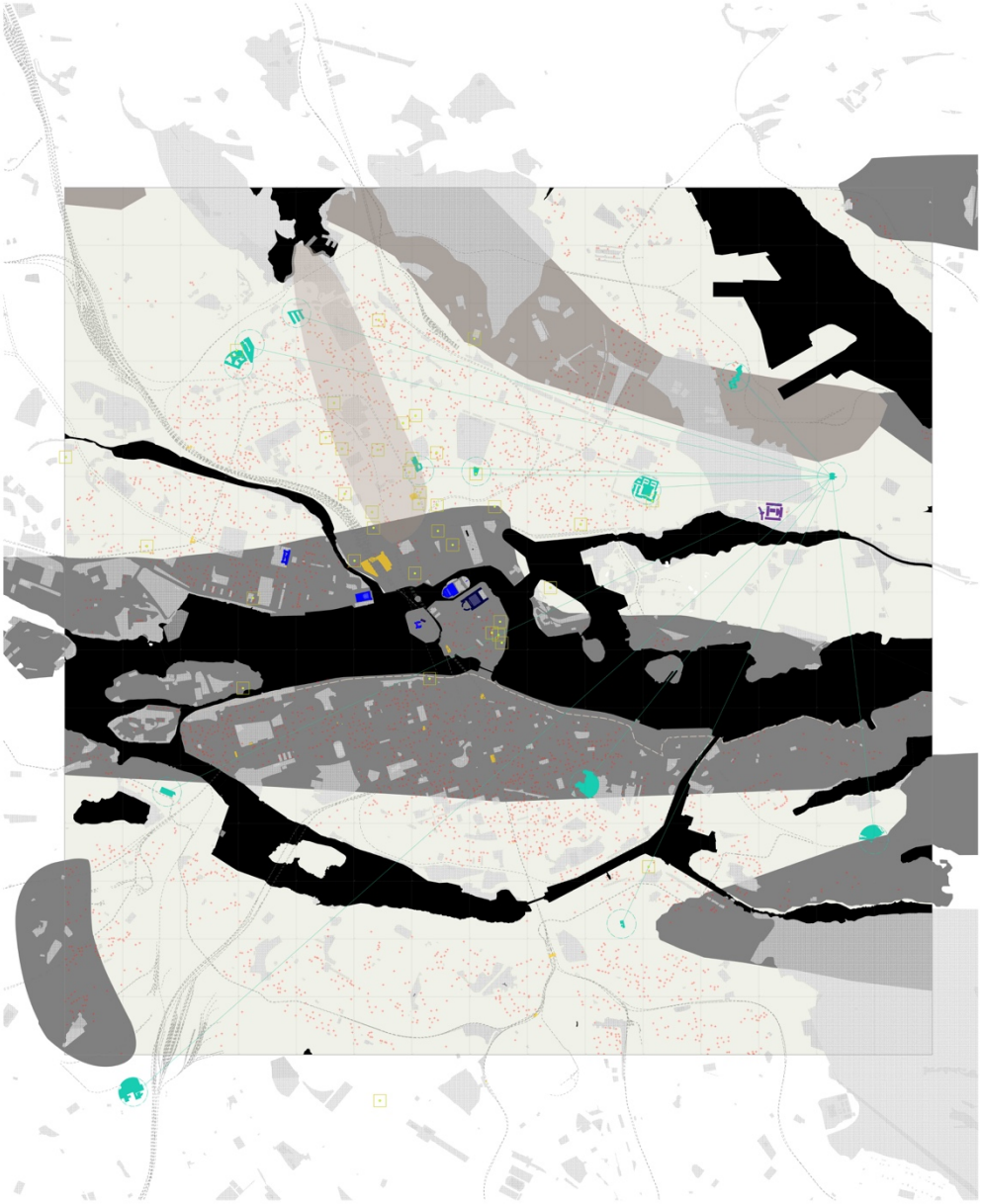

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PREFACE

While researching in advance of Bartlett Unit 21's field trip to Stockholm in October 2016, I became interested in the everyday archives we take for granted. After studying the vastness of our mindless archiving behaviours today through social media, I looked at the kind of infrastructures supporting our digital self-portraits. In Stockholm, data centres are found buried in rock caves, deep within the granite crust atop which the city sits, while satellites are positioned on rocky cliffs. This seemed to me a primal, physical relationship for something so modern and high-tech as the storage of digital data. Rock meets Internet.

Simultaneously mapping the geological and digital topographies [fig 01], I found an underlying topography; part human-made, part natural. As the glaciers that once covered Stockholm retreated, they carried with them the top soils that usually sit above the bedrock, leaving this exposed. The city is punctured and defined by its geology - with granite cliffs forming thresholds and parasitic networks of stairs and escalators on the rock to enable people to climb the geological landscape. In Stockholm the relationship between rock and humanity is obvious.

Looking further into this relationship between humanity and rock, I found there to be an emerging discourse of this very relationship – the Anthropocene. From here, the tutelage of Stamatis Zografos and the development of my studio work within the context of the Anthropocene led me toward the work of Henri Bergson, whose philosophy this thesis uses to explore the built environment through memory and time.

My thesis hence owes a lot to the geological landscape of Stockholm and to my studio tutors in choosing to base the unit in Stockholm this year. I doubt I would have investigated geology in the same way in a less palpably geological place. However, as this thesis uncovers, we must start to recognise the significance of the often insignificant landscapes on the planet we call our home.

Fig 01: Author's own mapping study of Stockholm. The geological landscape is contrasted against the ethereal data landscape of data centres, tech start ups, tech infrastructure and more.

Fig 02-04: Author's own photographs of geological and human interactions in Stockholm

01 INTRODUCTION, CONTEXTS, METHODS & KEY TERMS

INTRODUCTION

There is support for the theory that humanity is now in a new geological Age, the Anthropocene. We have irreversibly left a vast quantity of archaeo-geological markers of our presence all over Earth. Quarrying, building, dumping and consumptive behaviours have amounted to a mindless archive of humanity's recent history in the earth itself. In this context, humanity has agency as a telluric force, with irreversible and long lasting impacts in the wider ecology of Earth. The enormity of humanity's impact in the context of geological time begins to become vital for us to contemplate.

The built environment we live within has become part of a stratum that is entirely human-made and upon which our survival now relies, known as the *Technosphere*[1]. Conservation practices serve as a means of curating the archive of this built environment; determining which buildings are protected against demolition, decay or alteration, and which are not. In treating architecture as artefact, the innate physicality, and the profusion of possible artefacts makes the archive of the *Technosphere* complex to curate. Furthermore, the archaeological, ecological and geological responsibilities we find ourselves grappling with implicate our duty in the scale of deep-time and the very distant future. Our attempts to preserve the *Technosphere* become sometimes futile [fig 05] and often have unintended side-effects. The Anthropocene is an ecological phenomenon; the ontology of humanity, Earth and everything between.

Humankind in the Anthropocene context has a responsibility to Earth far longer than our own lifetimes. Under these circumstances, concern arises as to whether preserving our anthropogenic behaviours now will have damaging implications in the geological deep-future. Conversely, the uncertainty and unknown risks in the distant future impact our preserving behaviours now. How can we preserve a heritage if we don't know what the planet will need or be like in years to come? And how do we communicate in the deep-future? How does our curation and intervention in the present determine the future's retrospective understanding of us? In the context of the Age of Humankind, the distant, uncertain future ahead provokes a series of potential scenarios that must be explored in the present.

Henri Bergson's philosophical theories of time and memory can serve as a framework for interrogating our behaviours in this complex context. Bergson's radically alternative philosophies provide a means through which to re-understand the present normative behaviours we take for granted. In exploring Bergson's theories of time and memory, we discover inherent paradoxes to institutionalised conservation practices at present. In preserving, we are paradoxically always losing that which was not preserved, while we may actually be unintentionally further contributing to net negative behaviours in the Anthropocene. With this in mind, this thesis takes the form of a manifesto *against* conservation practices, for the sake of the heritage of the Anthropocene.

Manifestos became popular with artists and theorists in the 20th century, as a means of challenging the status quo, proposing a radical future[2]. Once again, we find that now 'speculation is a radical act because it breaks with the cultural climate of today, where utopias and manifestos have fallen out of favour as impractical and perpetual capitalism seems inevitable'[3]. The speculative, theoretical writing this thesis entails is thus radical; a break from the current capitalist, globalised behaviours inherent to the Anthropocene is demanded. Manifestos typically take a position *against* rather than for, often concluding in a list or statement. This manifesto is less formally manifested than a traditional

manifesto, rather it is formed as a method of using philosophy as a way of determining a new logic, applied to our institutionalised notions of conservation. This manifesto takes a Bergsonian direction – as a process of thinking rather than a resolute entity.

RESEARCH METHODS & CONTEXTS

In the Anthropocene, the boundaries between architecture, geology, archaeology, cultural studies, science, philosophy and politics become interwoven and inextricably ontological[4]. Thus, this manifesto explores an array of cross-discipline sources. Interrogating each of the many layers of the discourse is near geological, exploring the nuances of each stratum to form an understanding of the whole.

Bergson's philosophy acts as the primary means for re-understanding the complex themes of time and memory that arise in dialogue with the Anthropocene. Key works of Bergson's philosophy referenced in this thesis are *Matter and Memory* (1896) and *Time and Free Will* (1889). In these, Bergson explores the concepts of 'Duration, Memory, Élan Vital'[5]; challenging the way we have learned to consider and describe our human experiences.

Bergson was a highly regarded French philosopher, awarded a Nobel Prize for Literature in 1927. Bergson's ideas were highly radical, conflicting with the accepted notions of memory and time as they were understood at the time.[6] Bergson's influence has since been felt across a diverse array of disciplines such as psychology, art, literature, physics and politics[7]. This wide-ranging influence led paradoxically to the diffusion and downfall of his work; as a consequence of his popularity, Bergson's ideas fell out of favour in academia by the mid 20th century[8]. As already determined, 'our period is the epoch of Ecology'[9]. Bergson's philosophy explores the ecology of our human experience in time and space. As such it is relevant to explore the timic ecology of the Anthropocene through Bergson.

Bergson has been re-visited in recent years, after being influential in the work of Gilles Deleuze, particularly in his book *Le Bergsonisme* (1966), translated to English in 1988 (as *Bergsonism*). Deleuze's reawakening of Bergson's philosophy in *Bergsonism* saw not just an explanation, rather Deleuze's extension and expansion of Bergson's ideas. Since *Bergsonism*, many other theorists and academics from broader disciplines have too rediscovered Bergson, including Mullarkey (2000)[10], Ansell-Pearson, K. (2002)[11], S. Guerlac (2006)[12], J. Burton (2008)[13], & J. Canales (2015)[14]. These secondary voices serve as a tool to understand Bergson's in today's context[15] and the possible new applications of his theory within the milieu of the Anthropocene.

Beyond the philosophical theory of this thesis, there is a vast array of contemporary research that has been undertaken. Principally, this has been to comprehend the context and discourse of the Anthropocene. This is still an emerging field, so scientific journals, lectures, newspapers and so on have offered the most up to date context for this thesis argument to sit within. A multi-disciplinary approach is necessitated in the Anthropocene, as we find that the ecology at risk intertwines with it all disciplines, all objects, all life on Earth.

Regarding the context of Architecture and the Anthropocene, the most significant book published to date is Etienne Turpin's *Architecture in the Anthropocene*. This establishes a relationship between

architecture and the Anthropocene, though does not provide any hard and fast solutions. Turpin's book is intended as an open-ended speculation. Turpin states, 'with the provocation of the Anthropocene thesis, philosophy can produce new constructions that transform trajectories of thought'[16]. In *Architecture in the Anthropocene,* a Deleuzian *problematizating* method[17] is employed by Turpin's curation of the topic, that by the process of establishing problems advances can be made. '[I]t is the solution that counts, but the problem always has the solution it deserves, in terms of the way in which it is stated'[18]

This manifesto is a process further *problematizing*, dissecting the idea of heritage in the Anthropocene. Continuing with Turpin's regard for the significance of speculation and philosophising, this too is the primary agenda employed in 'Archiving the Technosphere'. Through looking to the future, a process for the present can be established.

KEY TERMS

This thesis contains some terminology that is emerging or controversial. These are my definitions for such terms.

Anthropocene: the geological time unit proposed to span from the Great Acceleration of the 1950s into an unknown future. This is the [anthropo] human [cene] period, where humankind has become a telluric force with implications for the ecology of Earth and humankind.

Anthropocenic: of the Anthropocene. Used to describe behaviours, processes or functions explicitly of the Anthropocene or that embody the principles of the Anthropocene. Not to be confused with; Anthropogenic : This is a term used widely to describe human behaviours that have had a negative impact environmentally. The use of the term therefore is controversial still, as climate change is not widely accepted in some parts of society.

Conservation*:* This is the act of trying to protect heritage "assets", whether by legislation or physical behaviours of generally attempting to reduce the impact of time, environments and humans upon objects.

Ecology: The notion that everything is connected to everything else; the earth, humanity, nature, technology, matter, time, space. An effect upon one will have an ontological consequence on the others.

Heritage: This thesis uses this term in a radical sense, attributing it to anything of Anthropocenic significance, alongside the more formal understanding of the term in contexts of organisations such as 'World Heritage'

Technosphere: coined by Peter Haff, an eminent geologist and physicist in the Anthropocene discourse to describe how the profusion of structures built by humankind in order for us to live have now accumulated to become a manufactured geological stratum

Notes

[1] 'Technosphere' was coined by Peter Haff, an eminent geologist and physicist who sits on the Anthropocene Working Group of the Subcommission on Quaternary Stratigraphy (International Commission on Stratigraphy). Zalasiewicz, Jan et al. (2017) Scale and diversity of the physical Technosphere: A geological perspective, The Anthropocene Review, vol. 4, no.1, London: Sage Publishing; pp. 9-22

[2] Danchev, A. (ed.) (2011), 100 Artists' Manifestos: From the Futurists to the Stuckists, London: Penguin Modern Classics
pp. xix-xxix

[3] Anderson, K. (2015), 'Ethics, ecology and the future: Art and design face the Anthropocene', Leonardo, v. 48, no. 4; p 341

[4] Harrison, R. p. 30

[5] Deleuze identifies these three concepts as the 'major stages of Bergson's Philosophy'. Deleuze, G. (1966), Bergsonism. Translated from French 'Le Bergsonisme', by Tomlinson, H. & Habberjam, B. (1991), Massachusetts: MIT Press; p.13

[6] Bergson's work was considered radical at the time, as it accused the scientific community of over-spatialising time and failing to understand the importance of the experiential, abstract qualities of time. Bergson eventually fell out of favour in mainstream toward the 1930s. Guerlac, S. (2006), Thinking in time: An Introduction to Henri Bergson, New York: Cornell University Press pp.10-13

[7] Guerlac, S. (2006), Thinking in time: An Introduction to Henri Bergson, New York: Cornell University Press pp.10-13

[8] ibid. pp. 12-13

[9] Mullarkey, J. (ed.) (1999) The New Bergson. Manchester/New York: Manchester University Press, p.27

[10] Mullarkey, J. (ed.) (1999) The New Bergson. Manchester/New York: Manchester University Press

[11] Ansell Pearson, K. (2002), Philosophy and the adventure of the virtual, London: Routeledge

[12] Guerlac, S. (2006), Thinking in time: An Introduction to Henri Bergson, New York: Cornell University Press

[13] Burton, J. (2008), Bergson's Non-Archival Theory of Memory, Memory Studies, Sage Journals, vol. 1, no. 3; pp 321-339

[14] Canales, J. (2015) The Physicist and the Philosopher: Einstein, Bergson, and the Debate That Changed Our Understanding of Time, New Jersey: Princeton University Press

[15] Bergson's context at the turn of the 20th Century was challenging, with the rise of Nazism, increasing anti-Semitism (Bergson was himself a Jew) and with the Technological Revolution changing the workplace and man's power on Earth. Today's context seems increasingly fraught, with the last stages of Capitalism, the rise of Islamophobia, the Third Industrial Revolution in progress and the current political context of Brexit negotiations and President Trump shaking the relatively stable West. Understanding the ideas Bergson turned to in a time of political crisis could be helpful in our own time, especially as the concept of the Anthropocene already encourages us to begin to challenge the status quo.

[16] Turpin, E. (ed.) (2013) Architecture in the Anthropocene: Encounters among Design, Deep Time, Science and Philosophy, London: Open Humanities Press; p.10

[17] American spelling as given in translation of Bergsonism. Deleuze, G. (1966), Bergsonism. Translated from French 'Le Bergsonisme', by Tomlinson, H. & Habberjam, B. (1991), Massachusetts: MIT Press; p. 35

[18] Deleuze, G. (1966), Bergsonism. Translated from French 'Le Bergsonisme', by Tomlinson, H. & Habberjam, B. (1991), Massachusetts: MIT Press; p.16

02 WELCOME TO THE ANTHROPOCENE![19]

THE ANTHROPOCENE – A NEW EPOCH

The Nobel Laureate Paul Crutzen[20], declared in 2000 that we are no longer living in the Holocene, the epoch of the last 12,000 years, but now the Anthropocene[21]. In his proposal, Crutzen referenced the geologist Antonio Stoppani, who in 1873 stated that mankind is 'a new *telluric* force that, for its strength and universality, does not pale in the face of the greatest forces of the globe'.[22] Crutzen hailed the Anthropocene as the 'Geology of Mankind'[23]. The Anthropocene is hence the period of time in which the human activity on Earth has been so accelerated, global, and largely with irreversible[24] impact upon the earth. Humanity has created an everlasting geological impact on Earth's landscape and broader natural systems.

Geology acts as a perpetual archive. Over billions of years, a database of all of the earth's inhabitants, major events and cycles has accrued as layers of the earth itself. The *Working Group on the Anthropocene*, led by geologist Jan Zalasiewicsz[25], was set up in 2009 in order to formally designate the epoch[26]. Evidence being explored for proving this hypothesis includes the radiation traces left all over Earth from nuclear technologies, and the *Great Acceleration* of the mid 20th century, with a 'global increase in population, industrial activity and energy use'[27] [figs 05- 6]. Recently, Zalasiewicsz stated that 'a strong case may be made for the Anthropocene to be treated as a formal chronostratigraphic unit and added to the Geological Time Scale'[28]. The recent profusion of concrete, plastics and metal alloys in our built environments even forms a new stratum; the *Technosphere*[29]. Through the process of evidencing this hypothesis, it is becoming ever more apparent how vast humanity's impact has been in a geological sense.

A key driver for geology surveying and mapping traditionally has been politics. Oil seams, lithium seams and gold have all been sought to forward civilisations, and have often divided them. The intrinsic nature of geology thus has a relationship with our politics, society and all aspects of life[30]. However, much of the 20th century saw geology and the wider ecology of our actions as separate. Technology gave humans perceived power over the planet. Nuclear weapons could be fired at the push of a button, causing widespread devastation. The dawn of Sputnik in 1967 saw humanity's perception of its relationship with Earth become even more distant[31]. Seen from space, 'all the places of the World, seen from every angle, coexist'[32]. Humanity has long had faith in our power over the earth and aspired to overpower its natural systems; modernism and capitalism embraced this mentality wholeheartedly.

However, our power often has unintended consequences. Anthropogenic activity is having a lasting impact on the ecology of our planet with often unexpected ramifications – it has been seen that even volcanoes can be affected by humanity's impact on the earth's systems[33]. In spite of our technological advances and space explorations, man ultimately still does not have full control over the planet. Every year, some disaster seems to strike a community somewhere, whether a flood like those that struck the North of England in 2015-6[34], or 2005's Hurricane Katrina[35], or the earthquake and tsunami causing devastation in Fukushima in Japan in 2011[36]. These remind us of the wider natural ecology we live within and the power of nature, often unpredictable and destructive.

For geologists, Epochs and Ages are not formalised lightly[37] nor is it common for geologists to be concerned with the future. Geology, the science usually seen to be retrospective, has become in this

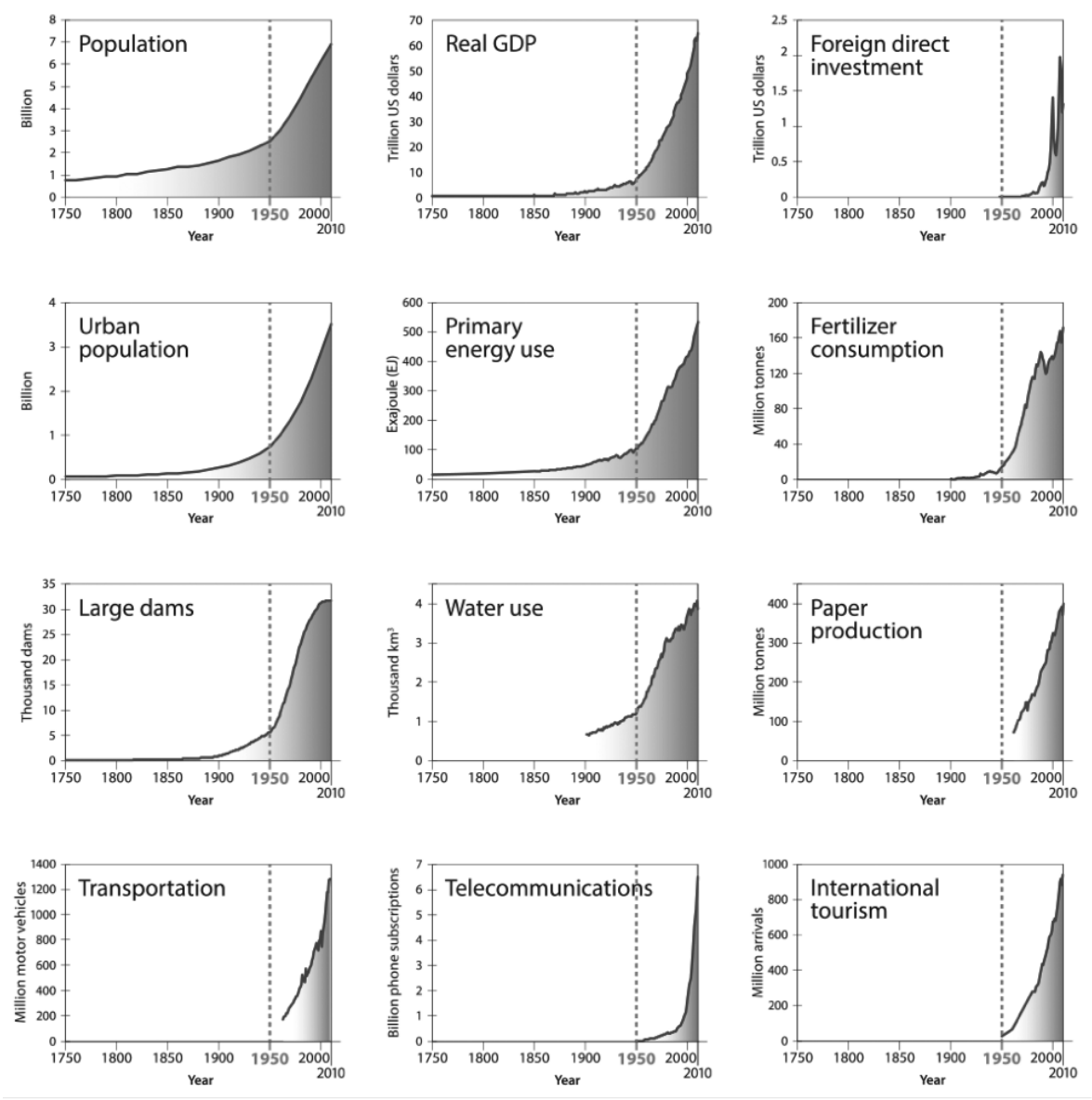

Fig 05: Socio-economic trends, 1750-2010
Study of the 'Great Acceleration' produced by the Stockholm Resilience Centre

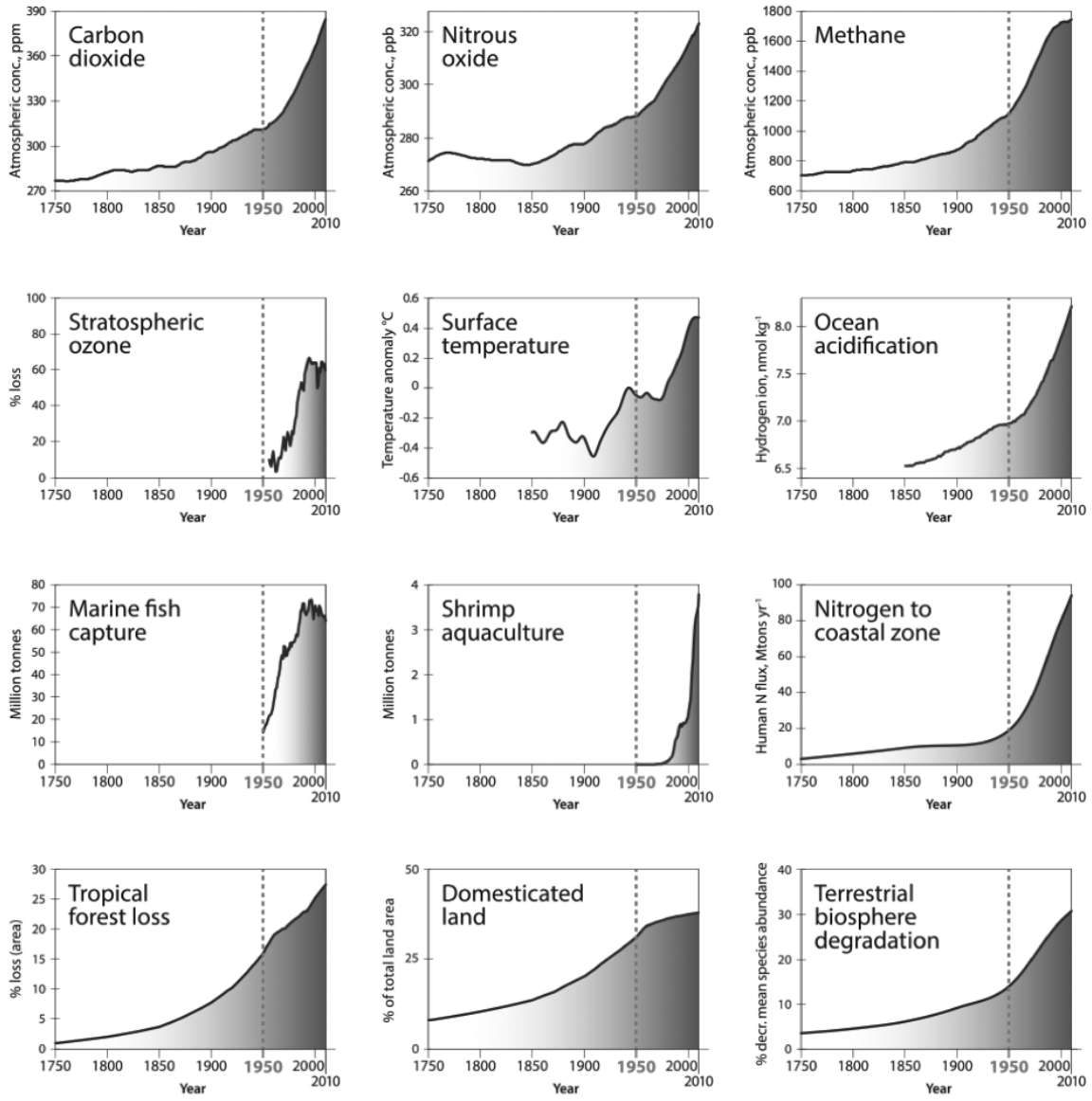

Fig 06: Earth System trends, 1750-2010
Study of the 'Great Acceleration' produced by the Stockholm Resilience Centre

context something which has the potential to be speculative, to commentate on our behaviours now. The Anthropocene invites speculation into the 'futurology'[38] of geology and archaeology, anticipating what future explorers of Earth might piece together of the 'geologically brief history of our species'[39]. 'Credit cards, all 0.76mm thin, slide into slots and readers around the world'[40] and we can imagine that future geologists and archaeologists will find their decomposed plastic and metal remains fossilised all over planet earth, alongside an immense quantity of other human markers. Our globalised behaviours, structures and dimensions amount to a lexicon of us that we can imagine future archaeologists will look for

The Anthropocene as a concept is thus radical and controversial in the scientific community. In geological terms, the Anthropocene is a very short time frame (so far), just a matter of 60-200 versus the billions of years of the earth's lifetime. With the Anthropocene as a ground-breaking new branch of geology, we begin to challenge the segregation of geology from other interconnected fields. 'The Anthropocene is a way to demonstrate that geology does not refer exclusively to the ground under our feet.'[41] As a concept, the Anthropocene provokes contemplations regarding the ontological ecologies of Earth; the intrinsic relationship between humanity and everything else.

THE RHETORIC OF THE ANTHROPOCENE

As we have found, the Anthropocene is contentious and radical. Introducing a new epoch is a serious, rare occurrence for geologists. As such, scientists continue to seek to evidence this epoch slowly and carefully. All the while, other academic circles have not waited for the scientific seal of approval, with the Anthropocene gaining rapid traction as a concept in the humanities and social sciences. The heterogeneous implications of this emerging discourse are beginning to be understood and explored far beyond the stratigraphic evidencing needed for proving the Anthropocene hypothesis.

Siegfried Zielinski's theory of geological *Tiefenzeit,* deep-time[42] - the vastness of which feels distant and not relevant to humans - becomes integral to the theory of the Anthropocene. This human-driven geological time forces us to consider the deep-time actions of our behaviours for the future. As we realise that our impact on Earth leaves a lasting residue as an archaeological, geological entity, the implications of this begin to unravel. Not only do we need to recognise the impact our behaviours have during our own lives, now we must consider the legacy we are creating. Legacy-making is an issue tangled in controversy and geopolitics. As we anticipate the deep future ahead of us, we start to be able to curate the future we are creating, making choices not just for ourselves, but more importantly for the planet itself.

As previously mentioned, talk of mankind's geological, telluric impact has been discussed since the mid-late 19th century, with fossil collectors sparking the beginnings of geology as we know it. At this time, 'geological imagination was constantly talking about the future'[43] with Jules Vernes' *Journey to the Centre of the Earth* highly popular, with an awareness of human polluting behaviours evident in Charles Dickens' fiction too. As modernism took root in the 20th century, however, mankind seemed to move away from this thinking. In spite of ever growing scientific knowledge regarding negative impacts of industry on our planet, we continued to industrialise, build and pollute. 'The more we talk about the need to control emissions, the more they are growing'[44]. The

Anthropocene has often been proclaimed a "discovery", whereas in actuality it engulfs and expands the pre-existing environmental rhetoric of the last century, returning to similar themes as were being explored at the end of the 19th century. With this in mind, it is worth considering that the climate change rhetoric has not yet convinced the whole of society over the last hundred years. Deniers as powerful as President Trump of the United States (who labelled climate change as 'a hoax'[45]) disregard the consensus of 97% of scientists that climate change is occurring and can be attributed to human activity[46]. As such, it will be a hard task to persuade all that the Anthropocene too is a worthy cause for changing our behaviours. This fear underlies the entire rhetoric of the Anthropocene, how can we communicate with those who do not want to participate in the discourse?

The largest implication of the Anthropocene has been the awareness raised of the wider impact of humanity's behaviour on Earth. This goes beyond the climate change rhetoric, as we find in the Age of Humankind the Ecology of Earth extends to often unexpected areas. The ultimate responsibility of the Anthropocene is concerns not our present, but the kind of legacy we are leaving for future generations. What will people remember of us, from the traces and memories we leave behind in our landscape of anthropocenic, capitalistic, industrial excess? Truly, mankind will never have full control over geological scales of time and space, however we can speculate on the Anthropocene's possible outcomes.

ARCHITECTURE IN THE ANTHROPOCENE

The archiving of the built environment becomes incredibly relevant in the Anthropocene, given that many of the main markers of the Age of Humanity have been as a result of the globalised use of human-processed materials, largely as a result of building construction. Conservation and heritage practices serve as a means of curating the archive that is the *Technosphere*. Buildings and landscapes often become considered by society precious sites of "imprinted" *collective memory*[47], thus requiring preservation against change. Preserved architecture becomes artefact, anachronism and museum at once. These materials form a large portion of the *Technosphere*, the new stratum of human-made structures, used to construct the buildings we attempt to preserve.

The understanding of architecture's role as a force with a tangible impact on Planet Earth's natural systems has begun to grow.

> Although architecture has a sense of its place within broader socio-political and cultural systems, it has not, until very recently, acknowledged itself as part of the earth's geology, despite the fact that it is a forceful geological agent, digging up, mobilizing, transforming and transporting earth materials, water, air and energy in unparalleled ways.[48]

With this mode of thinking, there is a responsibility for architects to consider not just the "environmental" impact of constructing architecture, but their effect as geological agents upon a wider ecology. Considering architecture henceforth as a part of a much wider earth-system indicates a radically different way of approaching both the construction of and the conservation of the *Technosphere* will be needed.

Construction has always been reliant on materials from and of the earth and yet has often managed to remain unaccountable for the implications. 'Energy from fossil fuels consumed in the construction and operation of buildings accounts for approximately half of the UK's emissions of carbon

dioxide.'[49] Combined with this output the wider geological behaviours of extracting materials to build with, digging up Earth and removing trees to build; the very act of constructing has a net effect in the ecology of Earth. This responsibility in the Anthropocene to the wider natural systems therefore changes the role the architects have - not just as makers, inversely as actors taking away from the earth.

Architects tend to perceive their designs lasting in a human-scale lifetime. However, this is a misconception, architecture tends to outlive us. In extreme cases, World Heritage listed structures such as the pyramids of Giza and Aleppo's historical centre have existed in a deep-time - upwards of 3000 years and 4500 respectively - far predating the start of the Anthropocene Epoch. Heritage relics stand as archaeological ruins or artefacts on a geological timescale. Though we do not simply let our technosphere completely fall apart over time. There is an inherent processing entailed when somewhere is preserved; the maintenance of the architecture is consumptive of further Earth resources. Furthermore, legislation preventing us from using the precious heritage sites as completely inhabitable spaces leads us to perpetually keep building new spaces, even if for the same original purposes as the artefact-buildings.

Some architects have begun to explore the responsibility the deep-timic and geological context of the Anthropocene dictates. Shelley McNamara and Yvonne Farrell of *Grafton Architects* have begun to explore the *Physics of Culture*[50], recognising the ontology between the sciences and culture in architecture as 'a moral responsibility of the profession'[51].

> [A]rchitects 'take from the Earth – we have to give something back with it. We dig, we use sand in concrete, limestone. We choose and this is a decision. Cutting down a tree – you are taking something – a tree is a gift to the Earth. Our role [as architects] is to make the world[52].

It is clear that there is an innate ecological understanding evident in the language McNamara and Farrell use. Encouraging this discourse to develop further will be vital for developing an attitude as a profession to the Anthropocene.

If we consider that 'architecture is a machine for slowing time down [...] architecture has a role to play irrespective of time', then understanding as architects the role architecture performs not in space, but in time will be a vital direction for this new discourse to take. How do we preserve and manage our architectures over hundreds or thousands of years to slow time down? Is our heritage culture the right approach to take? In order to interrogate these question, the next part of this manifesto will explore Henri Bergson's philosophies and their relevance in the Archiving of the Technosphere.

Notes

[19] 'Welcome to the Anthropocene' has been a widely used headline since the Anthropocene was first coined. The media has enjoyed employing the sensational tone implied in the phrase. The first published use of the phrase that I can trace is the title of a Nature Editorial;

Welcome to the Anthropocene, (2003), 424, 7 09, 14 August, Nature, London: Springer Nature

This was then followed by an Economist article in 'Leaders';

Welcome to the Anthropocene: the geology of the planet, (2011), The Economist

Since these two articles, numerous chapters of books, films and lecture series have been named this phrase. As a critique of the sensationalisation of this phrase, the chapter I have chosen to title 'Welcome to the Anthropocene!' The exclamation mark nods to the hyper sensationisation of the Anthropocene of late.

[20] Paul Crutzen received a Nobel Prize in 1995 for his 'work in atmospheric chemistry, particularly concerning the formation and decomposition of ozone' (Nobel Prize website, as below). Crutzen is highly regarded for his work in Chemistry, though it is the work of Geologists such as Jan Zalasiewicz who sit on the *Working Group on the 'Anthropocene'* at the *Subcommission on Quaternary Stratigraphy* to to determine if Crutzen's hypothesis stands true.

https://www.nobelprize.org/nobel_prizes/chemistry/laureates/1995/crutzen-facts.html (accessed 23 April 2017)

https://quaternary.stratigraphy.org/workinggroups/anthropocene/ (accessed 23 April 2017)

[21] Crutzen, P. J. (2002), Geology of Mankind, Nature, vol. 415, no. 6867, London: Macmillan Publishers Ltd; p.23

[22] Emphasis, author's own. Stoppani, A. (1873) Corso di Geologia, vol. II, Geologia stratigrafica. G. Bernardoni E. G. Brigola editori. Translated from Italian by V. Federeighi. In E. Ellsworth & J. Kruse (Eds.), Making the Geologic Now (pp. 34-41). Brooklyn, United States: Punctum Books.

[23] Crutzen, P. J. (2002), Geology of Mankind, Nature, vol. 415, no. 6867, London: Macmillan Publishers Ltd; p.23

[24] Zalasiewicz, Jan et al. (2017) Making the case for a formal Anthropocene Epoch: an analysis of ongoing critiques, Newsletters on Stratigraphy Open Access Article https://www.researchgate.net/publication/315489360_Making_the_case_for_a_formal_Anthropocene_Epoch_an_analysis_of_ongoing_critiques (accessed Apr 13, 2017).

[25] Zalasiewicz is the leading geologist for the Anthropocene Working Group of the Subcommission on Quaternary Stratigraphy (International Commission on Stratigraphy, having written numerous papers and has published his own book titled 'The Earth After Us'

Zalasiewicz, J. (2008), The Earth After Us: What legacy will humans leave in the rocks? Oxford: Oxford University Press

[26] Zalasiewicz et al. Anthropocene Working Group of the Subcommission on Quaternary Stratigraphy (International Commission on Stratigraphy) Newsletter 1, December 2009 p

[27] Zalasiewicz, J. Waters, C. & Head, M. J. (2017) *Anthropocene: its stratigraphic basis,* 541, 289 (19 January 2017) Nature, http://www.nature.com/nature/journal/v541/n7637/full/541289b.html (Accessed 24 April 2017)

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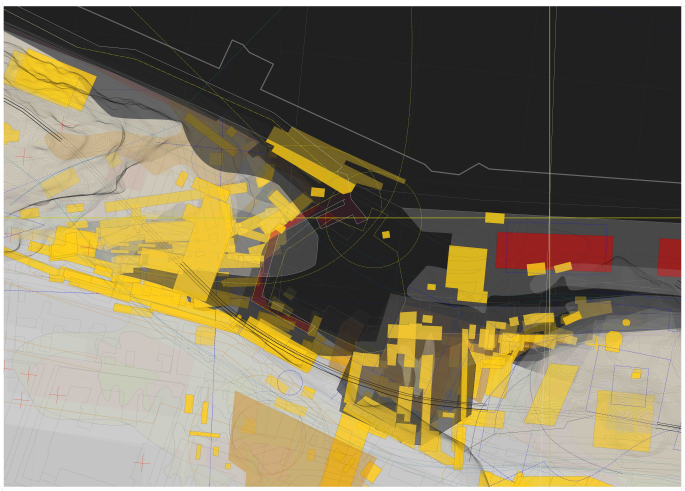
[51] These quotes are based on my personal notes from a lecture I attended at the Bartlett School of Architecture. To the best of my ability they are exact representations of what was said at this lecture. I attribute individual quotes to each Shelley McNamara and Yvonne Farrell, as the questions towards the end became a discussion.
Farrell, Y. (2017) Physics of Culture, Bartlett International Lecture Series, UCL, London.

[52] This was answer to a question posed by the author. When I posed the question to them 'You use terms that make your architecture sound like geology such as when you describe your Lima project as a new cliff. Do you see your architecture as a kind of constructed geology – a construction deliberately of the Earth?', their response was as quoted.
Farrell, Y. (2017) Physics of Culture, Bartlett International Lecture Series, UCL, London.

03 BERGSON: DURATION, MEMORY & ÉLAN VITAL



Henri Bergson's fundamental philosophies provide grounds to set out an approach for breaking away from conventional understandings of time and memory. Bergson's primary philosophies in *Matter and Memory* and *Time and Free Will* relate to at least one of the following three areas: *duration, memory and élan vital.*

DURATION

As David Bowie used to sing, 'time may change me, but I can't trace time'[53]. Time is a complex concept that humanity struggles to express or understand. Though we cannot trace time itself, the passing of time leaves its mark on our landscapes, on our skin, on our bodies, while the earth becomes transformed in the Anthropocene over time, accruing layers and being dug away at. The progress of time performs a physical marking process that we can see slowly and continuously through these traces.

Barely consciously, we obsessively calibrate our lives to mechanised time. The second, minute, hour, day and year are our attempts at quantifying time and they become the ways we give routine to our lives:

> The revolution speeds of hard drives, clocks of computers, network pings, and so forth are examples of the temporalities in which machines themselves are embedded and which they impose on the human social world[54]

Bergson unpicks our attempts at quantifying time in this way; stating that there is too much emphasis on quantity of time and not enough on the quality[55]. Through calibrating time, we spatialise it. There is an implicit linear succession in how we generally describe time; 1 o'clock, 2 o'clock and so on, inferring a physical adjacency in space[56]. The result is that *scientific* time is a spatialised and a 'homogeneous medium[57]. As Jules Verne's fantastical geologist Professor Lidenbrock proclaims; 'Science, my boy, is made up of mistakes, but they are mistakes which it is useful to make, because they lead little by little to the truth.'[58] *Scientific time* is our way of interpreting the more complex experience of time, through spatialising time we feel that we understand it.

Bergson characterises the *duration of time* as a continuous, heterogeneous entity[59] that is *virtual* rather than spatial. Thus *scientific time*[60] is useful as a means to manage ourselves and work cohesively with one another, however it does not comprise our true, full experience of time. We do not mind this generally, as the 'mistake' helps us toward achieving our other goals. Bergson denotes our true time as *pure duration,* in duality with *scientific time*. Bergson's *pure duration* is a heterogeneous process:

> 'pure duration, of which the flow is continuous and in which we pass insensibly from one state to another: a continuity which is really lived but artificially decomposed for the greater convenience of customary knowledge'[61] p. 186 MM.

Constantly changing, ineffable, *pure duration* is harder to express than *scientific time*. 'Pure duration offers us a succession that is purely internal, without exteriority'[62], our attempts at containing *pure duration* into *scientific time* are unsuccessful, as in 'reality, duration divides up and does so constantly[…] But it does not divide up without changing in kind'[63]. The act of dividing *pure duration* stops it from being the very continuous and heterogeneous *process* that it is. In this way, *pure duration* is a *virtuality*, as by actualising a moment of the duration, that moment stops being part of the duration.

Virtuality in Bergson's writing is not to be confused with the contemporary etymology of "virtual". Today we often consider the internet a "virtual" space and we dabble with "virtual reality", however these are entirely spatial, physical entities – the internet is actual cables and data centres as I investigated in Stockholm (page 8) and virtual reality entirely hinges on spatial design. Bergson's *virtual* is however entirely non-physical and exists in our consciousness; this is not to say *virtual* is not *real*. Unlike our understanding of the term "virtual" – used as the inverse of real, often used to describe a fictional realm – in Deleuze and Bergson's terms, the virtual is the inverse, it is more real, it 'posseses a full reality by itself'[64]. The notion of the *virtual* underlies Bergson's entire philosophy of time and memory. The *duration* is 'a virtual state whose full potential we can never actualize'[65].

In understanding the overlapping experience of *pure duration*, we find human labels of "past", "present" and "future" form a continuous ontology. We can understand the 'conception of duration as the *virtual coexistence* of all the degrees of a single and identical time'[66], that the present holds the past and the future all at once.'"[M]y present" has one foot in my past and another in my future'[67] and thus our present is a *simultaneity*[68] in time. These simultaneities are how we experience 'successive sensations'[69] of time. We perceive the present, past and future

> simultaneously, no longer in one another, but alongside one another; in a word, we project time into space, we express duration in terms of extensity, and succession thus takes the form of a continuous line or a chain, the parts of which touch without penetrating one another[43].

The simultaneousness or flattening of time in the present contains all of the pasts and possible futures. 'What duration is there existing outside us? The present only, or if we prefer the expression, *simultaneity'* [70]*. Simultaneity* and *present* are thus tautological. We see then in Bergson our use of the terms past, present and future becomes radically altered, as the present becomes a simultaneity of all times, holding the past and present at once.

Jorge Luis Borges' *The Aleph* describes a fictional glitch in time and space where 'all the places of the world, seen from every angle, coexist'[71].

> In that unbounded moment, I saw millions of delightful and horrible acts; none amazed me so much as the fact that all occupied the same point, without superposition and without transparency. What my eyes saw was *simultaneous*[72]

With this description of *simultaneity* we can begin to understand the non-linear, ontological nature of *pure duration,* given that the present as a simultaneity is 'the intersection of time and space'[73], our present can too be described as an *Aleph*. With this simultaneity, there is a duration in all things in space at once. Rather than saying that things *last* or *endure* in time, we must understand that everything is being continuously processed in the duration of time. In this way, space is itself not any longer an externality, but the composite of individuals experiencing duration, constantly changing and being changed by duration.

MEMORY

As with time, memory must 'be established in terms not of space but time.'[74] In Bergson's terms, memory 'is just the intersection of mind and matter'[75], a process in time as opposed to a spatial entity. Memory in conjunction with present perception works as a processing of the external environment beyond the individual. It is 'memory that makes the body something other than instantaneous and gives it a duration in time.' [76] 'It is the recollections of memory that link the instants to each other

and interpolate the past in the present.'[77] Memory therefore plays a vital part in our experience of the *simultaneity*, as through memory the past is experienced in the present.

Bergson establishes in *Matter and Memory* a duality of memory; *habit-memory* and *memory-image. Habit-memories* are the learned behaviours that humans do without thinking. For example, when reciting a learned poem, singing all the lyrics to a song, driving a car, we do not usually think about exactly what we are doing, we just are able to do it. In this way, *habit-memory* is an archive of our past, we can only do in our present what we have already learned at some stage in our past. *Habit memory* 'bears upon it no mark which betrays its origin and classes it in the past; it is part of my present, exactly like my habit of walking or of writing'[78]. *Memory-image* on the other hand, is the predominant way we tend to understand (incorrectly) our experience of memory. This second memory, 'records, in the form of memory-images, all the events of our daily life as they occur in time; it neglects no detail; it leaves to each fact, to each gesture, its place and date'[79].

Beyond the duality of memory, there is a third memory that is established. *Pure memory*. This memory is a virtual non-spatial state, towards which Bergson implies we should strive. *Pure memory* would be an impossibile human experience; as in order to reach this state, one would no longer experience spatially and thus would have no conceivable way of perceiving the state, as it would be too abstract to comprehend. *Pure memory* 'remains an ideal, towards which one moves by 'de-tensifying' one's focus on practical (self-)interest, and which one moves away from as this focus is intensified.'[80] Pure memory is from which we extract *memory-images* and in doing so, we experience only a snapshot of the pure memory. As memory is itself 'the conservation *and* preservation of the past in the present'[81], *pure memory* is the ultimate conservation of the past. Any attempt to conjure a *memory-image* isolates a snapshot from the *virtual coexistence* of *pure memory.* And any attempt to actualise these *memory-images* involves projecting them into space, thus altering them from the true memory.

It is *memory-image* that we confuse for a mental archive, as if an image is found in a drawer in the recess of our minds. In actuality, *memory-image* 'is a present state, and its sole share in the past is the memory from which it *arose*'[82] from *pure memory*. Hence, the *memory-image* relies on a process of recollection. As we recollect a memory 'from the virtual state it passes into the actual […] it tends to imitate perception.'[83] This process of recollecting and moving between states of memories is a movement in and out of the virtual. This process is constantly occurring; it is how we are able to perceive the world around us. With this, it becomes evident that '[o]ur perceptions are undoubtedly interlaced with memories'[84], our experience of the present 'is impregnated with memory-images which complete it as they interpret it'[85]. *Memory-images* in isolation are just snapshots of a much more complex virtual whole; in a similar fashion to *scientific time* losing the essence of the *duration of time.*

With this triptych of Bergsonian memory, we find then that the memory of 'our past experience is an individual, and no longer a common experience.'[86] This is the case because memory is entirely internal process, and is not spatial. We cannot express our personal virtual memories to one another. The very notion of any *collective memory* is therefore dismantled by Bergson, memory is an innately personal experience. Collective memory attempts will always lose something of each individual's memory, just as any attempt to spatialise or actualise *pure memory* will.

ÉLAN VITAL

The third of Bergson's fundamental concepts is the *élan vital*.[87] As memory and time are found to be parts of a process of understanding *virtuality,*. '[t]he élan vital ... designates the actualisation of this virtual.[88]

> We know that the *virtual as virtual has a reality;* this reality, extended to the whole universe, consists sin all the coexisting degrees of expansion (*détente*) and contraction. A gigantic memory, a universal cone in which everything coexists with itself[89]

It is in this that Bergson considers the process of evolution to be a succession of actualisations. The *élan vital* therefore becomes the essence to life itself, the constant thread of change in organisms, space and everything over the *virtuality* of time.

Notes

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[59] Deleuze, G. (1966), Bergsonism. Translated from French 'Le Bergsonisme', by Tomlinson, H. & Habberjam, B. (1991), Massachusetts: MIT Press; p. 37

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[61] Bergson, H. (1896), Matter and Memory, 5th Ed. Authorised translation from French 'Matière et mémoire' by N. M. Paul (1908), New York: Zone Books; p.186

[62] p.37 Deleuze

[63] Deleuze, G. (1966), Bergsonism. Translated from French 'Le Bergsonisme', by Tomlinson, H. & Habberjam, B. (1991), Massachusetts: MIT Press; p. 42

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[66] Emphasis Author's own, Deleuze, G. (1966), Bergsonism. Translated from French 'Le Bergsonisme', by Tomlinson, H. & Habberjam, B. (1991), Massachusetts: MIT Press; p.85

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[68] Deleuze G. (1991), Bergsonism, translated from French by Tomlinson, H. and Habberiam, B., Zone Books, New York, p.85
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[70]Bergson, H. (1889) Time and Free Will: An Essay on the Immediate Data of Consciousness, 3rd Ed. (1913) Authorised translation from French 'Essai sur les données immédiates de la conscience' by F. L. Pogson M.A. New York: Dover Publications p.227
[71] Borges, J. L (1945), The Aleph, Including the Prose Fictions from 'The Maker', Translated from Spanish 'El Aleph' (1998) by A. Hurley, London: Penguin Books Ltd, p.127
[72] Empahsis Author's own, ibid. p. 129
[73] Bergson, H. (1889) Time and Free Will: An Essay on the Immediate Data of Consciousness, 3rd Ed. (1913) Authorised translation from French 'Essai sur les données immédiates de la conscience' by F. L. Pogson M.A. New York: Dover Publications; p.110
[74] Bergson, H. (1896), Matter and Memory, 5th Ed. Authorised translation from French 'Matière et mémoire' by N. M. Paul (1908), New York: Zone Books; p.220
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[76] Deleuze G. (1991), Bergsonism, translated from French by Tomlinson, H. and Habberiam, B., Zone Books, New York, p.25
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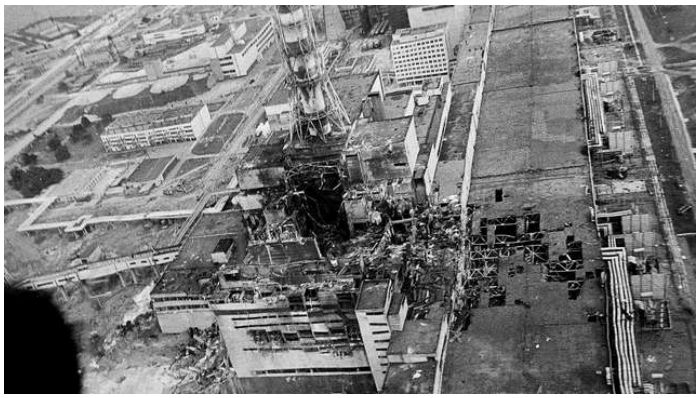
[81] Deleuze G. (1991), Bergsonism, translated from French by Tomlinson, H. and Habberiam, B., Zone Books, New York, p.51
[82] ibid. p.140
[83] ibid. p.134
[84] Bergson, H. (1896), Matter and Memory, 5th Ed. Authorised translation from French 'Matière et mémoire' by N. M. Paul (1908), New York: Zone Books; p. 170
[85] ibid. p. 170
[86] Bergson, H. (1896), Matter and Memory, 5th Ed. Authorised translation from French 'Matière et mémoire' by N. M. Paul (1908), New York: Zone Books; p.179
[87] Directly translating as "vital momentum" the English feels inferior to French of this term, in the loss of the anglo-franco legible *vital.* Generally even in English academia, Bergson's term *élan vital* thus remains in French.
[88] Deleuze G. (1991), Bergsonism, translated from French by Tomlinson, H. and Habberiam, B., Zone Books, New York; p. 113
[89] ibid. p. 100

04 BERGSONIAN PARADOXES IN ARCHIVING THE TECHNOSPHERE



THE BERGSONIAN ANTI-ARCHIVAL PARADOX

In the Great Acceleration, from the latter half of the 20th Century to today, we see not just the acceleration of the earth systems and socio-economic factors [fig 5-6], but the acceleration of history itself. This amounts to 'an accelerated precipitation of all things into an ever more swiftly retreating past'[90]. The demand on our memories and on archives to recollect in this ever denser history becomes ever greater given the vastness of information we are recording. Society has a tendency to 'delegate the responsibility of remembering'[46] to the physical objects and archives we keep, to *places of memory*. We assign memories to external objects and places, as if we can outsource our memory. A *place of memory* may be defined as a 'cultural support for a particular collective memory'[91]. We thus spatialise memory with the idea that physical artefacts can act as memory substitutes. We find it hard to part with these artefacts, and we are saddened to see *places of memory* change in time, relating this to the loss of our memory and our ageing minds.

Bergson's philosophy of memory completely upturns this way of spatialising memory. As we have already found, memory in Bergson's terms is an internal process. Therefore any attempt to actualise and spatialise memory results in the *memory-image* being further detached from the *virtual* state of the duration and the state *pure memory*. In this detachment, we lose the ontological form of *pure memory*, with an isolated snapshot instead. From this, we find there is an inherent paradox in any archiving behaviours. The very act of trying to actualise a memory in the form of a spatial *place of memory*, such as an archive, loses the very essence of that memory in its purest form. Archives are consequently sites of inherent memory loss, which undermines their very intention to store as *places of memory*.

Added to this paradox, there are curatorial behaviours imposed on places of memory. Curation involves selecting which *memory-images* will be preserved, and conversely, those that will not. This selective curating process also means we lose what was not preserved. We then with this find ourselves very far from the *virtual duration,* as not only are memories isolated as snapshots, they become filtered through an external, spatial process. In time then, memory can be curated to an agenda, or it can be distorted and falsified, not representative of the *pure memory* experienced. The archive generally also acts as a place of *collective memory*, with the curation attempting to satisfy a group of individuals. As we found however, *collective memory* does not exist, in so far as *pure memory* is an internal process. Archives cannot possibly actualised everyone's individual *memory-images.*

There are then several ways archives lose the relationship between *memory-image* and *pure memory.* As a result of these paradoxical consequences of archiving, James Burton argues that Bergson is at once anti-archival and hyper-archival[92]. Through moving towards the virtual 'limit of pure memory, so the relaxing of the body-image of the archive leads in the direction of a hyper- or unbounded archivism.'[93] In hyper-archiving, we must cease to curate an archiving process of extracting *memory-image*, so that we can get closer to the internal *virtuality* of time and memory.

ARCHIVING THE TECHNOSPHERE

If we take then heritage practice as tautologous to archiving in the Technosphere, we see the Bergsonian paradox is maintained in conservation of the technosphere. Technosphere landscapes treated as heritage are forced into anachronisms, as they stop existing in the duration of time. If we

try to take a hyper-archiving approach with this, we must cease institutionalised curating of the Technosphere. With institutional heritage; the intuitive growth and change of the urban landscape, at one time free of planning and conservation restrictions, becomes eventually part of a curated process, altering the memory and actual physical memory-images. The moment we stop inhabiting architecture and transform it to become archaeological artefact, the very essence of the architecture memory is lost. In attempting to preserve landscapes, they move further from *pure memory.* In imposing a *memory-image* onto the Technosphere, we are inherently taking away from its true heritage. Attempting to ensure that any part of the built environment we inhabit will be a fixed entity is inherently flawed, as the virtual processes of duration and *élan vital* will take place irregardless. In preserving, we distance ourselves from experiencing of the virtual.

When reflecting upon the earlier words of Yvonne McNamara, that 'architecture is a machine for slowing time down', this statement in Bergson's terms becomes even more significant. The idea that architecture can slow down the conventional calibration of time is difficult (though not impossible to interfere with devices that we calibrate time with using magnetism and radiation), but in the sense of the duration of time, we can understand that perhaps architecture has the ability to make us experience at a slower pace, using more of our senses. McNamara went even further to say 'architecture wants to touch the timeless'[94], which seems to evoke the more abstract Bergsonisms, that architecture seeks to attain the abstractness of *pure memory,* or perhaps to express the *simultaneity* of existing in a place and time. Considering conservation of the Technosphere in this philosophical sense can open opportunities for speculation, that architecture at once seeks to be 'timeless' and yet become part of the *duration* of time, a seemingly paradoxical aim.

Given the process of *élan vital,* humanity 'continues to mark the land, relentlessly shaping the surface from wilderness to cultivation'[95] . This process happens most freely in all of those places where there is reduced heritage regulation. Places such as slums, countrysides and the wild are constantly undergoing transformations, as 'hybrid landscapes'[96] processed by human activity and nature. In hybrid landscapes, we find then that duration is most evident in the resulting Technosphere, in the geology of earth. It is in our cities and planning zones, where heritage regulations are toughest that anachronisms are allowed to exist, that this archiving process of the Anthropocene is less ecologically free. Perhaps it is in the everyday, ever changing, uncurated human behaviours that we can provide a hyper-archive of the Anthropocene. As we speculate in the Anthropocene, we rely on our own memories to form the framework for possibilities and restrictions on the future. This hyper-archiving process of self-awareness of our own *pure memory* can enable speculation from individuals to be informed by the *virtualities* of time and memory.

GLOBALISATION

Individual memory is internal; so too is our freedom. Physical boundaries do not restrict our individual freedom in Bergson's terms, however artificial boundaries and physical barriers do alter the true duration of things. In spatially limiting our lived experiences, we then limit our *memory-image* to those that we have been exposed or encouraged to. Thus, as de-spatialising our heritage practice is necessary to get closer to *pure memory*, then 'homogenous space, which stood […] like an insurmountable barrier, is then seen to have no other reality than that of a diagram or symbol.'[97] In the very act of constructing borders between countries and territories, we are interrupting the

duration, altering the resulting memories. In this sense, Bergson's philosophy advocates globalisation; in the eradication of artificial boundaries such as borders, we begin to experience more in the duration of time.

However, globalisation in practice has not been borderless. Instead the physical and bureaucratic boundaries of capitalism and trade have interfered with the true openness that his philosophy idealises. What is considered 'heritage' varies wildly across and inside these borders. There is thus an inherent politics to global heritage. Western society, in dominating global power in recent times, has imposed its curatorial self onto other societies. Global "common memory" is purportedly being preserved by bodies such as 'World Heritage' and the UN has charters to protect regions such as the Galapagos and the Arctic from human activity. These centralised powers begin to undermine the globalisation that Bergson's philosophy encourages of us.

Conservation practice today is governed largely by political systems, such as *UNESCO World Heritage, Historic England, The Twentieth Century Society* and *The Ancient Monuments Society.* These bodies range in their power to take action, some act as lobby groups rather than legislators, with UNESCO one of the largest heritage bodies globally. Arguably, the UN is itself a heritage body too – with charters protecting areas such as the Arctic and the Galapagos. There are overlaps of curatorial agendas between each body, as well as disagreements between them. What the *Twentieth Century Society* may consider a piece of cultural heritage, *Historic England* may consider an eyesore or not of value. These piecemeal bodies and their legislations overlap, or even contradict one another, while each attempts to control their version of the Technosphere archive. This means that there is a disjointed, curation of the global Technosphere archive; *memory-images* are curated inconsistently and without a common approach.

UNESCO states the definition of the heritage it aims to protect as;

> our legacy from the past, what we live with today, and what we pass on to future generations. Our cultural and natural heritage are both irreplaceable sources of life and inspiration.[98]

As we reconsider the timic legacies we are creating in the entirely global context of the Anthropocene, this fundamental statement comes into question. The Western dominance in the political curation of the Technosphere archive has meant that our *memory-image* type understanding of memory has structured the World's knowledge to our bent. We have manipulated the archiving process to suit our ideals, with the tourist industry interwoven with the heritage industry meaning that often World Heritage sites cater for Western holidaymakers' tastes. If we are to truly preserve heritage on a global scale, there must be a vast transformation of the way Western powers impose their form of curation onto the rest of the World. In doing so, the *memory-images* are reduced to the knowledge as selected by bureaucracy and power, moving us further away from *pure memory.* In this, it would be better for global heritage to be depoliticised, that is, barriers broken and boundaries no more.

Areas of our remaining frozen wilderness such as Antarctica and the Arctic fall within global territories as designated by the *United Nations Convention on the Law of the Sea*. Globally significant regions like this have been disputed over throughout history. As such, the Arctic provides an 'opportunity for the states concerned to demonstrate how such matters should be dealt with by responsible actors on the international arena'[99]. The opportunity in the Arctic is for there to be a global approach to end the West's curation of Earth, in order to enable individual memory to be the

power that leads conservation. That is, paradoxically, by ending *World Heritage* type Western ideal-rooted programs, a worldlier heritage will be produced. This worldlier heritage will be that of the many individuals experiencing their own *memory-images* without the interruption of political powers acting as curators.

UNCERTAIN HERITAGE FUTURES

> We are living in an incredibly exciting and slightly absurd moment, namely that preservation is overtaking us....
> Maybe we can be the first to actually experience the moment that preservation is no longer a retroactive activity but becomes a prospective activity. This makes perfect sense because it is clear that we built so much mediocrity that it is literally threatening our lives. Therefore, we will have to decide in advance what we are going to build for posterity sooner or later. [100]

The age of what we are protecting through conservation regulation is ever younger. Recent architecture such as Fosters' Willis Faber Building (1975) and Rogers' Lloyds of London (1986) are already Grade I listed. The gap between the past and present in our heritage systems is getting ever closer. As Koolhaas argues, 'preservation is overtaking us'[101], with consequences for what we build today. If we know that the brief for a project is to build an architecture deemed worthy of conservation, an intentional *place of memory*, then the act of architecture construction itself is ontologically woven with conservation and dictated by it. In the context of the Anthropocene, this is all the more resonant, as we have already determined architecture as a deep-time entity whose legacy needs considering far more. Simply building for the sake of eventually preserving is wasteful in a time when we ought to realise the ecological impact of construction activities. In perpetuating these behaviours unquestioningly, we are failing to *problematize* or speculate.

There is an inherent politics and ethical or moral dilemma at stake here – as we now begin to realise that natural and cultural heritage are interwoven and inseparable. There is a politics to heritage, and while the heritage of the mundane (the rubbish tips, quarries and power stations that people tend to forget our materialist societies rely upon) has been neglected in many ways, we continue to preserve "historic" artefacts and "important" buildings without necessarily questioning how important or relevant they will be in the future.

The Anthropocene has, in parallel to the formal conservation behaviours explored so far, seen accidental Technosphere landscapes constructed in times of disaster. 'On 26 April 1986, at 01:23 hours and 58 seconds, a series of blasts brought down Reactor No. 4 of the Chernobyl power plant'[102]. Distributed by the explosions and plumes of poisonous air that followed were vast quantities of highly radioactive material. 'Uranium decays at 238 half-lives. Translated into time that means one billion years. And thorium is fourteen billion years'.[103] With this disaster, man has seen its potential to be a legacy maker in very deep-time. As people were evacuated from surrounding towns and villages, the extent of the ecology of nature and man became fully apparent.

The processes undertaken in the Chernobyl clean-up operation were beyond imaginable, with people attempting to repair the irreparable;

> 'we lifted the surface soil and rolled it up, like a carpet. It was green turf with grass, flowers and roots, worms and spiders. What we were doing was insane. You can't strip away all the earth, taking out of everything that is alive.'[104]

The vastness of the Earth meant that the attempts to spray powder over the landscape [fig 07] and to bury all that was exposed to radiation were mostly futile. Now, more than thirty years later, the landscape has visibly begun to recover. Nature has flourished in the increased absence of man (there are those who moved back to the towns, or never left, but they were outnumbered by wolves and wild animals). In giving the landscape over to the wild, the *élan vital* of nature was able to curate the landscape, rather than man. In this process of rewilding, there is a chance for human-damaged landscapes to be healed by ecology over time, through a process of *durational* decay and regrowth. Now, with the sarcophagus covered with a new shield, there are tourist trips to visit Chernobyl's exclusion zone. 'Atomic tourism is in great demand.... Visit the atomic Mecca. Affordable prices.'[105] There are now calls for the Zone to be designated as a World Heritage site, despite that in doing so, the positive processes of nature's reclaiming of the landscape would be interfered with.

Inversely, forgetting becomes an important archiving process too. With radioactive sites and rubbish dumps, we may be better off hiding and forgetting their location, in order to ensure that there is no danger of the resources falling into the wrong hands in the future[106]. This is explored in the film *Into Eternity,* where it is concluded that humankind poses the biggest danger to the *Onkolo* nuclear bunkers in Finland. As such, sometimes in protecting humankind heritage 'we need to remember forever to forget.'[107]

With these typologies of hybrid landscapes, we are seeing the potential for our understanding of what we preserve and consider heritage to continue to transform as our needs from the earth change in the coming climate change. Chernobyl as a heritage site would be a memory that would remind us of how very powerful the Anthropos is, though how eventually, mother nature will prevail. In many ways, sites such as the Chernobyl zone become Anthropocene Heritage – stark archives of the accidental by-products of the age of Humankind.

When humans act to exclude nature from the archive of the technosphere, our actions alone curate the earth. In these places, humans must start filling the ecological gaps – for example buying food in shops, because there is not a sufficient supply of fruits to forage or animals to hunt. Through a process of relinquishing our curatorial powers, the technosphere can become more hybridized, even in our cities. By making room for timic decay and embracing the *durational* processes that weather the technosphere, there is the chance that this archive will become less anthropogenic and more processes of negative unsustainable behaviours and deeming them to be heritage, we are reinforcing the ways we have damaged the earth irreparably.

> While heritage is produced as part of a conversation about what is valuable from the past, it can only ever be assembled in the present, in a state of looking toward, and an act of taking responsibility for, the future.[108]

Considering the unknown future ahead, we must begin to contemplate how we would like to communicate with future civilisations. Heritage becomes a futurology[109]. In reducing our preservation behaviours, we may be able to leave a full enough anti-archive of ourselves that the Technosphere can communicate for us. Attempts have been made to develop a process for communicating into the

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Fig 07: A helicopter over the Chernobyl Zone spraying a layer of powder to try to trap the radiation distributed by the explosion of Reactor 4 (1986). This is an image of the futility of humans against the ecology of Earth.

Fig 08: Now the Exclusion Zone is wild, there are new curators of the landscape, like these Bison. Wildlife and mammals once again roam the landscape, alter its geological make-up in turn.

future, however, what language will people speak then? What if in communicating the dangers of somewhere we do not want them to go, we end up encouraging them to investigate? Therefore intuition and *élan vital* are integral, that the evolution of humanity over the *duration* of time must be allowed to perform the necessary curation for us. If places are dangerous to inhabit because they are radioactive, then humanity will evolve to move away from those places, through storytelling and the process of learning. We cannot even be sure humanity will survive to experience the consequences of our present behaviours, in which case 'perhaps there is an ethical urgency to consider the posthuman.'[110] How far do we feel responsible for our actions on earth, and to what extent would we be willing to change our lives now for the future?

Notes

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[98] This is the primary agenda for UNESCO, as stated on http://whc.unesco.org/en/about/ (date accessed 17 April 2017)
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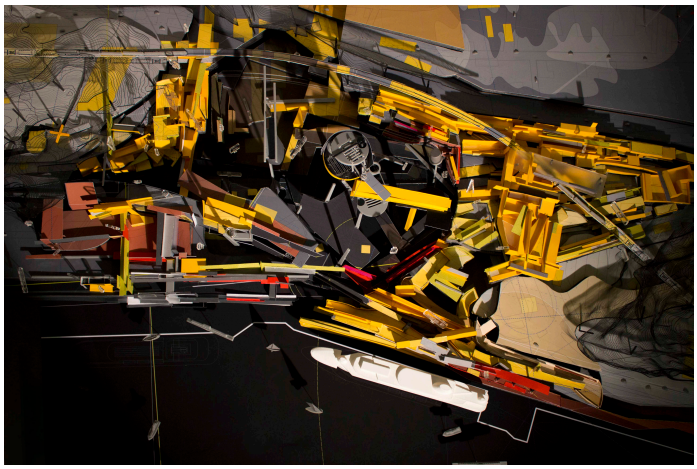
[100] Koolhaas, R. (2014) Preservation is overtaking us, New York: GSAPP Books, Columbia University
[101] ibid.
[102] Alexievich, S. (2016), Chernobyl Prayer: A Chronicle of the Future. Translated from Russian by A. Gunin & A. Tait. London: Penguin Random Hous, p.1
[103] ibid. p.136
[104] ibid.. p.196
[105] ibid. p.293
[106] Madsen, M. (2010), Into Eternity, Films Transit International, Denmark, 75:00 minutes
[107] Madsen, M. (2010), Into Eternity, Films Transit International, Denmark, 75:00 minutes
[108] Harrison, R. (2015) Beyond "Natural" and "Cultural" Heritage: Ontological Politics of Heritage in the Anthropocene, Heritage & Society, vol. 8, no. 1; pp. 24-42
[109] ibid. p.35

[110] Parikka, J. (2015), A Geology of Media, Electronic Mediations, Volume 46, Minneapolis & London: University of Minnesota Press; p.63

05 A MANIFESTO AGAINST CONSERVATION IN THE ANTHROPOCENE



MANIFESTO SUMMARY

The Anthropocene provokes an understanding that all our actions on Earth are part of a wider ecology. Implicated in the Age of Humankind is a new kind of legacy responsibility, in the deep-time of the future. Henri Bergson's ecologically-minded philosophical writings have served as a framework for re-understanding time and memory as concepts. In appreciating the virtual entities of the *duration of time* and *pure memory* alongside the over-spatialised *calibrated time* and *memory-image*, we find that opportunity exists to speculate upon our archiving behaviours. With this approach, it has been found that there are a series of paradoxes in our present behaviours that compromise our futures. This manifesto has emerged as a process, a way of looking at the present condition of humanity in the Anthropocene, to enable speculation and over deep-time.

The Technosphere acts as an archive of all of the built environment. Given the *Technosphere's* general profusion of structures and buildings and their relative permanence, this is an archive that is vast and complex to curate. As exploring Bergson's philosophies of time and memory have found, our present heritage and conservation practices are inherently paradoxical and futile in this environment. Contemporary conservation practices of the *Technosphere* must desist for the sake of conservation's primary agenda – to protect humanity's heritage to pass on to future generations. A new radical approach to archiving the Technosphere becomes at once anti-archive and hyper-archive, with the duration of time and the ontological relationships between human and Earth exhibited. In protecting the Technosphere against preservation, we enable the process of *pure duration* to take effect upon the landscape, thus enabling the Technosphere to become a true archive of the Anthropocene.

The deep-time trajectory of the Anthropocene still yet to come is inherently difficult to plan for. We will never quite know if our efforts to conserve and our cultures will be sustained in a deep-future in the way that we imagine with current conservation practices. There is inherent risk and uncertainty involved in this Anthropocene. We can never be sure of the implications of any changes in our behaviour, however we can be certain that whatever humanity does, there will be reciprocal outcomes from nature. If we allow our technosphere to decay and progress in durational time, rather than continually preserving, we may find that the *virtual* realm of *pure memory* is brought closer to our lived experience.

With this new anti-archival approach, through encouraging speculation and *problematizing* we could transform the heritage industry as we know it, enabling our future to be unhindered by present cultures and politics. The Anthropocene forms a backdrop for a new Technosphere-Archiving discourse in which architects, theorists and planners ought to participate, given their dominance in curating and constructing the *Technosphere* so far. Through changing the traditional focus of these disciplines from *space* to *time*, enables a reconceptualisation of conservation practices, enabling us to strive for the timeless.

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EXHIBITIONS ATTENDED

Subirós, O. & de Vicente, J. L. (2016) Big Bang Data, Somerset House, London

Do, H. S. (2017), Passages, Victoria Miro Gallery, London

Raven, L. (2017), Lucy Raven: The Edge of Tomorrow, The Serpentine Gallery, London

FIGURES

Front cover: Marlow, P. (2011), 'Mrs Doreen Thomas'. UK. England. Kent, Dungeness. http://pro.magnumphotos.com/C.aspx?VP3=DynamicPageGeneration&OriginalURL=Catalogue%2FPeter-Marlow%2F2011%2FUK-England-Kent-Dungeness-2011-Mrs-Doreen-Thomas-NN1109356.html&FRM=SubHeaderFrame%3AMAGO31_13 (accessed 25 April 17)

Fig 01: Author's own mapping study of Stockholm.

Fig 02-04: Author's own photographs of geological and human interactions in Stockholm

Fig 05: Socio-economic trends, 1750-2010 Study of the 'Great Acceleration' produced by the Stockholm Resilience Centre; Steffen, W., W. Broadgate, L. Deutsch, O. Gaffney, C. Ludwig (2015), The trajectory of the Anthropocene: The Great Acceleration, The Anthropocene Review 2; pp. 81–98 http://journals.sagepub.com/doi/abs/10.1177/2053019614564785 (accessed 25 April 17)

Fig 06: Earth system trends, 1750-2010 ibid.

Fig 07: A helicopter over the Chernobyl Zone spraying a layer of powder to try to trap the radiation distributed by the explosion of Reactor 4 (1986). https://www.theatlantic.com/photo/2011/03/the-chernobyl-disaster-25-years-ago/100033/ (accessed 25 April 17)

Fig 08: Now the Exclusion Zone is wild, there are new curators of the landscape. such as these Bison http://www.adaptnetwork.com/environment/nature-taken-over-chernobyl/ (accessed 25 April 17)

THESIS SUBMISSION

BARTLETT, 2016-17

Katherine Scott
Unit 21