Education As Human Development

An integrated thesis examining education in terms of human development as opposed to a business. This document explores strong issues and draws from multiple disciplines to build arguments from different perspectives.

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Overview

In this paper I examine the impacts of a market driven society as related to homo sapiens as social mammals. The effects of the reductive pressures of finance are to create underclasses through exclusion from cultural production (Select Committee on Financial Exclusion, 2016) damaging their ability to develop and contribute to a mutually recognitive whole (Gunn, 2018).

These underclasses are vulnerable to exploitation through their dehumanisation and devaluation (Kaufmann, Kuch, Neuhäuser & Webster, 2011). Education has been explored as a tool in this process (European Round Table of Industrialists, 1998) and is linked to a history of reducing the field of political economy to expressions of finance.

To scrutinise this cultural schema I bring in natural history perspectives to help us analyse from a third perspective the effects of 'opportunities reduced to finance' on our species. I argue that education is human development (United Nations, 2004) and as such is a vital element of the habitat of homo sapiens as a social mammal (Thornton & Raihani, 2010).

The harms visited upon an animal by the erosion of it’s habitat (sociological and physical) are significant and marked. Viewed from this perspective we can understand education as essential for health, happiness, and generative behaviours.

Mental and physical illness, anxiety, stress and negative behaviours emerge from the destruction of the habitat of our species (Forbes, 2007) forcibly changing cooperative behaviours to competitive ones thereby negating the possibilities which come from collaborative endeavour.

The transformation of the living environment from one of holism affording nurture to an industrial environment which increasingly operationalizes living beings for the extraction and concentration of wealth in the form of finance is a lens through which we can understand the context of the central thesis of this work - 'Education as Human Development'.
Instrumentalising animals via industrial farming results in underdeveloped brains (Darwin, 2009) through impoverishment of environment – also known as habitat (Diamond, Krech & Rosenzweig, 1964; Diamond, Greer, York, Lewis, Barton, & Lin, 1987; Diamond, 2001).

In the human context I propose a similar process may explain the reversal of the Flynn Effect (Flynn, 1984; Flynn & Shayer, 2018) where we see a reduction of intelligence levels across industrialised nations; whether we read IQ testing as a measure of ability or whether we read it as a measure of cultural dislocation (Hall, 2006 ??).

As a response to the erosion of habitats I argue we must cease consuming the world’s resources mindlessly and attend to collective sustainable futures responsibly through a practice of rewilding (Parliamentary Office of Science and Technology, 2016) our intellectual, social, economic and environmental landscapes if we are to avoid catastrophic ends to the means we are employing. In this education is critical to evolving appropriately (O’Hearn, 2009) to the emerging challenges of our changing world.

This thesis is an expanded version of a presentation given at the British Educational Research Association conference held in Liverpool John Moores University which had the theme of 'Transitions: Challenges, Threats & Opportunities across the Post-compulsory Sectors'.
About the Author

Alex Dunedin runs the Ragged University project dedicated to opening up learning opportunities which develop capabilities independent of finance. Coming from a homeless background, he is particularly interested in finding models of education which can function in the most inhospitable and unresourced environments so that society as a whole can flourish.

Many of his understandings have been developed through sharing individuals and he gained his education via pro-social behaviours found in community. He believes informal education is an important complement to formal education and researches how people beyond formal education might be valued for their contributions to fields of knowledge.

People are invited to offer critical perspectives and ask questions as this is an essential mechanism he uses to be in dialogue with society.

Contact: alex@raggeduniversity.com

About Ragged University

Ragged University is an idea inspired by social traditions of learning found in every culture and draws its name from the Ragged Schools movement which brought about free universal education for children in the 1800s.

The axiom ‘Everybody is a Ragged University; a unique and distinct body of knowledge, accredited by their life experience and with a membership of one’ articulates the key tenets of what constitutes a university in law.

This project is informed by the Universal Declaration of Human Rights and is situated beyond the formal world where many people live independent and rich intellectual lives. Events and activities are free and happen in social spaces which are open to everyone.

Website: www.raggeduniversity.co.uk
**Introduction**

In this paper I examine the impacts of a market driven society on homo sapiens as social mammals. The effect of the reductive pressures of finance are to create underclasses through exclusion from cultural production (Select Committee on Financial Exclusion, 2016) and ultimately representation by the culture.

These underclasses are vulnerable to exploitation through their dehumanisation and devaluation (Kaufmann, Kuch, Neuhäuser & Webster, 2011). Education is viewed as as a tool in this process (European Round Table of Industrialists, 1998) as the social science of political economy has become diminished through abstraction to finance and mathematical expressions omitting the everyday human from the ordinary business of life.

In short, simple numbers (e.g. GDP) have been used to represent complex social phenomena and as a result the living realities of those who live under the cultural apparatus of the financial system are largely ignored as a system oriented around GDP it is grossly representative of those who have finance...

As a methodology I make use of the tradition of the principles of the 'democratic intellect' which predates the categorical organisation of fields of knowledge (Davie, 2013). This kind of approach synthesises eclectic understandings affording the development of interdisciplinary perspectives on a given focus.

As a starting point and a means of structuring the argument throughout, I am going to draw on recognized standards necessary for the welfare of animals to help build a picture of what welfare means in the human context. An understanding of what welfare means and constitutes is critical for the framing of 'Education as Human Development' as it has as its roots in nurture.

Article 7.1.1. of the Terrestrial Animal Health Code as laid out by the World Organisation for Animal Health (aka Office International des Epizooties; OIE) states animal welfare as
referring to “how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear and distress” (World Organisation for Animal Health, 2015).

It is from this starting point that I begin this paper so that we may understand ourselves as a highly evolved simian species which is a part of nature rather than above or beyond it. This vantage point helps us gain perspective in understanding homo sapiens as a social mammal with complex behavioural and sociological habitats which are essential for well being.

We can understand things about ourselves by looking at what constitutes welfare for other species. It is especially helpful looking towards other social mammals due to the similarity of the needs.

In this paper I will be mooting the questions which follow from the proposition ‘what happens when we strip an animal of its habitat?’, applying these directly to our own existences. Directly in focus will be education as a part of our innate social behaviour and as imperatively constituting part of our sociological habitat and wellbeing.

I am drawing on this strategy as self awareness is a capacity which challenges and confuses human beings, and this lack of capacity historically results in fallacy and error which we must somehow find ways of getting beyond. So, it is by taking a detached third person perspective that we might more effectively examine the erosion of our socio-behavioural environment as it is consumed by the drives and forces for extracting and concentrating what is commonly referred to as profit.

In the next part of the paper I will be painting a socio-economic portrait of significant events and cultural forces which have shaped the world and landscape we live in today. I will construct the argument that our sociological habitat has been reduced through the capacity of finance to abstract and dissociate resulting in precarity (Standing, 2019) through the extraction and stranding of wealth from our collective
existence. This is a major argument Professor Guy Standing associates with the idea of the provision of a Universal Basic Income.

Professor Guy Standing talks on Basic Income RSA
https://www.youtube.com/watch?v=zs5Ls9Ks3to

Economic History: Colonisation of the Field and the Reduction of Everything to Finance

“In the current century, although cruelty persists, and although huge numbers of animals continue to be used for food and other purposes, we have arguably moved into a third stage. We now see that the burgeoning human population is having vast, unintended effects on the non-human inhabitants of the planet. We affect animals by destroying their habitat, polluting their environment, introducing invasive species into their ecological systems, building structures in flight-paths, tilling the land, cutting trees, driving cars, burning fuel, and on and on.” (Mellor, Hunt, & Gusset, 2015).

I open this section with a quote which brings into sharp relief the impacts of humans on other living species. A chief reason for doing this is to articulate that what we have heaped upon other animal species is also heaped upon our own. The instrumentalisation of humans and other species is a diminishment of their existences from whole sentient beings to products and tools for consumption and wealth extraction via the euphemistic 'marketplace'.

I will be examining how this instrumentalisation has been effected by examining the changing nature of the way that our societies have been governed through the subject lens of Political Economy. There is arguably no more potent force in policy and practice of human affairs today than that which stems from this subject field. Thus analysing the historical trends associated with the field is a key step we need to undertake to understanding our current context of consumerism.
The root of the word 'economics' stems from the Greek 'oikonomia' meaning "household management, thrift"; it is related etymologically to 'oikonomos' meaning "manager, steward", and to 'oikos' meaning "house, abode, dwelling". The roots of economics comes from understanding how to manage our home such that it provides for our needs.

The renowned political economist Alfred Marshall famously stated in 1890 about this field: “Political economy or economics is a study of [hu]mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of wellbeing” (Marshall, 2013).

As social mammals the companionship of society is vital for our health and wellbeing which I hope to demonstrate. Much of what is taught or discussed today as economics is more concerned with finance than wellbeing. This is in contrast to the study of the holistic interplay of human beings and functional relationships working to live in ways which coalesce with wider societies and environs than we find in finance alone.

Political economy as a discipline originated as a social science in the academic department of geography; a field dedicated to the study of the lands, their features, inhabitants, and the phenomena of the planet Earth. It was not until the 1700s that the subject started to be systematised by thinkers such as Richard Cantillon in his 'Essai sur la Nature du Commerce en Général' [published 1755], who was to influence François Quesnay and the Physiocrats and ultimately Adam Smith, who wrote the landmark work 'An Inquiry into the Nature and Causes of the Wealth of Nations' published in 1776 (Rutherford, 2012).

The discipline in its origin was organised from the writings of various theoreticians and merchants across the ages, and it was from these collections that the 18th century Enlightenment thinkers drew together understandings of functional relationships from amid the factors of land and society coalescing a distinct field of study. The physiocrats who inspired Adam Smith were French economists who put forward ideas that all wealth came from the land through its agriculture and development (Neill, 1949).
I argue that later Neoclassical Economics started to become increasingly abstracted through the application of pure mathematics to dynamic, complex, living systems. A significant point in development can be traced to William Stanley Jevons who published 'The Mathematical Theory of Political Economy' in 1874 (Jevons, 1874). This indicated a shift of the social science from political economy towards the symbolic world of mathematics moving attentions from the nuanced and embodied realities of the factory floor (for example) towards two dimensional cyphers of what is happening in the world.

In some ways, this marked the beginning of a significant reduction of the complexity of human affairs on a grand scale. I argue that human life was being re-cast through terms of demand and supply where people feature as consumers whose chief concern was to maximise personal satisfaction.

We can see the peaking of the second industrial revolution of the late 19th and early 20th century intersect with the rise of the Chicago School of Economics which fostered free market ideology confluent with the technocratic laissez faire business schools which were proliferating (Page xii, Locke & Spender, 2011). This mix of cultural developments against the backdrop of two world wars gave rise to the voicing of a kind of 'Capone Economics' which aimed to reframe classical political economy perspectives to positions which amount to might-is-right, pay-to-play and small government.

Through these particular ethereal and unbounded macroviews of the world, 'the market' is presented as the mechanism which always gives rise to the 'right decision' in collective human affairs. In the playing out of this cultural configuration, those with the greatest finance have the biggest stake hold in decision making. Paul Howard Douglas taught economics at the University of Chicago and wrote about the changing experience of teaching there in his memoirs:

"I was disconcerted to find that the economic and political conservatives had acquired an almost complete dominance over my department and taught that market decisions were always right and profit values the supreme ones. The doctrine of non-interference with the market meant, in practice, clear the track for big business. Inequalities of bargaining power, knowledge, and income were brushed aside..."
...the state seemed to be a good agency for widely needed reforms, in health, housing, education, conservation, and recreation. The opinions of my colleagues would have confined government to the eighteenth-century functions of justice, police, and arms, which I thought had been insufficient even for that time and were certainly so for ours. These men would neither use statistical data to develop economic theory nor accept critical analysis of the economic system...

...increasingly out of tune with many of my faculty colleagues and was keenly aware of their impatience and disgust with me. The university I had loved so much seemed to be a different place. Schultz was dead, Viner was gone, Knight was now openly hostile, and his disciples seemed to be everywhere. If I stayed, it would be in an unfriendly environment. I felt stifled and did not think I could live in that atmosphere” (Douglas, 1972).

I have included this introduction and lengthy quote to illustrate the doctrine and atmosphere which had become dominant in what we could argue as globally the most influential school of economic thought relevant to the era we now live through.

Associated with this period we see the upsurge of elite business schools whose spread in the 20th century has been associated with the rise of a kind of managerialism which paralleled the growth of the reductionist free market economics of the Chicago School of Economics. Together they shared a propensity to translate the living landscape into mathematical and positivist term of finance with accompanying claims that this made their practice more scientific – therefore robust - than other approaches.

Professors Robert Locke and J. C Spender chart the rise and influence of these business schools and practices of 'scientific management' in their book 'Confronting Managerialism: How the Business Elite and Their Schools Threw Our Lives Our of Balance'. In the book they present the case that:

“Because management schools existed in the USA and nowhere else, only there in the 1960s was it possible for a group of reformers to set about the education of a general management caste in business schools following a positivist science format. The principal issue raised in this study, then,
has not been whether people in management should learn mathematics, technology, and/or science in school, but whether management, as a general function, can be treated as a rational science in management praxis or in business schools. The answer the book has given is that it cannot, and thinking and acting as if it could has created lives out of balance…” (Page 178, Locke & Spender, 2011).

Relating this to the context of education, we can see by looking at Google Ngram Viewer (Figure 1 below) the rise of the phrase 'student as consumer' started to occur in the mid 1960s. This marks a considered strategy to redefine education in terms of market values and a concerted effort to unsettle theory of public goods and ownership. It was from the mid 1960s onwards that we start to see the meteoric growth of business schools and the creation of a managerial caste affecting nearly every walk of life.

Appendix 1: Google Ngram of the rise of the use of the phrase 'student as consumer'

Whilst beyond the scope of this particular paper, it is important to briefly allude to other related magnitudinal shifts in political economy which I have written about in more detail elsewhere (Dunedin, 2018). Critical to understanding our economic environment is the deregulation of global finance as seen in the neutering of the Bretton Woods system of economy that linked the gold reserves with currency underpinning a fixed rate of exchange.
This had a knock on effect of collapsing the London Gold Pool agreement in 1968 and is associated with the global transition of finance to fiat currency linked to the US dollar as an international standard. A fiat currency is legal tender whose value is determined by the government that issued it rather than the resources the government holds. It is in this period we see ‘off shore financial centres’ also known as 'tax havens' or 'secrecy jurisdictions' start to balloon in number (European Business History Association, [N. D.]).

In the same period we can see that the rise of the use of the term GDP (gross domestic product) (Figure 2 below) closely correlates with the rise of the use of 'student as consumer'. Joshua Cohen of Forbes business magazine (Cohen, 2018) illustrates how abstract mathematical figures are in use and openly acknowledged as proxies for "wellbeing".

He goes on to break down what is represented in the figure: "GDP represents the market value of all goods and services produced by the economy, including consumption, investment, government purchases, private inventories, and the foreign trade balance".

Appendix 2: Google Ngram of the rise of the use of GDP

Public Goods and Human Development: The Econo-Social Narrowing of Wellbeing to GDP

GDP as a measure has dominated how well-being is understood in industrialised countries. Predominantly, the mainstream curricula of universities across the globe have presented these measures of finance as representative of "standards of living" in countries (Khan Academy, [N. D.]).

There have been significant criticisms surrounding the general narrowing of political economy towards 'free market economics' as the impacts of such policy direction have almost universally ricocheted downwards onto those who are worst off financially (Rethinking Economics, [N. D.]).
In her book ‘Creating Capabilities; The Human Development Approach’ Martha Nussbaum scrutinises how the narrative of wellbeing (aka welfare) gets articulated through obfuscating devices such as GDP thus hiding a series of poverties and pathologies. She cites Charles Dickens who wrote about the problem of notionalising distribution of wealth in his 1854 book Hard Times and how wealth, and ultimately the welfare of all people is identified with the financial averages which are manufactured from the collection of statistics:

“Charles Dickens portrayed a classroom in which children were taught the standard approach. Circus girl Sissy Jupe—who has only recently joined the class is told to imagine that the classroom is a nation, and in that nation there are ‘fifty millions of money.’ Now, says the teacher, ‘Girl number twenty’ (in keeping with the emphasis on aggregation, students have numbers rather than names), ‘isn’t this a prosperous nation, and a’n’t you in a thriving state?’ Sissy bursts into tears and runs out of the room. She tells her friend Louisa that she could not answer the question, “unless I knew who had got the money and whether any of it was mine. But that had nothing to do with it. It was not in the figures at all.” (Page 14, Nussbaum, 2013).

This is a key way that the wealth of the population of nations has been depicted as wealthy through the use of mathematics and finance in expressions which do not reflect the realities of the majority of people’s circumstances.

In this transformation of how society is understood in terms of wellbeing, the dynamics were set for those who have voices of lesser status to be removed from the discourse (the poor); those of equal status which dissent are starved through lack of opportunity (the objectors) (Francis, 2015; Chan, 1996; Westmarland, 2001; House of Commons Committee of Public Accounts, 2016); and those who pragmatically capitulate have their value base shifted from delivery of public goods to those of market values (Diamond, 2010). This has the effect of ostracising people from commons which are constituted by public goods, leaving them bereft of the capabilities associated with them and dependent on them.
I will briefly scrutinise a means by which this shifting of public to private goods is effectuated. The growth of economics in terms of finance has become manifest in the development of a culture diminishing the real whole we encounter in tangled phenomena to numbers and metrics - it constitutes a codification of actual society into cyphers in a way analogous to how lossy compression (or irreversible compression) works in information technology.

Data is discarded and inexact approximations are used to represent the original phenomena resulting in situations where deep forensic information is lost and where the result is unrecognisable under close examination. Once information is disembodied from the account of the actual, the practice is uprooted and is malleable to having its value system shifted through administrative means.

This is how our society and lives are shaped through the mechanising influence of what are ultimately governed as of financial bureaucracies. In 'Making Gray Gold: Narratives of Nursing Home Care', Timothy Diamond gives an ethnographic account of how he observed such a shifting of value base take place in nursing homes transitioning from one of care to one of market values mediated via budgetary priorities and administrative metrics (Diamond, 2010).

Public goods such as education have been undergoing related forced systematic transformations in their value base through the implementation of measures and outcomes, league tables and bureaucratic impositions from financiers. In education we have seen the increased use of systems such as Value Added Measures (VAM) such as the proprietary 'Education Value Added Assessment System' (EVAAS), reported as the most widely used and implemented instrument in the sector. This software was developed by Statistical Analysis System (SAS) Institute Inc., a multinational developer of analytics software (Morris and Davies, 2018).

The SAS Institute started as a project at North Carolina State University to create a statistical analysis system for use by agricultural departments at universities in the late 1960s. It became a private business distinct from the university in 1976 where its revenues were to grow from $10 million in 1980 to $3.2 billion in 2016 (Amrein-Beardsley, 2014).
It was Dr. William L. Sanders who developed the EVAAS model in the 1980s as he was teaching advanced statistics in the University of Tennessee at Knoxville. At the time he was bringing together the use of mixed model selection methods and best linear unbiased prediction (BLUP) methods to model genetic and reproductive trends among livestock. Sanders' move into the field of public goods came about "practically by accident" as students prompted him to transfer his work into education.

Using student achievement data and advanced statistics linking student test scores with their teachers, schools and districts. He created algorithms to propose causal extrapolations about effectiveness and impacts on student achievement. Amrein-Beardsley reports that Sanders' focus was on the "product of (the) educational experience rather than the process by which it was to be achieved".

The imposition of metrics and competition into the educational sector is a suspect strategy when we consider the contributions of collegiality in knowledge production and human development. Thus the mechanism of ranking and pitting professional against professional, and institution against institution needs to be carefully problematised. This is especially so when this is being delivered by for profit companies such as Pearson Plc, a multinational publishing and education company which made £4,513 million revenues in 2017 (Leckie, 2016).

This represents what is known as a principal-agent problem (Shah, 2014) in economics amounting to moral hazard and harms (Epstein, 1995). The dictates of financial profit act in tension with the dictates of education as a public good and the individuals overseeing the activity are affected by the situational forces.

Lesley Saunders wrote a report examining over one hundred articles, reports and features on the contribution of value added measures to the educational sector. Her conclusions indicated that the problems of isolating pupil and school-level factors associated with better or worse performance are still undiagnosed. She suggested their are better models of what makes schools effective for different groups of students, particularly for those who are at greatest risk of under achievement (Saunders, 1999).
The work of Saunders corresponds with a report published by the RAND Corporation where in its concluding remarks it stated: “The research base is currently insufficient to support the use of Value Added Measures (VAM) for high-stakes decisions. We have identified numerous possible sources of error in teacher effects and any attempt to use VAM estimates for high-stakes decisions must be informed by an understanding of these potential errors.” (Mccaffrey, Lockwood, Koretz, Hamilton, 2003).

The problematising of such technologies in societal decision making processes has been a field which has emerged and grown with the technologies (House of Commons Science and Technology Committee, 2018). There is accruing evidence that use of digital technologies has only served to reinforce inequalities and further exclude the marginalised (Eubanks, 2012; Eubanks, 2019).

Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor by Prof Virginia Eubanks
https://www.youtube.com/watch?v=v74S-mTJ8Rw

Brown, McNamara and O'Hara (2016) identify in their paper the political desire to introduce value-added assessment into mainstream education. In their final analysis they agreed with Hargreaves’ (2011) thoughts in the presentation 'Essential For Some Good For All' (below) on standardised testing, moral hazard and perverse incentives introduced with the pressures of competition and rewards of finance:

“...the last remaining test is currently under review because of what the UK coalition government calls the perverse incentives that standardised testing applied to all populations causes teaching to the test and concentrating on some students who make the numbers look good at the expense of other students.”

Essential For Some Good For All by Andy Hargreaves
https://www.youtube.com/watch?v=hVkRFELPPzE

The scene is set of perverse incentives associated with 'teaching to the test', privileging students who have the finance to 'participate' in education systems, and catering to those with the greatest capabilities.
Financial Exclusion, Disappearing Public Goods and Poverties: The Dwindling Habitat

Speaking to the theme of public goods being reframed as opportunities for private profit, it does not take much analysis to see that the effects of private enterprise on education cause the emergence of under-classes of people; primarily of those who set out from the most disadvantaged starting points.

When the values of the free market ideology impose competition on a community which relies upon cooperation and which is delivering a system to serve the purposes of human development in society, a displacement occurs. Purged from the system are those who cannot compete financially (despite having something to contribute intellectually, socially)-those who cannot afford to take part are precluded from the culture of valuation embodied in higher education- and silenced are those who have inclusive values in education on pain of losing their resources within finance based hierarchies. People are excluded from participating through finance.

The Select Committee on Financial Exclusion (2016) published a report on how, despite the United Kingdom being at the forefront of the global finance industry and being a leader in the fields of financial services, technology and innovation, a large number of UK citizens lack access to even the most basic financial services.

Their findings showed that the most disadvantaged are forced to rely on high-cost and suboptimal financial products which can damage their long-term financial health. The poor live with what has been coined a ‘poverty premium’, whereby the poor pay more, which serves to compound the effects of financial exclusion thereby reinforcing an unvirtuous cycle.

Financial exclusion has come to describe the inability, difficulty or reluctance to access mainstream financial services, which, without intervention, can stimulate social exclusion, poverty and inequality. When we look at what opportunities are available to people which do not involve finance, we are left staring at a desert; a landscape bereft of much of the 'ordinary business of life' and 'social action' which is closely connected with the 'requisites of wellbeing' which Alfred Marshal famously described.
The innate behaviour of homo sapiens is diminished in similar ways to the lives of industrially farmed animals. Historically, enclosure of land and livelihood have displaced peoples from the lands which provided them with opportunities of subsistence farming and moved them into industrialised urban centers exploiting cheap labour employed from a position of precarity (Dunedin, 2017b).

For the poor the living environment in modern times is a sociologically denuded habitat which serves to instrumentalise, diminish and dehumanise people in profound ways, so much so that mental and physical health is dramatically impacted upon. As a part of the political myth of the current dominant cultures we commonly hear rhetoric of personal responsibility (McNeil, O., [N. D.]; Shorthouse & Kirkby, 2014; American Enterprise Institute for Public Policy Research and the Brookings Institution, 2015). Dorothy Thomas, visiting Fellow at the Centre for the Study of Human Rights, London School of Economics describes how a rhetoric of personal responsibility relies for its effect on the dehumanisation and demonisation of the people living in poverty (Report of Roundtable Meeting, 2008). Tom Slater scrutinizes how in the prevailing political cultures structural causes of poverty are strategically ignored in favour of blaming causes such as personal behavioural breakdown (Slater, 2012).

As people are structurally displaced from the means to take part in social, intellectual and economic culture, poverties are visited upon them (both physical and existential) by being forced to subsist under deficient circumstances (Dunedin, 2017a). The creation of artificial scarcity in a living habitat visits psychological and physical harms on social species, as is a theme of the natural history perspective I draw on in this writing.

In understanding poverty I argue it is important to recognise that there are of various kinds of poverties, many of which intersect and compound each other. In 1995 the United Nations adopted two definitions of poverty. Absolute poverty was defined as: “a condition characterised by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access
to services.” (United Nations, 1995). The definitions which they have articulated give a deeper insight into what constitutes well being for human beings:

“Overall poverty takes various forms, including: lack of income and productive resources to ensure sustainable livelihoods; hunger and malnutrition; ill health; limited or lack of access to education and other basic services; increased morbidity and mortality from illness; homelessness and inadequate housing; unsafe environments and social discrimination and exclusion.

It is also characterised by lack of participation in decision making and in civil, social and cultural life. It occurs in all countries: as mass poverty in many developing countries, pockets of poverty amid wealth in developed countries, loss of livelihoods as a result of economic recession, sudden poverty as a result of disaster or conflict, the poverty of low-wage workers, and the utter destitution of people who fall outside family support systems, social institutions and safety nets.”

Poverty violates dignity and creates the conditions where people are vulnerable to exploitation as poor people are dependent on others in a degrading way which is taken advantage of and capitalised on. It is through poverty that circumstances for dehumanisation of out-groups by in-groups are set up and reinforced. The poor become marginalised through processes of misidentification and misrepresentation and they are structured out of opportunities otherwise available and recognized as fundamental rights to all people (Schaber, 2011).

An example of dehumanisation of the poor is used by Waytz, Schroeder and Epley (2014). When in 2010 the lieutenant governor of South Carolina, Andre Bauer, whilst making a public address about government assistance argued that the poor should not be given food assistance because “they will reproduce, especially the ones that don’t think too much further than that... They don’t know any better”. These researchers of the psychology of dehumanisation suggest that the statement has implicit in it the attitudes that the poor have a diminished capacity to think carefully about the consequences of future actions; it views the poor as having lesser minds.
In deconstructing the problems which are being raised we must find a means of orienting associated questions of morality and justice. An obvious global justice question is why in some parts of the world there are people who struggle to meet their most basic needs, while in other sites people live in comparatively exorbitant conditions built on the extraction of wealth from the needy. There are many local justice questions raised by research which demonstrates how the wealth differences within affluent societies are the roots of significant problems like premature death and illness (Wilkinson & Pickett, 2009; Wilkinson & Pickett, 2018; Müller and Neuhäuser, 2011).

The Inner Level Presentation on Equitable Societies by Professors Kate Pickett & Richard Wilkinson
https://www.youtube.com/watch?v=OdAtpSmOWTg

It is apparent that the criteria for the United Nations definitions for absolute and overall poverty are being met for significant populations in so called 'developed nations' such as the UK through their dispossession from public goods and subsistence means (United Nations, 1995).

Prof Philip Alston - Press Conference of the UN Special Rapporteur Reports on Britain
https://www.youtube.com/watch?v=NeozhyFY1i8

The Narrow Economy, Demarcated Workfulness and the Disappearing Everyday

In a society where the drive for profit is limiting access to education and as a consequence blocking access to other basic services, it is apparent that the criteria for the United Nations definitions for absolute and overall poverty are being met in a so called 'developed nation' like the UK for significant populations by their dispossession from public goods and basic means to subsistence (United Nations, 1995).

Professor Philip Alston, Special Rapporteur on extreme poverty and human rights for the United Nations, visited the UK in 2018 to review conditions (Alston, 2018). In his report he identified
that "poverty is a political choice" in a country which is the fifth largest economy in the world. In the 24 page report he gives a detailed account of his rationale which includes the following:

"14 million people, a fifth of the population, live in poverty. Four million of these are more than 50% below the poverty line, and 1.5 million are destitute, unable to afford basic essentials. The widely respected Institute for Fiscal Studies predicts a 7% rise in child poverty between 2015 and 2022, and various sources predict child poverty rates of as high as 40%. For almost one in every two children to be poor in twenty-first century Britain is not just a disgrace, but a social calamity and an economic disaster, all rolled into one"

In the face of the modern reinvention of poverty, education plays an indispensable role in being able to survive in a culture which demands validation and authentication before an individual can take part in work. The more professionalised and bureaucratised a society, the more privileged are formal qualifications. Increasingly it is imperative to have formal educational qualifications to be considered for jobs which previously did not require any (Hobbs, 2016).

The professional demarcation of workfulness in low grade, low paid, low security jobs is affected by a type of 'qualification poverty' entangled with credentialism which is playing off against a rise of grade inflation (Allahar, [N. D.]). Beyond the academic realm, the function of the formalised educational systems in recognizing the qualities and capacities individuals possess enables people to function in the symbolic world of the administration which continues to shape life opportunities.

Applicant Tracking Systems are software systems that generate shortlists from candidates on recruiter databases using algorithms. Also known as ‘Resume Robots’ these computer algorithms reject up to 75% of CVs before they even get in front of human eyes. Plainly put, if the algorithm does not recognise the signals in a curriculum vitae, it will not select you for an interview process. There is no recourse to human interaction and a set of people are precluded from allocation of opportunities (McLean, 2018).
I propose that as recruitment processes are increasingly using machine algorithms to determine and allocate who gets offered interviews, those who have recognized qualifications and recognised signifiers on their curriculum vitae silently displace those who lack such qualifications despite there necessarily being no practical requirement for any – i.e. shelf stacking and basic cleaning jobs.

This is a kind of enclosure of human capital by technologised professionalisation driven by market values of profit seeking and compounded by the reconfiguration of ‘education as a business’; this marks the dispossession of people from being involved in economic, social and cultural production where previously there were more points of entry into work related opportunities. This move to marketise education and learning provision was in part planned by the European Round Table of Industrialists in 1998 (Page 18, European Round Table of Industrialists, 1998):

“Universities no longer have the monopoly on disseminating knowledge. We cannot leave all action in the hands of the public sector. The provision of education is a market opportunity and should be treated as such. Nowadays there are far more players in the higher education market. Industry also has a role to play...

...Business education is a major growth sector with a Europe-wide potential and a growing export market. In the Europe of distance learning, virtual colleges and universities are growing in importance, and the way is clearly open for software companies to enter the field in a major way. For the public and private sectors to interact effectively in a Learning Society, it is essential to train legislators in the innovative new technologies to enable them to understand the basics of new sectors now being regulated”.

Identifying further significant changes in the structuring of global finance helps us to understand the economic environment (marketplace) in which education has been relocated (floated). On the global stage, where multinationals operate across borders, this plan by the European Round Table of Industrialists was published one year prior to the repeal of
the Glass–Steagall legislation in the United States by the Gramm–Leach–Bliley Act. This had the effect of removing barriers which separated and regulated commercial and investment banking.

As a result, in 1999 this massive deregulation of how much investment (also known as holdings) financial entities were allowed to own gave rise to the creation of “financial superentities” (Glattfelder, 2010) of agglomerated investment banks, commercial banks and insurance firms; something which had not been allowed since the Great Depression. Critics have said that it paved the way for companies which were too big and interconnected to fail.

Who Controls the World? James Glattfelder studies complexity: how an interconnected system is more than the sum of its parts:

https://www.ted.com/talks/james_b_glattfelder_who_controls_the_world?language=en

In the world of global finance which is always seeking the next market to invest in and exploit, education became a target for profit as much as staple foods. To make overt the lack of moral decision making in the financial markets we need only look to how financial speculation was the instrument used to starve millions of people to make extra profit on bushels of wheat (Kaufman, 2012 [a]; Kaufman, 2012 [b]).

To contextualise the effects of this cultural schema on the social mammal of homo sapiens I return to natural history perspectives to help us analyse from a third perspective the effects on our species of ‘opportunities reduced to finance’. In the following section I lay out the argument that education stems from human development (United Nations, 2004) and is a vital element of the habitat of homo sapiens as a social mammal (Thornton & Raihani, 2010).
Exploring Education as Human Development: Reflections of Our Environment and Social Exclusion

“Welfare shall refer to the physical, behavioural and social well-being of animals through the provision of appropriate conditions for the species involved, including but not necessarily limited to housing, environment, diet, veterinary care and social contact where applicable” (European Association of Zoos and Aquaria, 2014)

These standards are based on accumulated knowledge and understanding for the accommodation and care of animals in zoos and aquaria. If these elements are taken away or withheld from animals in captivity it is considered illegal and cruel because of the resulting stress reactions and associated illness which accompanies trauma (Smith & French, 1997). In this context I ask – ‘so what are the ramifications if this happens to homo sapiens’?

Once again I want to draw our attention back to the premise that homo sapiens are social mammals requiring all the elements important to the habitat of social animals. I am threading social, economic, physiological, ecological and psychological sources through the narrative to build an understanding of Education as Human Development which speak to us as living contextualised beings.

The critique that drawing parallels across species constitutes anthropomorphism has its counterpoint in the concept of 'anthropo-denial' coined by Professor Frans de Waal who says “the question whether anthropomorphism is acceptable, or not, is inseparable from our relation with the animal”. Whilst he identifies problems with the naïve projection of human experience onto other species in attempts to try to understand them, he also acknowledges the basic fundamental fact that we are animals ourselves and share numerous physiological, emotional and cognitive processes (de Waal, 1999).

To imagine that we are not connected with and reflected in the
natural world around us I argue is a sign of the alienation we as a species are increasingly experiencing in our thinned out habitats sparse of the basic elements with which we evolved over tens of millions of years with the loss of our natural world behaviourally we are becoming stranded from our environs.

The complexity of the natural world demands we think holistically about our needs. The impact we are having on the world is evident through damage to our oceans (GRID-Arendal & UNEP, 2016), deforestation (Forestry Statistics, 2018), loss of species (Millennium Ecosystem Assessment, 2005), soil erosion (Bridges & Oldeman, 1999), pollution (World Health Organization, 2016), climate breakdown (Intergovernmental Panel on Climate Change, 2013). What I am interested in is the details of the effects of these harms as related to us as homo sapiens. The ability to self reflect is significantly hindered by our gaze outward and away from our likeness with the world overlooking the connections we have with it.

Our ability to self reflect is significantly hindered by the propensity for humans to see ourselves as separate and above nature and the unfamiliar world overlooking the intrinsic connections and effects we have with out environment.

How finance has shaped our experience can be summarized as a great reduction in what we can and do encounter in the world. As an example, the homogenisation of the human diet - once composed of a wide variety of plants and animals - is now, for many, largely composed of processed foods comprised of a small number of species (Drewnowski & Popkin, 1997). This constitutes a reflection of the diminishment of our habitat.

While there are an estimated 30,000 edible plant species only 30 crops ‘feed the world’ according to the United Nations (Food and Agricultural Organisation of the United Nations, 2010). These foodstuffs provide 95% of dietary calories or protein. Wheat, rice and maize alone provide more than half the global plant-derived dietary intake. It is these three plants which have received the most investment in terms of conservation and improvement. If we add in sorghum, millet, potatoes, sweet potatoes, soybean and sugar (cane/beet), this brings the total to 75% of dietary intake.
This is a reflection of how commodities trading on the stockmarket has shaped access to goods and how finance has been involved in determining what choices people have available to them to buy; I correlate this to the socio-economic phenomena of the artificial inflation of the price of staple foods and the creation of famine (Ziegler, 2013; Foodwatch, 2011; Kaufman, 2011; Hari, [n.d.]) - what I refer to here as 'artificial scarcity'.

The Food and Agriculture Organization of the United Nations is a specialized agency of the United Nations which leads international efforts to defeat hunger. In December 2008 they published the book 'The State of Food Insecurity in the World 2008; High food prices and food security – threats and opportunities' in which they identified high food share prices as having much of the blame for adding 75 million more people to the total number of undernourished in the world (Food and Agricultural Organisation of the United Nations, 2008a).

Jean Ziegler whilst working as Special Rapporteur on the Right for Food for the United Nations reported: “FAO (The Food and Agriculture Organization) indicates further that high prices of internationally traded commodities, such as staple grains and vegetable oils, are expected 'to increase the prevalence of malnutrition among both urban and rural households', while noting that the most vulnerable groups are the ones from 'countries with already low levels of dietary diversity.'” (Human Rights Council, 2009).

This was in a year when there were global records for cereal harvests and a significantly increased capacity to combat hunger (Food and Agricultural Organisation of the United Nations, 2008b). As Kaufman wrote: “The wheat harvest of 2008 turned out to be the most bountiful the world had ever seen, so plentiful that even as hundreds of millions slowly starved, 200 million bushels were sold for animal feed. Livestock owners could afford the wheat; poor people could not.” (Kaufman, 2012 b)

In an interview with Gilles Toussaint, a journalist for La Libre Belgique, Jean Ziegler said: “There are more and more people who understand that hunger is [hu]man-made, that we live in a cannibal world-order maintained by multinational companies and their mercenary organizations, that is, the International Monetary Fund, the World Trade Organization and the World Bank” (Toussaint, 2011).
In another interview with Philipp Löpfe for the Swiss national paper Tages-Anzeiger Ziegler said: “According to the World Food Organization, there is enough food on the planet for 12 billion people. If people still starve today, it’s an organized crime, a mass murder. Every five seconds a child under the age of ten starves to death and one billion people are permanently severely malnourished” (Löpfe, 2012).

The financial markets have had the effect of abstracting the owner from the enterprise homogenising experience and reducing diversity in the food chain. The structuring which has been imposed on the food chain is in direct relationship with the large scale multinational agricultural monocultures which have wiped out so much natural biodiversity - for example in the cutting down of rainforests (Chakravarty, et al., 2012) and hedgerows (Wood Wise, 2014) - and disappearance of small hold farming (Pakeman, 2011) which produce a richer diversity of crops and species.

Parallel and intimately linked to the erosion of our physical habitat is the destruction of our existential experience which - for the majority - has become diminished through the foregrounding of processed and fast foods separating us from the preparatory and cultural behaviours which were intrinsic aspects of comestible existence. This example illustrates the dynamic relationship of the living experience of a human being in the world. Growing, preparing and sharing food stuffs puts us in linked relationships with the world – losing these activities represents loss of that experience and meaningful activity.

The same forces have come to act on our social infrastructure in terms of the urban/suburban planning, healthcare, education, and economy. In the same way that finance has structured our landscape, it has come to effect social action and interaction. The activities which people can engage in are determined by the credit rating systems and finances they have available to them.

Where historically there were greater numbers of opportunities that people could engage in through personal interaction, trial, and exchange and barter; the growth of technologies and holdings through finance has reduced what is possible without representation through its systems.
The loss of public toilets, bins and seating, to parks, squares and libraries, wild spaces and woodlands also denote a loss of sociological habitat. Public goods in general which are important for normal healthy human development (Pratt, 2017) have become prey to financialisation processes.

The aspects of human existence which public goods provision generally serve human development needs. The Directorate-General for Employment, Social Affairs and Equal Opportunities for the European Commission published a paper on financial exclusion detailing the consequences and difficulties caused by the process of financialisation identifying the fact that use of financial products cannot be avoided in a normal social life and that in turn these ultimately shape the lives of people (European Commission Directorate-General For Employment, Social Affairs And Equal Opportunities Inclusion, 2008).

Financial exclusion can generate further financial consequences by affecting, directly or indirectly, if and how individuals can raise, assign, and use monetary resources. Social consequences of financial exclusion affect patterns of consumption, if and how people are involved in economic activities, access to social welfare, and they pre-determine the distribution of wealth they encounter in their lifetimes.

Finance impacts the way in which people behave in terms of purchase decisions and how they choose to spend their time; it significantly affects overall quality and length of life. These consequences affect the various connections and bonds between and with individuals. Finance impacts self-esteem (Ibid), and this connection reflects the links that the individual to has society and communities in terms of psychological wellbeing. Exclusion effects are interrelated aspects made up of financial, socio-economical, sociological and physiological outcomes for the person.

Levitas et al (2007) did an analysis of social exclusion examining its characteristics and effects. The working definition they used stated that: “Social exclusion is a complex and multi-dimensional process. It involves the lack or denial of resources, rights, goods and services, and the inability to participate in the
normal relationships and activities, available to the majority of people in a society, whether in economic, social, cultural or political arenas. It affects both the quality of life of individuals and the equity and cohesion of society as a whole”.

The Social Exclusion Unit (SEU) was created to implement a cross-departmental approach to the complex problems which arise from social exclusion. The definition they used articulated the term as “...a shorthand term for what can happen when people or areas suffer from a combination of linked problems such as unemployment, poor skills, low incomes, poor housing, high crime environments, bad health and family breakdown”.

Ultimately the effects of social exclusion, impacts on health and welfare whether that relates to what happens through sociological exclusion or (Cacioppo & Hawkloy, 2007) physical harms such as we see in malnourishment or disease. Financial exclusion results in social exclusion which can be understood as an impoverishment of habitat both social and physical (Pratt & Jones, 2009).

**Human Capabilities and Habitus; the Accessibility of Opportunities**

After presenting a relatively detailed analysis of how the commercialisation of education as public goods leads to a scenario where opportunities are dictated by finance, in this next section of the paper I am going to present ideas of how education effects human development in terms of cognition and meaningful activity thus constituting an essential part of our natural habitat necessary for our survival, normal function and well being.

To contextualise the reduction of life opportunities to those afforded by finance in terms of human development I am drawing on the work of Amartya Sen and Martha Nussbaum who have detailed the well known Human Capabilities approach. I will also be drawing on the work of Pierre Bourdieu to add sociological detail to the backdrop which informs an individuals opportunities.
The human capabilities approach aims to evaluate social change in terms of the richness of human life resulting from the given change. The ‘capability approach’ sees human life as a set of ‘doings and beings’ relating the evaluation of the quality of life to the assessment of the capability to function (Sen, 2003).

The valuation of life cannot be done by taking a narrow focus on commodities or incomes which play a role for those people in their doings. Sen argues that the commodity based accounting of the quality of life results in a confusion of means and ends quoting Aristotle: “The life of money-making is one undertaken under compulsion, and wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else.” (Page 7, Aristotle, 1980).

In this context, it is that 'something else' which we are concerned with. The capability approach holds that the functionings of the being are seen as constitutive of elements of living: “A functioning is an achievement of a person: what he or she manages to do or to be, and any such functioning reflects, as it were, a part of the state of that person”. The capability of a person is a notion derived from this, it is a view of living as a combination of doings and beings and reflects a person’s freedom to choose between different ways of living.

Sen discusses the complex nature of functionings which constitute living for a person. He identifies as important the achieving of self respect, taking part in the life of the community and appearing in public without shame as intimate parts of human development. To illustrate this he evokes Adam Smith’s writing in his Wealth of Nations (Smith, Campbell, Skinner, & Todd, 1981):

“Consumable commodities are either necessaries or luxuries. By necessaries I understand not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without. A linen shirt, for example, is, strictly speaking, not a necessary of life. The Greeks and Romans lived, I suppose, very comfortably though they had no linen. But in the present times, through the greater part of Europe, a creditable day-labourer would be
ashamed to appear in public without a linen shirt, the want of which would be supposed to denote that disgraceful degree of poverty which, it is presumed, nobody can well fall into without extreme bad conduct. Custom, in the same manner, has rendered leather shoes a necessary of life in England.

The poorest creditable person of either sex would be ashamed to appear in public without them. In Scotland, custom has rendered them a necessary of life to the lowest order of men; but not to the same order of women, who may, without any discredit, walk about barefooted. In France they are necessaries neither to men nor to women, the lowest rank of both sexes appearing there publicly, without any discredit, sometimes in wooden shoes, and sometimes barefooted. Under necessaries, therefore, I comprehend not only those things which nature, but those things which the established rules of decency have rendered necessary to the lowest rank of people”.

Sen claims that when evaluating a person’s well-being, understanding ‘functionings’ such as meeting cultural expectations are constitutive of a person’s actualisation of self and are necessary for wellbeing. Understanding opportunity in terms of capability allows us to distinguish if a person is able to do the things they would value doing and whether they possess the means, instruments or permissions to pursue what they would like to do.

As mentioned, in terms of human development Sen resists an overconcentration on means such as incomes and primary goods, directing his attentions towards whether the person is able to do the things they would value doing.

The capability approach elucidates how two individuals can have different substantial opportunities although they have the same set of means. He uses the example of a person with a physical handicap who can do less than an able bodied person can with the same income and other primary goods. The disabled person is not equally advantaged with the same opportunities as the person who does not have a physical handicap, but with the same set of means and instruments.
The capability perspective allows us to take into account the parametric variability in the relation between the means, on the one hand, and the actual opportunities, on the other. Differences in the capability of people to function can arise with the same personal means for various reasons including (Sen, 2005):

- physical or mental heterogeneities among persons (related, for example, to disability, or proneness to illness);

- variations in non-personal resources (such as the nature of public health care, or societal cohesion and the helpfulness of the community);

- environmental diversities (such as climatic conditions, or varying threats from epidemic diseases or from local crime); or

- different relative positions vis-a`-vis others (illustrated by Adam Smith’s discussion of the fact that the clothing and other resources one needs “to appear in public without shame” depends on what other people normally wear, which in turn could be more expensive in rich societies than in poorer ones)

If we are examining society in terms of sociological habitat, a behavioural account needs to be produced of how poverty and privilege is strengthened and reproduced both internally (for those affected) and externally (for those effecting).

Dina Bowman shows how the capability approach can be usefully complemented by Pierre Bourdieu’s conceptualisation of field, capital, and habitus adding insightful understandings of the processes and experiences of inequality (Bowman, 2010). Here I am going to draw together a portmanteau of verbatim excerpts from Bourdieu to add body to this arrangement of ‘habitus’ for the purposes of the narrative I am building on the capabilities approach.

In his work Bourdieu develops the use of the term Habitus to integrate collective histories along with individual histories in the production of social distinctions, tastes and behaviours. Beverley Skeggs (1997) has pointed out, the concept of habitus incorporates not only our individual histories but also our collective histories; as in we inherit understandings of what it
means to occupy a particular social space. This is helpful in allowing us to unpick the sociological terrain in which capabilities are functioning:

“The habitus is the product of the work of inculcation and appropriation necessary in order for those products of collective history, the objective structures (e.g., of language, economy, etc.) to succeed in reproducing themselves more or less completely, in the form of durable dispositions, in the ...individuals... lastingly subjected to the same conditioning, and hence placed in the same material conditions of existence.” (Bourdieu, 1977).

His sociological analyses are founded upon the configuration of the habitus observable as behaviour which relates the cultural environs along with the individuals and groups within it. It is presented as an overt anthropology which can be read and deconstructed:

“The habitus, an objective relationship between two objectivities, enables an intelligible and necessary relation to be established between practices and a situation, the meaning of which is produced by the habitus through categories of perception and appreciation that are themselves produced by an observable social condition” (Page 101, Bourdieu, Nice, & Bennett, 2015).

It is important to keep in view the relations of the habitus and sociological landscape if we are to understand what opportunities are open to whom in light of which capabilities they have. In terms of human development we must take into account the notion that education is understood as a fundamental right for people necessary to be able to understand their fundamental rights and what opportunities are available.

Amartya Sen articulates freedom or capability as the proper content of rights and thus develops a rich understanding of education as a human right that offers a dynamic scheme which can help inform contextual applications of both theory and practice (Lee, 2013). How human rights are realised in societies and whether they can be realized for the individual greatly depends on the social make up of the situation that they occupy in the given culture.
The social behaviours which people embody encompass invisible and/or tacit differentiations which determine the associations which an individual is privy to. The tastes and preferences which individuals operationalise often serve to shore up a projection of belonging to an in-group as a part of their identity (Elias, 1994). This identity signaling is also part of the make up of how out-groups are simultaneously formed (Berger & Heath, 2008).

The way that society is structured in terms of class and affluence differentials profoundly determines a multitude of outcomes for the individual concerned (Macintyre, 1997; Lundberg, 1991). With the development of his conception of ‘habitus’ Bourdieu offers a framework to sketch out how distinctions, marginalisations and privileges are created and reinforced as dominant norms in societies:

“Through the economic and social conditions which they presuppose, the different ways of relating to realities and fictions, of believing in fictions and the realities they simulate, with more or less distance and detachment, are very closely linked to the different possible positions in social space and, consequently, bound up with the systems of dispositions (habitus) characteristic of the different classes and class fractions. Taste classifies, and it classifies the classier. Social subjects, classified by their classifications, distinguish themselves by the distinctions they make.” (Page 6, Bourdieu, Nice, & Bennett, 2015).

Implicit in human development perspectives are freedom of choice, adequate nourishment, sufficient shelter, good health, education, democratic participation, economic opportunity and chances to participate in community life (United Nations Development Programme a, [N.D.]).

These ideas have been developed by the economist Mahbub Ul Haq who anchored them in Amartya Sen’s work on human capabilities with a particular focus on whether people are able to “be” and “do” desirable things in life. Haq led the establishment of Human Development Report, an annual report published by the Human Development Report Office of the United Nations Development Programme (United Nations Development Programme b, [N.D.]).
Human development – or the human development approach - is about expanding the richness of human life, rather than simply the richness of the economy in which human beings live. It is an approach that is focused on people, their opportunities and their choices. This raises inquiries into barriers which may arise in sociological and psychological realms.

The analyses of class and socio-cultural demarcation are relevant to discussions of human development. A key part of this analysis is understanding the harms which are realised through behaviours which impinge upon the freedom and welfare of those outside of the privileged in-groups in each society. Status perception plays a measurable role in dehumanization processes and such distinctions can profoundly affect the opportunities and choices which people have available to them (Louceiro, 2015).

Bourdieu relates these demarcations partly in terms of symbolic capital which affirms, communicates and regulates identity and belonging through gestural characteristics:

“Knowing that 'manner' is a symbolic manifestation whose meaning and value depend as much on the perceivers as on the producer, one can see how it is that the manner of using symbolic goods, especially those regarded as the attributes of excellence, constitutes one of the key markers of 'class' and also the ideal weapon in strategies of distinction” (Page 66, Bourdieu, Nice, & Bennett, 2015).

The tastes, manners, identities, behaviours, dispositions, histories and cultures which inform the habitus shapes the world around the individual. These collective forces coalescing in the individual are influenced by the psychology of 'Mere Exposure' (Young, 2007) to its own influence reproducing itself in specific ways.

The 'Mere Exposure Effect' describes a psychological phenomenon by which people tend to develop a preference for things or people that are more familiar to them than others (Verrier, 2012). Over time monoculturation becomes manifest out of the positive feedback effect of the habitus recognising its own self and building upon itself.
Understanding how the 'Mere Exposure Effect' factors into reinforcing privilege may be formulated thus: privilege privileges itself by having the resources to laud its own qualities visibly in the landscape; poverty is impoverishing as it does not have the resources to self promote in the landscape.

Bourdieu describes the forming of classes in this way: “The habitus is not only a structuring structure, which organizes practices and the perception of practices, but also a structured structure: the principle of division into logical classes which organizes the perception of the social world is itself the product of internalization of the division into social classes.” (Page 170, Bourdieu, Nice, & Bennett, 2015).

Bourdieu proposes distinctions as rooted in these dynamics: “...it is an immediate adherence, at the deepest level of the habitus, to the tastes and distastes, sympathies and aversions, fantasies and phobias which, more than declared opinions, forge the unconscious unity of a class” (Page 77, Bourdieu, Nice, & Bennett, 2015).

Distinctions form the basis of in-group and out-group formation (Tajfel & Turner, 1979). In Michel-Rolph Trouillot's theorising of history and power he states that wherever a fact is created, so too is a silence putting forward the idea that "Effective silencing does not require a conspiracy, not even a political consensus. Its roots are structural" (Page 106, Trouillot, 2015).

I argue that in a way related to the mere exposure effect, those existing under the privileged class become obscured and dispossessed from cultural production as in-group/out-group signifiers form distinctions of participation beyond finance. This sets the scene for the processes of devaluation, derivatization (Cahill, 2012) and dehumanisation to take place.

In this thesis I am relating the argument that, just as homo sapiens have come to impose themselves on the planet destroying diversity in favour of privileged ideas of its own culture, so, in an analogous way, human beings have also come to dominate other human beings through the mechanics brought about by cultural homogenisation.
Damage and Harms to Cognition Through Structural Violence

The agency of the individual in the capabilities context is thus affected by various factors influencing how that individual will act and react to opportunities or lack thereof. Psychological perspectives are necessary to also give further depth to our understandings of the complex ways in which individuals act. This line of inquiry is necessary to identify how the cognitive reflex can be altered, damaged and hindered through social experience therefore establishing the importance of understanding harms in relation to exclusion. It also disconcerts the formulating of education through the lens of Rational Choice Theory (Boyd, Crowson & Geel, 1994) which posits the individual as a rational agent who acts consistently to choose the self-determined best choice of action.

In this line of inquiry the well known psychologist Martin Seligman demonstrated how the cognitive reflex can be damaged when an animal is put into a lose-lose situation. Seligman articulated how ‘Learned Helplessness’ comes about and as a result creates a psychology where individuals have difficulty developing new behaviour appropriate for given situations:

“We have seen that a major consequence of experience with uncontrollable events is motivational: uncontrollable events undermine the motivation to initiate voluntary responses that control other events. A second major consequence is cognitive: once a man or an animal has had experience with uncontrollability, he has difficulty learning that his response has succeeded, even when it is actually successful. Uncontrollability distorts the perception of control....They had difficulty perceiving that responses could affect success or failure....Learned helplessness produces a cognitive set in which people believe that success and failure is independent of their own skilled actions, and they therefore have difficulty learning that responses work” (Page 37, Seligman, 1975).

Setting an outgroup-individual into cultural settings in which they are confronted with a multitude of scenarios where they cannot succeed sets the conditions for learned helplessness.
When such in-group-outgroup privilege is codified into societal figurations which amount to structural violence, the opportunities to develop such affective-cognitive damages escalate (Hennessey, 2007). Mark Vorobe (2008) describes structural violence as violence which results in harm but is not caused by a clearly identifiable actor.

Damaged or maladaptive responses to oppressive circumstances are alternatively understood as 'adaptive preference formation'. This phenomenon has been articulated as “persons who are subject to social domination, oppression, or deprivation adapt their preferences (or goals) to their circumstances....In social situations characterized by oppression or deprivation, the problem then is not just that restricted opportunities constrain self-determination but also that the internalization of these constraints can shape individuals’ sense of who they are and what they can be and do.” (Mackenzie, 2014).

Albert Camus alluded to this kind of degenerative normalisation process in his famous book 'The Stranger': “At that time, I often thought that if I had had to live in the trunk of a dead tree, with nothing to do but look up at the sky flowing overhead, little by little I would have gotten used to it. I would have waited for the birds to fly by or the clouds to mingle, just as here I waited to see my lawyer’s ties and just as, in another world, I used to wait patiently until Saturday to hold Marie’s body in my arms. Now, as I think back on it, I wasn’t in a hollow tree trunk. There were others worse off than me. Anyway, it was one of Maman’s ideas and she often repeated it, that after a while you could get used to anything.” (Camus, 1989).

In understanding stress and abnormal behaviours we can glean insights on the response to stress traumas in the study of circus animals. Studying trauma in this context presented the problem that the animals are trained and/or tamed, so behavioural responses can become impossible to interpret as the trained/tamed behaviours can become the responses to stress (Jordan, 2005).

Martha Nussbaum discusses adaptive preference formation in relation to the capabilities approach of human development (Page 136 – 139, Nussbaum, 2013). The early formulation of
the concept was by Jon Elster around the vignette: 'having desired the grapes, the fox, seeing that he can’t get the grapes, judges that they are sour' (Elster, 2016).

Nussbaum focusses particularly on Amartya Sen’s elaboration of the concept in relation to women and other deprived people. He uses the central figure of women who have come not to desire basic human good because they have long been habituated to the absence of it or being told that it is not for them.

As Sen puts it: “Quiet acceptance of deprivation and bad fate affects the scale of dissatisfaction generated, and the utilitarian calculus gives sanctity to that distortion”.

Nussbaum goes further to say that there is a converse adaptive preference which happens with privileged people where they become used to being coddled and served they may experience unusually high levels of discontent when that special status is not served.

Justice, Utilitarianism and Education as a Right

Teschl & Comim (2005) discuss how the Human Capability Approach has been developed by Amartya Sen and Martha Nussbaum to deal with the problem of adaptive preference formation and create an evaluation of people’s wellbeing which gives a more objective representation of their life circumstances.

The work of John Rawls (Rawls, 2003) can be related to the values base elaborated by Nussbaum and Sen in certain respects. Rawls also is critical of the utilitarian approach. Rawls' work is relevant to the exploration of notions of human development as intimately bound up with social justice, and by extension social justice as intra-related with the idea of education as human development.
Homo sapiens have diminished the diversity and wealth of environments and the diminished diversity and wealth of culture represents part of those environments. The 'intra-action' (Barad, 2007) of the structure and structured, person and worldly encounter, present and past, form the milieu of the social experience of the lifeworld. This notion of intra-action is an important addition to our lexicon helping us appreciate the tangled nature of phenomena which we are exploring.

In an interview with Adam Kleinman, Karen Barad, further unpacks the use of this word for us (Kleinman, 2012): "The usual notion of interaction assumes that there are individual independently existing entities or agents that preexist their acting upon one another. By contrast, the notion of “intra-action” queers the familiar sense of causality (where one or more causal agents precede and produce an effect), and more generally unsettles the metaphysics of individualism (the belief that there are individually constituted agents or entities, as well as times and places)....’individuals’ do not pre-exist as such but rather materialize in intra-action. That is, intra-action goes to the question of the making of differences, of “individuals,” rather than assuming their independent or prior existence. “Individuals” do not not exist, but are not individually determinate. Rather, “individuals” only exist within phenomena (particular materialized/materializing relations) in their ongoing iteratively intra-active reconfiguring."

This helps us reach beyond the attraction of simplistic reductive atomistic approaches to complex phenomena which separate experience out into mutually excluding categorical studies. This process of viewing the world in categorical ways uproot the focus of study from understanding through obfuscation of its phenomenological environs. Much more helpful in our age are approaches which help us navigate the simultaneity of phenomena as entangled and recursive.

In this sense only an interdisciplinary approach is equipped to deal with the complexity of reality affording multiple simultaneous expressions of the same focus of study. For practical purposes I draw on the educational tradition described in the 'Democratic Intellect' (Davie, 2013) which reason that an argument may gain substance by drawing on
information from any discipline. In an integrated approach when we are talking about education we must necessarily reconcile questions of justice and human development.

As our social institutions have evolved partly through pragmatic forms of organisation (governance) where bureaucracies (centralised administration of remote activities) are tasked with serving large heterogeneous populations with standardised instruments, a policy environment of utilitarianism often takes a lead role in decision making.

John Rawls (Page 3, Rawls, 2003) places justice central in the foundations of social institutions arguing in ‘A Theory of Justice’ that the utility of serving the majority at the expense of the few is unjust and therefore unacceptable:

“Justice is the first virtue of social institutions, as truth is of systems of thought. A theory however elegant and economical must be rejected or revised if it is untrue; likewise laws and institutions no matter how efficient and well-arranged must be reformed or abolished if they are unjust. Each person possesses an inviolability founded on justice that even the welfare of society as a whole cannot override. For this reason justice denies that the loss of freedom for some is made right by a greater good shared by others. It does not allow that the sacrifices imposed on a few are outweighed by the larger sum of advantages enjoyed by many. Therefore in a just society the liberties of equal citizenship are taken as settled”.

As discussed, part of the criticism of the problem of Utilitarianism is related to the insensitivity to the problem of adaptive preference formation which takes place. Sen examines this viewpoint in detail in his book 'Resources, values, and development' (Page 308, Sen, 1997):

“The most blatant forms of inequalities and exploitations survive in the world through making allies out of the deprived and the exploited. The underdog learns to bear the burden so well that he or she overlooks the burden itself. Discontent is replaced by acceptance, hopeless rebellion by conformist quiet, and – most relevantly in the present context – suffering and anger by cheerful endurance. As people learn to survive to adjust to the existing horrors by sheer necessity of uneventful survival, the horrors look less terrible in the metric of utilities”.
He argues that Utilitarianism is not interested in people and individuals but more that a person from this philosophical viewpoint becomes reduced to little more than a depersonalised space where happiness occurs. Utilitarianism orients around happiness as a value looking at the sum of happiness which is produced by different configurations however as an approach it disregards how the happiness comes about, what accompanies it, and other issues like if it is shared by many or few. It lays out a case for utility being inadequate as a basis for social choice.

If we take justice as the primary virtue of social institutions and understand justice in terms of fairness and equity, then we can reason that denying education for some so that others may benefit from its provision is unjust. Those left out of social provision of education are excluded from the nurture necessary to develop capabilities, be valued for those capacities and take part in society further enriching the lives of others.

In an interconnected way education empowers people to understand the rights and values they share with other people allowing them to identify and contest unfairness when they encounter it. As a result they develop as individuals with an enlarged set of capacities to enrich and be enriched by their sociological environment. Knowledge and knowing are a critical part of realising human rights and human development.

In this view human rights and human development necessarily involve education for their realisation. We commonly find education written into these frameworks as human rights advocates argue that literacy and numeracy are necessary for securing work, being an active member of a peaceful community and in achieving self realisation (Lee, 2013).

Brian Orend brings the following definition to a human right: “A human right is a high-priority claim, or authoritative entitlement, justified by sufficient reasons, to a set of objects that are owed to each human person as a matter of minimally decent treatment. Such objects include vitally needed material goods, personal freedoms, and secure protections. In general, the objects of human rights are those fundamental benefits
that every human being can reasonably claim from other
people, and from social institutions, as a matter of justice.
Failing to provide such benefits, or acting to take away such
benefits, counts as rights violation” (Orend, 2002).

By examining the etymological roots of the word ‘society’ we
find the intrinsic meaning of ‘companionship’. This correlates
to the notionalisation of the state as a ‘corporate parent’
(Scottish Government, 2015; Cockett, 2016; Access All Areas,
2017; Llywodraeth Cymru, Welsh Government, 2009). By
contextualising the state in terms of nurture then rights may be
understood as referring to a series of mutually recognitive
values (Gunn, 2018) being negotiated for working out collective
(corporate) means for serving a minimum standard of
treatment for individuals amongst the group.

In 1945 UNESCO committed itself to ‘full and equal
opportunities for education to all’. The United Nations has
always recognised the indispensable link which exists between
education and development. In the 1970s education had a high
priority, however in the 1980s focus shifted to macroeconomic
views. In the 1990s a more multifaceted approach emerged
viewing education as a necessary, if not a sufficient condition,
for development (Economic and Social Council, 2004).

In 1990 the Jomtien Conference took place in Thailand where
UNESCO, UNICEF, World Bank, UN Development Programme
and UN Population Fund launched the Education For All
movement. This provided the foundations for the most widely
agreed set of international goals in education (Osttveit, 2014):

- Early childhood care and education;
- Provision of free and compulsory primary education for all;
- Promotion of learning and life skills for young people and
  adults;
- Increasing adult literacy;
- the achievement of gender parity and gender equality;
- improving the quality of education for everyone.
Collectively, failing provision of education to populations leads to problems for everyone no matter their status through phenomena such as poverty, destitution, and civil unrest. Ultimately all levels of education form significant social components for the functioning of the individual and the society itself. Thus in provisioning of educational opportunity it is not only the individual which is served, but also the welfare of the collective.

The intra-action of individual welfare and societal welfare are embedded in these terms of human development. This relationship is reflective of the perspective developed in this paper of looking at human beings as constituted of their environment and vice versa. When that environment is harmed so too are the individuals enmeshed within it. Environment must be understood in multivalent sociological, physiological and physical terms. From this vantage point behaviours, welfare and dispositions can be better understood allowing us to contextualise what human development means, how human rights might function and what value a broad vision of education might have in looking towards our horizons.

In this section I have explored the interwoven nature of education as a human right and the special relationship which provision of such a public good has to notions of justice as a social institution and society in general. In this I have examined problems of utilitarian approaches as being inadequate as a basis for social choice.

Next I shall be examining in physical and psychological terms the detailed effects of the stress response to a loss of sociological habitat on behaviour and cognition identifying harms which act to impede human development. This offers significant grounds for critiquing rational choice theory with relation to educational access and attainment, societal applications of behaviourism with regards to nurture and how Maslow’s hierarchy of needs is a flawed perspective of development.
Physical Reflections of the Non Physical: Stresses from loss of habitat

In terms of neurology the organisation of emotional behavioural systems is similar across mammalian species. Certain behaviours and physiologies are shared between homo sapiens and a range of other animals. As a consequence we can gain certain insights into the health of homo sapiens through the study of other animals under stress and in captivity.

In animals, known behavioural responses to stress include stereotyped movements, pacing and circling, ritual head turning, repeated regurgitation, ingestion of food, abnormal behavioural responses to trivial stimuli, the introduction of novelty by creating motor patterns, throwing or begging behaviours, increased reaction to normal stimuli, playing with food sources, normal responses to subnormal stimuli, circling, hypersexual behaviour, aggression, excessive grooming, coprophagia, self mutilation, and apathy. Stressed animals can also damp down behavioural responses to stimuli becoming unreactive to avoid attention (Jordan, 2005).

The physiology of stress culminates in the brain structure of the hypothalamus stimulating the pituitary gland to release adrenocorticotropic hormone (ACTH), which goes on to stimulate the adrenal glands to produce corticosteroids - also known as glucocorticoids and the "stress hormones" (Tort & Teles, 2011). Chronic stress damages health via these mechanisms resulting in the atrophy (deterioration) of tissues showing up in cardiovascular changes which injure the heart, blood vessels and kidneys. Tissue repair and fertility is known to be damaged as well (Tsigos, Kyrou, Kassi & Chrousos, 2016).

Physiologically, one of the best measures of stresses is quantified by measuring the glucocorticoid levels of cortisol (Bassett, Marshall, Spillane, 1987) and corticosterone which are produced primarily in the adrenal cortex. Blood pressure and heart rate are also used as significant measures of stress which correlate to glucocorticoid levels.

Animals suffer from fear, grief, sadness, concern, anger, the absence of joy and frustration. Jordan gives an example of how
grief affected a young chimpanzee after the death of his mother who died of old age: “The son stayed near the corpse grabbing the hands, trying to pull her up. He slept near the body. He showed signs of depression. In the days that followed he kept returning to the body and tried to remove the maggots. In ten days he lost a third of his weight. Finally, when the corpse was removed and buried, he sat on a rock and died. Post mortem examination showed no cause of death.”

Grief is a response to loss and commonly it is associated with the death of a loved one. However grief is a reaction which occurs in relation to various other losses in life. Understanding this key behavioural manifestation can give us insights into what processes are at work when homo sapiens lose their sociological habitat. Kriss Kevorkian writes about ‘environmental grief’ which expresses “the grief reaction stemming from the environmental loss of ecosystems caused by natural or man-made events” (Kevorkian, 2019).

This extending of the theory elucidating grief stems from the work of Ken Doka who’s research focused on ‘disenfranchised grief’; this he described as “grief that is experienced when a loss cannot be openly acknowledged, socially sanctioned, or publicly mourned”. This is commonly encountered by older persons who experience senescence or the process of ageing and it brings an array of developmental losses (Doka, 2002).

The notion of environmental grief was explored through examining people’s experiences in relation to the decline of resident killer whale populations. Kevorkian found in interviews that individuals were suffering from reactions of anger, frustration, depression, sadness, hopelessness, and helplessness which were related to environmental grief - intense sorrow at loss of the surroundings or conditions in which a person, animal or plant lives and operates.

Henry Olders (1989) describes the physiological impacts of grief and mourning on individuals and how strong emotions (affects) bring about physiological changes in the individual. It has been found that bereaved people suffer from depressed immune functioning along with subtle and long term effects on the central nervous system which influence learning and memory. These include changes in REM sleep patterns (Rapid
Eye Movement sleep), changes in brain cortisol and norepinephrine (noradrenaline) levels. REM sleep is involved in maintaining long term memories.

Raised adrenal hormones have been identified as a response to losing one’s job or expecting the death of a spouse from terminal illness. With regards to the loss of a job, Baum, Fleming and Reddy (1986) associated experiences of grief with learned helplessness. Cunsolo and Ellis (2018) write about how climate change is effecting the mental health and wellbeing of people through causing intense feelings of grief related to losses of species, ecosystems and landscapes.

The American Psychological Association (Clayton, Manning, Krygsman, & Speiser, 2017) has released guidance on the impacts and implications of climate change on mental health. They have identified the tolls on mental health as far reaching inducing stress, depression, anxiety and strain in social community relationships. They have linked changes in climate to depression, suicidal ideation, post-traumatic stress, feelings of anger, hopelessness, distress, despair, increases in aggression, violence, and crime suggesting that it is children and communities with the fewest resources which are those most affected.

All of these insights can inform an understanding of the impacts of the loss of sociological habitat on human beings. The sociological habitat is linked with, and a reflection of, our physical environment, and our cultural landscape is constructed of collected behaviours of which ‘education as human development’ features heavily. A destruction of our habitat is felt and experienced as a destruction of our existential selves which is measurable in physical pathologies and mental illness. What we see in other animal species we are living and experiencing in connected ways.

Jordan divides animal stressors into somatic and psychological types. Somatic stressors include injuries to tissues and bones, poisoning and intoxication with pollutants, hunger and malnutrition, intense thirst, extremes in temperature, and disease states. Psychological stressors include alarm, fear, apprehension, anxiety and frustration. Jordan makes the point that sustained low grade stress in confinement is just as serious in the long term as visually overt and dramatic traumas.
Robert Sapolsky has written about how prolonged stress causes and compounds a range of physical and mental ailments, including depression, ulcers, colitis, and heart disease. In his book 'Why Zebras Don't Get Ulcers' he analyses the effects of stress and the mitigating effects of social support (Sapolsky, 1994):

“Put a primate through something unpleasant: it gets a stress-response. Put it through the same stressor while in a room full of other primates and ... it depends. If those primates are strangers, the stress response gets worse. But if they are friends, the stress-response is decreased”.

Sapolsky details the effects which disparities in social status have on the individual illustrating them with studies in various species. Glucocorticoid levels are elevated among low ranking baboons and among the group if dominance hierarchy is unstable or a new male has just joined the troop and aggression ensues.

Male baboons with lots of friends have lower glucocorticoid levels than similar ranking males without the social networks. This he relates to human society in terms of stress related physiology which is generated socially rather than physically. Without the nurture of the right sociological habitat, physiological and psychological harms manifest as results.

In a related study of how disparities in status affect individuals, the Whitehall Studies looked at social determinants of health - in particular, the cardiovascular disease prevalence and mortality rates amongst British civil servants. The first of these large studies (London School of Hygiene and Tropical Medicine, 1967) measured various health outcomes of 18,403 civil servants. It showed a sharp inverse association between social class and mortality from a wide range of diseases.

A second study was done between 1985 and 1988 investigating the degree and causes of the social gradient in morbidity in 10314 civil servants which reported "no diminution in social class difference in morbidity" (Marmot et al, 1991). This work provoked a host of related investigations which identified the harms associated with the stress of low status (Stansfeld & Marmot, 1992; North, Syme, Feeney, Head, Shipley & Marmot, 1993).
Ballieux (1991) examined how mental stress damages the immune response. It is well documented how levels of hormones, such as cortisol and adrenaline in saliva change due to psychosocial stimuli. Changes in these hormones modulate white blood cell (lymphocyte) responses opening the individual to infection and illness. Thus socially generated stress generates physical illness through a tangible, measurable mechanism.

Heribert Hofer and Marion East (1998) examine human driven (anthropogenic) factors in regards to stress in animal species. These include environmental pollution, tourism and leisure activities, hunting, noise, and global warming. They have proposed that a reduction in Darwinian fitness results as the effects of stress; by this they mean the array of social behaviours which determine success and failure in the sociological environment.

This may well lend relational insight into the work mentioned earlier of Seligman (1975) in studying learned helplessness where double bind (Tennen & Affleck, 1998) situations lead to the damaging of the cognitive reflex. Without the capacity to learn the organism has a reduced ability to adapt to changes in the environs, and without the capacity to adapt the organism will fall prey to the same problems again and again. In this way, learning is placed at the heart of our capacity to survive as individuals and as collectives in the changing circumstances of life – this expresses well the notion spoken of in 'Education as Human Development'.

Jordan (2005) iterates the various sources of stress for free living wildlife. These include habitat destruction, fencing and restriction of movement, chemical pollution, noise pollution, capture, and marking for research purposes. For factors impacting on welfare for captive animals he identifies capture, captivity itself, training and taming animals (related to dominating), unsocial grouping, research, noise, and marking.

Poor welfare arises from pain, extreme or prolonged stress and emotional situations. The main welfare problems encountered are emotional and the stress resulting from these emotions. I argue that all of these elements of habitat and welfare have their direct equivalencies in homo sapiens and can help us
understand what harms come from the withholding of such elements. Intrinsic to this argument is that learning behaviours, social connection, the nurture of teaching, the practice of communication and the production of knowledge are all innate (natural) behaviours which stave off stress responses and their associated illnesses.

Not to recognise the primary importance of the sociological habitat for the welfare of human beings is related to the devaluation of the subjective experience of the least advantaged in terms of wellbeing. In our animal relations Jordan directs us to read Broom and Johnson's book 'Stress and Animal Welfare' (Broom & Johnson, 1993):

“...The subjective feelings of an animal are a very important aspect of its welfare. Pleasant and unpleasant feelings are part of the experience of an individual as it attempts to cope with its environment. Dawkins has discussed suffering in some detail and has stated that ‘suffering occurs when unpleasant subjective feelings are acute or continue for a long time because the animal is unable to carry out the actions that would normally reduce risks to life and reproduction in those circumstances’”.

Jordan relates that “Suffering is the most important aspect of poor welfare”, however, as we know from the earlier discussion of adaptive preference formation, an animal (or person) may not be aware that it is suffering although there may be natural anaesthesia, immuno suppression, poor wound healing and other stress linked illnesses.

Drug seeking behaviours have been associated with responses to trauma (Fisher, 2000; Eastern Trauma Advisory Panel Trauma, (n.d); International Society for Traumatic Stress Studies, n.d; Wand, 2008). The work examining the correlations of Adverse Childhood Experiences (ACE's) and their relationship with Post Traumatic Stress Disorder (PTSD) (Whitfield, 1998), mental illness (Ford, n.d.), addictions and negative health outcomes (Hughes et al., 2017) has profoundly affected the discussions in social care policy (Convention of Scottish Local Authorities, 2018).
In primates (including homo sapiens) and ungulates (such as cattle, pigs, giraffes, camels, deer, and hippopotamuses) the predominant glucocorticoid produced is cortisol. The long term effects of such biology include reduced reproductive rates, loss of weight, and impaired immune system leading to disease and shortened life expectancy.

The Federation of Zoological Gardens of Great Britain and Ireland produced guidelines for monitoring stress in zoo animals via measurement of glucocorticoids in urine and faeces (Smith, 2004). They described stress as 'the biological response elicited when an individual perceives a threat to its homeostasis, and this includes long-term low-grade stress'.

In terms of measurements five physiological components were correlated with stress:

- parameters of immune function (e.g. decrease in T and B lymphocytes) (Glaser & Kiecolt-Glaser, 2009);

- cardiovascular output (e.g. heart rate, blood pressure) (Esch, Stefano, Fricchione & Benson, 2002);

- Darwinian fitness (e.g. reproductive output [Moberg, 1985], longevity [Goh, Pfeffer, & Zenios, 2015; Eyer & Sterling, 1977]);

- Endocrine parameters (e.g. concentrations of adrenalin or cortisol);

- behaviour (e.g. rates of scratching).

They advised that as stress responses vary in individuals and situations, more than one index should be used when measuring the trauma of an individual. The most commonly used measures are behaviour and quantification of glucocorticoids (typically cortisol) as one of the most significant regular changes is increased activity in the hypothalamic-pituitary-adrenal axis.

Two psychological problems found in captive animals are frustration and boredom due to their being prevented from fulfilling biological needs; as well as this, continual mild fear or
anxiety is noted when they are unable to conceal themselves or have sufficient distance (flight distance) from humans. Thus it seems that privacy from observation is also an important part of habitat and wellbeing. Social species need the company of companions and stress will ensue if kept isolated or in a group which is socially unsuited or unstable.

Food and water are fundamental needs spoken about in the same primary needs context. With animals the food presentation, frequency of feeding and the balance of nutrition are critical factors for welfare. Food should be encountered in ways which correspond with the natural behaviour of the species. Occupation of time and energies ultimately needs to relate to agency, success and reward through engagement in meaningful activities for stress reactions not to take place.

Patterns and levels of cortisol secretion were measured in human beings who lived in deprived urban communities were correlated with neighbourhood green space. Stress and mental health were correlated with these (Roe et al, 2013); as well this cortisol levels have been correlated with poverty (Chemin, de Laat, & Haushofer, 2013; Blair et al., 2011).

Provision of opportunity to express normal behaviour features regularly as an imperative part of animal welfare. The composition of groups, sex ratios, number of animals in an enclosure, space and variation in the environment are all factors for wellbeing and health. Confinement for long periods indoors is also documented as creating profound problems.

Guidelines for enclosure design set out by the Federation of Zoological Gardens of Great Britain and Ireland (ibid) make provision for escape from other animals and the public; as well as this it is advised that animals often benefit from mixed species environments. The impoverishment of habitats and a lack of privacy generate anxiety in various species leading to problems such as ulcerative colitis amongst the ailments already mentioned.

Animals such as monkeys experience frustration from not being able to embody their motivation to gather food. When animals are deprived of the chances to perform constructive behaviours their responsiveness to stimuli becomes blunted or
absent. Constructive behaviours are those which induce pleasure and/or avoid pain; in other words, behaviours which demand some level of cognition and interaction.

The wellbeing of an animal is a reflection of the level of enrichment of its sociological and physical environment, and the behaviour of the animal is a linked expression of this matrix. Professor Monika Meyer-Holzapfel (1968) compares responses of dejection to impoverishment to states of mourning and depression in humans: “the indifference of the animal to all goings-on is comparable to states of mourning and depression in man” - this is taken as a sign of poor welfare.

Stress behaviours and harms from poor welfare can be described in terms of stereotyped activities (stereotypies) which are repetitive and do not have any apparent function; thus these behaviours do not occur in the wild. These activities have been articulated as displacement behaviours that occur when an animal is frustrated in its aims.

The various forms of stereotypic behaviour that are repetitive are apparently functionless and do not appear in the wild. These are proposed as displacement behaviours occurring when an animal is frustrated in its aims. In order to care properly for any animal in captive conditions it is critical to recognise that the composite creature is more than just flesh, blood and bone – animals have natural desires and feelings.

Animals and living beings are easily reduced to less than they are through a process of essentialising them as a series of discrete needs for resources. This kind of perception is particularly prevalent in economic perspectives which discount those things essential for wellbeing which are not a readily quantifiable commodity. An example I introduced earlier is how Gross Domestic Product is used to express the welfare of a country. This figure says nothing about the sociological habitat which is pivotal to the psychological, social, and physiological being which is constituted of the level of environmental enrichment for the individual textured with all the variations, arrays of social relations and processes of nurture which come through those relations to coalesce a complex locus of needs.
Prof Francoise Wemelsfelder (1984) develops scientific approaches for the study of animals as whole sentient beings conceiving of living things as subjects rather than objects. Returning to our theme I argue the advantage of pointedly understanding ourselves, human beings, as animals helps us escape some of the gravity of our subjectivities sufficiently well to observe what is happening to us as our environment and habitat become impoverished and disappear.

This approach is a tactic to see our context more clearly and to help us value the subjectivities we are constructed of and humanize a dehumanized rendering of education as a means of extracting profit.

As animals, human beings are diminished by the loss of social nurture, psychologically meaningful activities and diversity in our habitat culminating in a series of harms which damage our abilities to cognicise and adapt to the demands of living. It is in this key conception that education as human development relates the ethics of the rights associated with inherent wealth of the individual, the sociology of the domain associated with nurture, the shared development of capabilities and the connection between the wider world and the healthy functioning of self.

I argue that rights, opportunity and abundance are primary factors for the expression of collective Darwinian fitness which rest on the need for diversity. In our increasingly abstract conceptualisation of ourselves in the universe we are losing the dynamic interconnection of how we are subject to and in the world at the same time; as a result of this we objectify our selves through framing needs as a series of commodities rather than relationships ultimately experiencing this process in corrupting ailments. The Gestalt complex sentience, which transcends the proximal elements which constitute our physical being, suffers and thrives as the world around us does. This is also axiomatic of the conception of Education as Human Development.

Wemelsfelder develops her thinking through the study of pain in animals (Page 116, Wemelsfelder, 1984). She does this by observing behavioural rather than physical criteria since “behaviour represents the self-expression of the animal as an
intrinsic whole, including any subjective experience it has”. Pain is a form of subjective feeling accessible to biological research. In this context Wemelsfelder examines adaptation, stress and animal boredom relating selfhood to the developmental potential of the animal and how it is possible to ‘miss’ certain things such as the opportunity to perform its specific behaviour.

Wemelsfelder (ibid) goes on to talk about ‘environmental deprivation’ on the basis that “the environment provides adequate stimuli to fulfil an animal’s needs, and elicits appropriate, species-specific behaviour in an animal. In a diverse, rich environment, an animal has to search for these adequate stimuli. In a monotonous, ‘barren’ environment, the animal is not only prohibited from searching for adequate stimuli most of the time, but hardly any adequate stimuli are present. This change in environment has an effect on the behaviour of the animal”.

Psychologically manifestations such as boredom can be seen as earmarking aberrations in the environment. Boredom is commonly overlooked as a serious manifestation of environmental deprivation in the animal and human world:

“Behaviour is the qualitative expression of an animal’s selfhood, and is therefore an end in itself, and not a means towards a homeostatic state, or towards successful reproduction. Each animal has basic, genetically inherited, behavioural needs which clearly matter to it, because when it is prevented from performing these behaviours it resorts to abnormal behaviour or becomes apathetic. An animal can be said to be bored when it has to adapt to its environment in an abnormal way, indicative of understimulation, in order to maintain its sense of selfhood. Boredom can be regarded as a form of distress, indicating that an animal is stressed, not due to overstimulation, but due to understimulation.” (Page 149, Wemelsfelder, 1984).

Thus the searching for and cognizising of diverse informations whilst engaging in meaningful interactions in the world constructs the wellbeing of the organism. It is learning through exercising its capabilities and as a result further capabilities emerge as tissues, skills and knowledge develop as the
organism adapts to the stimulus of enrichment. It is an existential wealth which feeds into the health and progress of the individual which is indistinguishable from education.

In John Webster's book 'Animal Welfare; A Cool Eye Towards Eden' he lists the environmental factors most likely to affect the sense of wellbeing of a sentient animal and animate it to behave in such ways as to achieve pleasure or avoid suffering. In the four categories he lists, education is mentioned and described as a means through which “to acquire the knowledge necessary to achieve comfort and security during independent, adult life” (Webster, 2002).

It is here we can situate 'meaningful activities' linking a cognitive process with a set of constructive behaviours for wellbeing rooted in the sociological habitat as part of the enriched environment. Behaviour becomes abnormal and cognition diminished when the environment is diminished.

Inclusion in a Community of Peers: Reflections on Health and Wellbeing

The expression of behaviour is important for an animal and the absence of opportunities to perform that intrinsic part of its existence is thus a deprivation which can be measured in terms of stress. Solitary confinement is a very real and physical punishment mediated primarily through the psychological experience of an individual. I propose that to be excluded from education, valuation and nurture can be understood in terms related to this.

Solitary confinement is understood to violate Article 3 of the European Convention on Human Rights (ECHR), which prohibits “torture or inhuman or degrading treatment or punishment.” (Rovner, 2017). Prolonged solitary confinement inflicts profound psychological and physiological harm (Grassian & Friedman, 1986; Appelbaum, 2015) and we know also that social isolation delivers similar impacts. Loneliness causes physiological events that damage our physical health through release of stress hormones. These hormones in turn act on immune and cardiovascular function with an accrued effect
that suggests being lonely is equivalent in impact to being a smoker (Cacioppo & Hawklow, 2007).

Thus far in this paper I have been tracking the conception of Education as Human Development and how the habitat is a coalescence of many factors of enrichment. One of the most important in consideration is that of being included in a social society. Membership within a social group is a vital means for development, learning and wellbeing. Exclusion from membership within learning communities precludes forms of existential substantiation for the being concerned and acts as a harm upon them further damaging their health/wellness/fitness.

Social conditions play a significant role in stress generation and resultant behaviours. The increasingly technocratic nature of the sociological habitat of homo sapiens is expressed in terms of opportunities determined by finance and technologies which automate aspects of our existence. These situational forces put emphasis on the repositioning of education/knowledge recognition as a part of the financial complex. From this cultural figuration we can understand the exclusion of people from taking part in intellectual and cultural production as a deliberate incursion on the wellbeing of those marginalised from participatory processes.

In other words; the more that jobs, socialising, and the ability to express one's self as a human being is limited by the money which is available to one (and the qualifications which one could afford to get ratified) the more excluded from taking part in collective conversations and cognitive revelations one becomes.

This prevents associating with society as a community of peers and constitutes forms of social and intellectual isolation, loneliness and stress that are ultimately detrimental to the successful development and wellbeing of the individual. Education as human development must therefore be constituted by processes of inclusion and recognition as much as by teaching, exercising and investing.

The denial of social grouping for individuals of species for which such grouping is necessary represents an abuse once the
trauma of such actions is highlighted in social awareness - it represents a potential site of willful ignorance (Sarch, 2018) for policy makers, resource holders and socially advantaged actors.

This discussion of education brings into review the fundamental values basis of the social mammal and concept of society. I reiterate the point made earlier that the concept of society etymologically hails from the French 'société', from the Latin 'societas', and from socius ‘companion’ performing the meaning of ‘companionship, friendly association with others’. Society is a vital and imperative part of our habitat.

I argue that there is ample evidence to show that a significant proportion of wellbeing stems from what I mark out as “Being in Relation with Other”. If, for a social animal, we are to remove proximity with that ‘other’ then we are taking from it companionship thereby directly inflicting harms upon it. I argue that education is constituted of inherent social behaviours which describes activities that bring us into relation and association with the world. It deals with the metaphysics of experience and constitutes a means to first principles from which consciousness follows.

In thinking about education as a social behaviour we can look to how Thornton and Raihani (2010) describe teaching as “a form of cooperative behaviour that functions to promote learning in others” studying it throughout the animal world.

In developing their work they utilised the operational definition put forward by Caro and Hauser (1992, p. 153) clarifying three criteria for identifying the occurrence of teaching:

(1) An individual, A, modifies its behaviour only in the presence of a naive observer, B;
(2) A incurs some cost or derives no immediate benefit; and
(3) as a result of A’s behaviour, B acquires knowledge or skills more rapidly or efficiently than it would otherwise.

This narrow definition differentiates teaching from other forms of behaviour which are not directly involved in facilitating learning in others but which may constitute forms of social learning. Evidence for teaching using this definition exists for a
number of species, and studies have provided strong evidence consistent with all three criteria. They highlight that transmission of information is an important evolutionary force citing thinkers like Richerson and Boyd (2005) who argue "culture is essential to human adaptation...as much a part of human biology as bipedal locomotion".

Whiten and Schaik (2007) have studied social learning and sustained traditions in a range of vertebrate and invertebrate species. They put forward evidence for the 'Culture Makes You Smart' hypothesis particularly in primates. Coining it the Cultural Inheritance Hypothesis they link social intelligence and complexities of animal culture.

This relates to Robin Dunbar's work linking the development of brain size and complexity with mean size of social group in several species of social mammals. Dunbar argues that it is not simply sheer number of the relationships involved that led to the evolutionary impetus but the quality of the relationships, connecting this to mutual grooming behaviours. This he links into the idea that the development of language came about to cultivate bonding in large social groups (Dunbar, 2004; Dunbar, 1993).

Caro and Hauser (1992) argue that “adherence to conventional, narrow definitions of teaching, generally derived from observations of human adult-infant interactions, has caused many related but simpler phenomena in other species to go unstudied or unrecorded, and severely limits further exploration of this topic”.

Pedagogy, education and learning as subject areas require the same broader view if we are to apprehend the true nature and scope of such activities/behaviours. I argue that we should be understanding these as constituted of civil behaviours and institutions which are imperative elements of the habitat of homo sapiens as social mammals.
The Contextualising Orientation of Education as Development

Taking these perspectives we can understand education, learning and pedagogy as important for health, welfare, happiness and meaningful behaviours which serve constructive purposes. This line of argument asks what happens in the absence of education, learning and pedagogy in the culture and sociological environment of an individual.

A working definition of Education as Development is offered as follows: Education brings about and evolves the consciousness of the individual through cultures of information transmission and interaction in the development of meaningful activities as a part of an enriched environment. This process builds Darwinian fitness and cognitive responsiveness. This is a relationship between world, society, group and individual as a part of the environment which constitutes the wellbeing and capacities of the individual.

Thus we can understand education as a part of environment which is imperative for health and happiness feasibly identifying the individuals level of development through their behaviours as a reflection on their opportunities past and present. In this scheme the presence of education results in promotion of health and wellbeing, and its absence results in illness, stress and anxiety.

This formulates education as a diffuse phenomenon which takes place not only in formal spaces as types of large culture but also importantly informally throughout living relationships as 'small cultures'. I draw on Adrian Holliday's articulation of 'small culture' to create a relational framework which expands beyond reductive perspectives and helps ground the concept of education as constructing the individual. In recursive ways we are necessarily a part of the environment and the environment is of us (Holliday, 1999).

We are involved in an “intra-relational way” with the universe which takes greater account of the nuances we must examine to be able to get at certain understandings. Karen Barad articulates this concept in the following terms: “The notion of
intra-action is a key element of my agential realist framework. The neologism 'intra-action' signifies the mutual constitution of entangled agencies. That is, in contrast to the usual 'interaction', which assumes that there are separate individual agencies that precede their interaction, the notion of intra-action recognizes that distinct agencies do not precede, but rather emerge through, their intra-action. It is important to note that the 'distinct' agencies are only distinct in a relational, not an absolute, sense, that is, agencies are only distinct in relation to their mutual entanglement; they don’t exist as individual elements.” (Page 33, Barad, 2007).

This key concept better positions us to grasp the interrelationships, mutualities and simultaneities at work in complex social and physical phenomena brokering a better means to understand our relationships between each other and the world beyond. Traditional views which work to abstract homo sapiens from the natural world have the effect of ultimately reducing homo sapiens and the natural world to less than they are. This approach we encounter through witnessing catastrophic diminishments to humans and to those things which exist beyond humans.

David Orr (2004) in his book 'Earth in Mind: On Education, Environment, and the Human Prospect' helps bring into view this important aspect: “...we continue to educate the young for the most part as if there were no planetary emergency. It is widely assumed that environmental problems will be solved by technology of one sort or another. Better technology can certainly help, but the crisis is not first and foremost one of technology. Rather, it is a crisis within the minds that develop and use technology. The disordering of ecological systems and of the great bio-geochemical cycles of the earth reflects a prior disorder in the thought, perception, imagination, intellectual priorities, and loyalties inherent in the industrial mind. Ultimately, then, the ecological crisis concerns how we think and the institutions that purport to shape and refine the capacity to think (Orr, 2004).

In the absence of development there is diminution. In the absence of education there is neglect. Neglect denotes the failure to care for properly or the state of being uncared for. Care refers to the provision of what is necessary for the health,
welfare, maintenance, and protection of someone or something. In these linguistic foundations we can find the identity of care in education. There must be a relationship and that relationship is based on care. Without care there is either no relationship to hold the parties together or, at worst, a negative relationship in the meeting which we could rightfully question as offering the qualities necessary or sufficient to develop capabilities in others.

As explored earlier, when there is stress, anxiety, frustration and a negative relationship in situ across animal species we see the development of repetitive rituals known as stereotypies. We see these behaviours commonly in captured and domesticated animals. Animals pacing their enclosures, biting bars, foraging for food on concrete floors are all stereotypies which are aberrations of natural behaviour. They can be intricate and malformed embodiments of activities which develop as artefacts in attempts to cope with cramped or barren environments and traumatic stimuli.

A significant aspect of stress is associated with the biological release of endogenous opioids (substances which act through the opiate system) (Valentino & Van Bockstaele, 1996). Prolonged confinement results in abnormal behaviour of stereotypies or inactivity and unresponsiveness. These behaviours have been linked directly with increased opioids and opiate receptor density in the central nervous system (Zanella, Broom, Hunter, & Mendl, 1996).

The release of endogenous opioids create positive feedback which maintains the persistence of the stereotyped behaviour and inhibits switching to different activities (Rushen, De Passillé, & Schouten, 1990). Opioids function both to mimic natural reward signaling in the organism and as a part of the response to trauma, commonly associated with, but not limited to anaesthesia (Di Chiara, Acquas, Tanda, & Cadoni, 1993).

High stress impairs the formation of explicit memories and interferes with complex, flexible reasoning whilst it reinforces performance of implicit memory and well-rehearsed tasks (Sandi, 2013).
This seems to offer a robust account of the formation of stereotyped behaviours under conditions of stress. Georgia Mason describes these stereotypies as ‘repetitive invariant behaviour patterns with no obvious goal or function’ (Mason, 1991). Her work identifies these behaviours in captive animals, mentally ill or handicapped humans, and subjects given stimulant drugs.

The abnormal behaviours which arise through impoverishments and trauma are demonstrations of psychological aberrations. Andrea Lord (2002) presents the idea that such repetitive behaviours are manifestations of mental disorder in the animal world which we see in human beings. She reports that such repetitive behaviours are seen in over 36 different mental illnesses of modern psychiatry including autism, schizophrenia, Tourette’s syndrome and obsessive-compulsive disorder.

Abnormal stereotyped behaviours have been understood as inappropriate responses to stimuli and tests developed which require subjects to make a simple response and then change it. In such tests, when presented with the same choice over and over again, healthy people vary their response, however stereotypers tend to persevere with the choice they made first. This has been interpreted as a cognitive deficit and a basis for inappropriate responses to stimuli.

Similarly in animals when taught to press a certain button to receive a food, when the reward was removed normal healthy animals quickly learned to vary their response whilst those exhibiting stereotyped behaviours kept on repeating the same choices. Joseph Garner notes that abnormal repetitive behaviours in captive animals appear to involve the same mechanisms as abnormal repetitive behaviours in human psychiatry reflecting underlying abnormalities of brain function (Garner, 2005).

Whilst recognising these behavioural manifestations as coming out of coping mechanisms to relieve the trauma of stress and frustration, there are still questions about why improving the environment of older animals doesn't improve the stereotypies in some. This returns to questions about whether the cognitive reflex becomes damaged through aspects of long term environmental deprivation causing stress responses which reinforce coping behaviours to mitigate trauma through opiate release, in turn further perpetuating types of cognitive dysfunction.

The role of opiates in psychiatric illness is long established and well documented (Shah & Donald, 1982; Usdin, 2000). Connecting the endogenous production of opiates with trauma and stress provides a link between impoverishments of sociological and physical habitat and behaviours such as drug addiction, stereotyped behaviours, cognitive dysfunction and mental illness (Sinha, 2008). From these a series of other social deprivations are met in succession through increased susceptibility to socio-psychological processes which dehumanize extreme outgroups (Harris and Fiske, 2006) and the primary loss of competencies.

Habitat Interrupted: Situational Forces Brought About by Scarcity

The changing of the educational and sociological landscapes into terms of over financialised economies represents an uprooting (deracination) of individuals from the habitat from which they originate. The United Nations 1992 Convention on Biological Diversity 'Habitat' is defined as “the place or site where an organism or population occur” (United Nations, 1992).

As we have been exploring, habitats are comprised of multiple factors coalescing including places where a species can find food, shelter, safety and mates for company and reproduction.
The convention describes in-situ conservation as “the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties”.

Examining the behavioural aberrations which arise from the loss of elements of the habitat is of importance in determining what value educational and social behaviours have to the individuals involved. This way we can reason what is at stake when such things are enclosed and proposed as businesses – i.e. participation and recognition only available to those who have the relevant finance.

The differentials which arise from those changes to the landscape represent structural changes to an environmental continuum which has informed the development of homo sapiens for tens of millions of years at least. For those who are privileged by the structural differences of such enclosures it represents nurture and extending the privilege they already have; for those who are disadvantaged by their dispossession from wealths which have been an inherent part of their evolutionary development.

Understanding the structural violence implemented by finance and recreated by everyday complicity to putting values of finance before bio-psycho-social imperatives is a vital part of realising the harms which arise in the absence of the benefits of societal enfranchisement.

In this section I realise I am drawing on challenging, sensitive and difficult material but I feel it is necessary to illustrate the points which I feel are important to understanding what is at stake in the notion of education as human development.

To understand the efficacy of education as a nurturing force it is important to reflect on the effects which imposed poverties have on individuals and populations. Certain aspects can be understood more powerfully when we examine what happens in its absence.
In the process of financialising aspects of life and environment essential for human development, an abstracting utilitarianism is promoted at the expense of social relations which inform and feed into a commons providing welfare benefits at a species, as well as an individual level (Ostrom, 2018). The disruption of this for specious economic activity amounts to the creation of artificial scarcity in the face of a world of plenty. It is the invention of difference and poverty.

Such structural violence in the form of artificial scarcity gives rise to real poverty and has knock on effects impacting on socially generative cooperative behaviours and putting pressures on subpopulations to compete for resources. I suggest that such a cultural configuration promotes aggression and competition at the expense of collegiality, the pooling of resources and sharing.

Drawing on natural history perspectives, Scott Forbes argues that "A poverty of resources is the direct antecedent of child abuse and infanticide in both animals and humans. Limited supply and excess demand animate conflict that has lain dormant....The behaviour of both parents and offspring, and the potential for harmony or discord, are contingent on circumstance" (Page 198, Forbes, 2007).

The creation of artificial scarcity changes the psychodynamics of the way in which people think and act towards each other. Not only does it generate stress through uncertainty but it moves thinking from one modality into another. 'Fight or Flight' stress biology is given prominence giving rise to more adrenal reactions and fewer processes which involve more complex slower modes of contemplation.

In conceptualising how stress environments affect behaviour drawing on natural history helps give us indicators of how thought and action may be influenced. Behaviours manifest very differently in times of abundance and in times of impoverishment. Even what are perceived as the most close nurturing relationships can fragment and reform as negative behaviours under the situational forces of certain circumstances. Forbes reinforces that we can observe this throughout nature:
“A blackbird family amid a flush of insects on a warm summer day is a picture of harmony. Warm, well fed chicks lie contentedly on the nest and do little more than open their mouths when mother returns with a beak full of bugs. But observe the same family after forty eight hours of cold, wet weather and you see a family in crisis. The brood becomes unsustainable and every offspring must now look out for itself. Whilst still able, chicks beg frantically for food and attention whenever a parent returns, and often when not. Older stronger siblings show their weaker counterparts no quarter, pushing them aside and even trampling them at feeding time. The last hatched within the brood are the first to suffer from neglect, and they rapidly wither and die” (Page 174, Forbes, 2007).

Under unfavourable circumstances in nature we may see manifestations of negative degenerative behaviours such as infanticide, cannibalism, behavioural discrimination and various sub-lethal effects. Under conditions of acute food stress we can witness in birds and mammals the consumption of progeny. This has been observed in species ranging from hawks and owls, to beetles, mice, chimpanzees and even bonobos (Callaway, 2010).

Forbes’ work details in varying species how we can find elevated levels of child abuse, neglect and even infanticide when families are too large, when birth intervals are too close, resources too scarce, when there are congenital defects, and families not related closely enough. He thinks the role of idealized culture as important to be implicated in obscuring such traumatic linkages between circumstance and behaviour in the animal world.

In humans whilst there is a strong association between “family poverty and a child’s chance of suffering child abuse or neglect” (Bywaters et al, 2016), Carol Bower suggests that “although poverty does not cause child abuse, living in deep poverty increases the vulnerability of children to abuse and neglect” (Bower, 2003). Farrell and colleagues (2017) found that higher county poverty concentration is associated with increased rates of child abuse fatalities.
Reading what 'poverty' means should be done carefully holding in mind Amartya Sen's warning about 'the commodity based accounting of the quality of life'. In a study by Ney, Fung and Wickett (1992) they identified that mistreatment of children was associated with 'poor care' from parents which was attributed predominantly to "immaturity, marital problems, alcohol abuse, unemployment, drug abuse and lack of money".

Whilst poverty is not causal it offers situational forces for the individual to contend with; a family may be financially impoverished however offer up and reinforce all the nurture required to mitigate the circumstances. Equally we know that power and status increases the dehumanisation of others in the name of making 'tough decisions' (Lammers & Stapel, 2011) and that dehumanization enables violence which perpetrators see as unethical, but instrumentally beneficial (Rai, Valdesolo, Graham, 2017).

What I am attempting to highlight is that the situational forces of circumstance have a stronger bearing on our behaviour than is comfortable to acknowledge.

The alarming truths of destructive behaviours back onto the knowledge and reassurance of relationships and behaviours which are nurturing, protecting and loving. What reflexive actions we see in the animal world are evident in statistical associations associated with the cultures of homo sapiens.

To further explore the dynamics which the artifices of power and poverty can bring about I am going to draw on historical illustrations where maladaptive behaviours have been brought about through situational forces.

In 'Betting on Famine' – a book which covers stockmarket speculation on staple food stuffs - Jean Ziegler points out the history of Heinrich Himmler's Reichssichertshauptamt (Central Security Department) rolled out as a scientific plan for the annihilation of selected groups of people deemed to be 'life unworthy of life' (Lebensunwertes Leben); this was known as the Hungerplan (page 88, Ziegler, 2013).
Historian Timothy Snyder (2010) researched and documented the suffering endured by Soviet prisoners of war condemned by the Nazis to “extermination through hunger”. The Nazis were vigorous bureaucrats keeping detailed accounts of every camp maintaining an accounts book (Lagerbuch).

In many of these Lagerbucher, the SS relate with relish and detail recurring cases of cannibalism where they reported how young Soviet prisoners of war resorted to such measures as they were dying of hunger. They portrayed it as a defining proof of the Slavs' barbaric nature, but it was in fact the results of the unspeakable assault which they made upon what we refer to commonly as the ‘humanity’ of homo sapiens – the stress conditions sufficient to propose ‘us-or-them’ choice.

These are obviously horrific circumstances and behaviours which are pushed to the far edge of extremes but such tragedies demand that we acknowledge these ways of acting originate in conduct found of the subtle and everyday (Waytz, Schroeder, & Epley, 2014); the near insurmountable crime against humanity enacted in the second world war must not be understood as banal though it can appear in the guise of the normalized day-to-day.

The great release from such behaviours is that we can transcend them through thought and awareness, understanding and the active building of compassion.

The tragedy is that situational forces can have an overwhelming effect on how we behave and whether that behaviour is used to reinforce in-group/out-group dehumanization promoted in ideologies. The notion that behaviour is vulnerable and affected by situational forces was studied in detail by thinkers like Stanley Milgram (1974) and Philip Zimbardo. Zimbardo and colleagues famously organized the Stanford Prison Experiment where volunteers were put in a role play situation and told to act out the parts of prison warder and prisoner.

The experiment had to be stopped because the behaviour of the volunteers who played the wardens had become authoritarian and brutal subjecting prisoners to psychological abuse, whilst those playing prisoners had started to normalise the abuse. This is an example of adaptive preference formation in negative situations.
The Stanford Prison Experiment was conducted under control circumstances, Zimbardo later examined the same kind of maladapted behaviours by US soldiers in Abu Ghraib prison during the 2003 Iraq war (Page 332, Zimbardo, 2009) where he came to the defence of Staff sergeant Frederick. There is ample documented evidence for these kind of behaviours both in experimental and real life circumstances.

The purpose here is to underline the role which situational forces have in affecting the behaviour of individuals. The impact that stress has on cognition and wellbeing along with the pressures which scarcity, competition and power differentials exert provide significant impetuses which factor into both harms and the likelihood of negative behaviours. The simplistic notion of negative behaviours as pathology is misleading. Unless we recognizing such structural contributors to behaviour change, including effects of power and privilege, loss of welfare and social decay, then we strand ourselves from deeper understandings and capability building.

“By creating this myth of our invulnerability to situational forces, we set ourselves up for a fall by not being sufficiently vigilant to situational forces....We are best able to avoid, prevent, challenge, and change such negative situational forces only by recognizing their potential power to 'infect us,' as it has others who were similarly situated” (Page 211, Zimbardo, 2009).

If we are thinking about education in terms of human development, then some understanding of the converse of development can be reasoned giving insights into the negativities which impact the individual. No doubt availability of resources and a culture of facilitation versus one of competition play significant roles in determining the wellbeing and behaviours of the individuals involved in the human ecology.

Zimbardo’s focus on situational forces adds an appropriate dimension to analysing the influences of different cultures on behavioural outcomes: “Motives and needs that ordinarily serve us well can lead us astray when they are aroused, amplified, or manipulated by situational forces that we fail to recognize as potent” (Page 258, Zimbardo, 2009).
Along with the biological influences of stress in terms of cortisol, opioids and adrenal function builds a framework for understanding how physical, social, and mental pathologies might come about from a loss of sociological habitat. Bringing varying disciplinary perspectives into proximity with each other can offer a way beyond the categorical voiding of isolating bodies of knowledge from each other.

Only an inter and multidisciplinary approach can equip us to decode the complexity of factors which coalesce to alter and damage the cognitive reflex resulting in the breakdown of normal functioning – specifically disrupting capacities equated with Darwinian fitness.

Taking on the view that our consciousness forms around the happenings of the proximal environment, the notion of speaking of the sociological habitat firms up. Leading from this, if we engage in a process to diminish others and the world, so we engage in a process to diminish our selves reducing the richness of our environment, and in a tangibly connected way, the neural connections which constitute in our central nervous system.

Socially and by way of the physical environment, diversity provides an array of opportunities which constitute as meaningful activities where decision making processes are active exercising the physical and psychological being. The physical result of diminishing the environment can be seen when we look at the effects of domestication and industrialisation on animals.

Charles Darwin noted differences when in studying and comparing the brains of domestic rabbits with those of their wild counterparts. He found that the domestic rabbits had smaller less complex brains than those of their wild counterparts and he reasoned that this was due to the richness of the environment and lifestyle of the free rabbits (Darwin, 2009). He concluded the domestic animals “did not exert their intellect, instincts, and senses as much as did animals in the wild” and that this manifested in the way brain tissues had adapted to their environments in developmental terms.
This observation was the forerunner of extensive research examining the effect which the stimulus of the environment has on neural development. For many years certain assumptions had dominated in understandings of the nervous system such as the idea of the inability for neural tissue to be rehabilitated, renewed or develop past a particular point. The notion that the brain was a fixed rather than dynamic system responding to the environment shaped how people were viewed and treated.

Understandings have moved on. The more devoid the environment, the more underdeveloped the tissue and the connections which are found within it. The less exercised the perception, the fewer material developments in the nervous system arise through engagement with meaningful activities. Those activities which drive the creative perception create the circumstances for emergent properties in thinking as the biology of life adapts.

Marian Cleeves Diamond pioneered work documenting how enriched environments result in the development of heavier more complex brains (Diamond, 2001). She and her colleagues helped establish this theory in modern neuroscience demonstrating that environmental enrichment causes the adaptation of structural components in the brain at any age (Diamond & Rosenzweig, 1964; Diamond et al, 1987).

Although the brain possesses a relatively constant macrostructural organization, the cerebral cortex is going through constant changes and its complex microarchitecture is strongly shaped by experiences before birth, during youth as well as throughout the span of life. Since then an abundance of research has consolidated these understandings in relation to human beings (Fuchs & Flügge, 2014).

Rather like exercising a muscle causes its development to the stimulus, in the exertion which the environment shapes, a process of neuroplasticity occurs in biology which is associated with learning. The development of a healthy nervous system is not only reliant on sufficient and necessary nutritional supplies to sustain life, but also requirements of the sufficient and necessary sociological and perceptual inputs.
One example of looking at the effect which learning activities have on the brain is the study of memory and cognition in people who suffer from Alzheimer’s disease. Lifelong Learning supports deeper, wider richer perspectives important for living in a complex local-global environment. Such a culture of learning prevents the deterioration of the mind as much as it builds the capacities which serve the individual.

Physical exercise and cognitive stimulation are reported to reduce and possibly reverse the negative effects of ageing on the brain associated with cognitive decline. There has been much work done on neuroplasticity around the idea of either ‘using it or losing it’. Scientists have shown that limited cognitive engagement can result in increased cognitive decline which is reversible through cognitive stimulation.

Engagement in informational activities and opportunities which involve learning have been associated with a 47% reduced chance of developing Alzheimer’s Disease (Wilson et al, 2002). Regardless of the form the activities take, cognitive stimulation and engagement work powerfully to prevent and delay cognitive decline generally as well as medically in terms of dementia and Alzheimer’s Disease (Snowden, 2001). The more engagement in learning, the greater the benefits (Schuller, 2017). The more socially active, the more the brain develops.

Understanding stress biology in context with neuroplasticity and levels of environmental richness offers a foundation to formulate what changes and development in cognitive function might be seen under different circumstances. That enriched environments positively affect brain development, behaviour and capacity and have wide ranging implications. The idea that intellectual and sensory stimulae are major determinants of cognitive health, existential wellbeing and ultimately physical welfare can readily be linked to the understanding of education and cultural opportunities as necessary enrichments in the life course of an individual and community.
The Flynn Effect: Measurement or Dislocation?  
Intangible Cultural Heritage

Key questions about the importance of intellectual participation in the sociological habitat of human beings are bound up with how capacities are recognised and valued. One much debated and questioned measure of cognitive health and ability is the use of Intelligence Quotients (IQ) as metrics.

James Flynn has become known for publishing longitudinal work reporting that every Stanford-Binet and Wechsler IQ standardization sample through the period 1932 to 1978 showed norms of an increasingly higher standard than its given generational predecessors (Flynn, 1984). His name has thus been lent to the general observation which has come to be known as the "Flynn effect".

In later work Flynn and Shayer (2018) go on to show a reversal of the trend demonstrating how the IQ gains of the 20th century have reversed resulting in overall mean losses of 'IQ'. In Britain, measurements on Piagetian tests show significant declines. They propose that the strongest evidence bases come from Scandinavia as a whole, Britain, and Germany.

Reflecting on this work Bratsberga and Rogeberg (2018) argue that the reversal of the Flynn effect has come about through changes in environmental factors. One view of the use of IQ tests is as a legitimate measure of capacities in order to structure the allocation of opportunities. The claims of the Flynn Effect are highly contested (Rodgers, 1998) but nevertheless such tests are engrained in the public imagination as scientific tools.

Other perspectives include the position that these methodologies are divisive bureaucracies based on narrow measures of what capacities an individual has. Whether we take the view that changing mean IQ levels are reflections of differing capacities (Wade, 1980), if they are culturally inappropriate tools of social and economic segregation (Michigan Law Review, 1973) or whether they are in some ways reflecting a mixture of both, the proposal of a shifting mean (fact or fiction) offers a telling provocation.
Wanetta Laird (2003) documents the history associated with the use of IQ tests in the eugenics movement in her study of the education of students with mild intellectual disabilities. Critiques of the use of standardised IQ tests (Restori, Katz, & Lee, 2009) raise significant problems to the approach both in terms of practicability and cultural appropriateness.

The question of the lack of representation of the individual in the design of the test has repeatedly been an issue with drawing inferences from such bureaucratically aligned measurements. We can imagine that where there is a lack of cultural representation of an individual there is a lack of a capacity to recognise the person in the system the bureaucracy constitutes.

At its worst it manifests as an ideological domination through independently controlling how people are valued (Brown, 1993), a part of an apparatus of cultural oppression (Hall, 2006) which undermines attempts to live happy, healthy, prosperous lives. Taking this line of argument then might the Flynn Effect of the downward shifting baseline of mean IQ levels represent the cultural inappropriateness of the means of valuing people?

Such metrics are multifactoral inevitably leading to the conflation of complex variables with a simple number. Koenen, Moffitt, Caspi, Taylor, & Purcell (2003) report that extreme stress in childhood negatively impacts children's neurocognitive development leading to lower intelligence.

Milton Schwebel and Daniel Christie (2001) discuss the stress incurred through structural violence examining how economic and psychological deprivation impairs the development of children. They identify how children living in poverty experience diminished intellectual development partly because parents are overwhelmed. They argue for essential provision of living-wage employment, good prenatal medical care, and high-quality child care, if we are to see future generations develop into the intelligent and caring citizens needed.

If we are to take into consideration the effects of underdevelopment, then this might be a reflection of the increasing of the precarity of people's existence in the culture's
dominant paradigm. When viewing the sociological setting through the lens of observing social mammals, it becomes stark what exists in the absence of support and/or resources.

If welfare is to be a chief orientation in education and if we are to take onboard measures of social stress and stress borne illness, we can understand stress behaviours as natural responses to specific environmental conditions. Stress traumas might be brought about from the loss of social interactions and intangible structures which have played key roles in the development of the species homo sapiens and these might be measured through IQ tests read as cognitive damages or cultural exclusion.

We can postulate with deep understanding what the effects of diffuse isolation and the exclusion of involvement in dialogue are on individuals. The concept of Education as Human Development is forwarded to encapsulate not just a flexible pedagogic teleology of self directed learning but also the learning of the necessities and sufficiencies involved in a healthy dignified life.

Practically thinking, those most in need of means of human development have least access to finance; from this foundational logic comes the necessity to build beyond the enclosures of finance as a sole means.

Importantly, in the majority context, tools of human development must be capable of existing beyond any monopolisable means or forces. Aside the positioning of education as a commons of self directed researches it also constitutes a necessary part of our sociological habitat that when interrupted lead to the manifestation of distinct harms.

The thesis in this paper comes from engaging in the social practice at the center of a project called Ragged University which is based in the informal community context. Informed in part by learning from the field of international development, it has had to operate without funding or resources as attempting to access these has distortionary effects on the learning based activities.
Ragged University is thus not an organisation as such but a coalescence that speaks of searching for practical philosophy capable of provisioning processes which the individual can own and organise in their context under independent means. This idea of a practical philosophy places education as an intimate part of culture and shares various aspects of what the United Nations describe as Intangible Cultural Heritage (United Nations, [N.D.]).

Understanding learning and teaching more in terms of oral tradition, performative social practices, comprehension concerning nature and the universe, knowledge production as custom, and skills development as social praxis helps reveal the richness embroidered in people's lives as well as with the harms of appropriation or restriction of people's lives. It holds in its core a study of the human condition essential for any person engaged in a sense making process.

I argue that the economic denuding of the physical, psychological and sociological habitat has rendered from many people's lives health and meaningful activities. Related to the phenomenon of species disappearing from our physical world, we are seeing the disappearance of social spaces (third places) long used as hubs of non pecuniary interaction (Oldenburg, 1989). If we consider how behaviours might be lost like languages and traditions, does it make sense to speak of loss of social species?

The rise of repetitive behaviours associated with stress correlate with the rise in stress induced illness (Adult Psychiatric Morbidity Survey, 2014). Security in jobs is being replaced with more profitable short term contracts and landownership is now concentrated into historically low numbers of holders that produces an artificial precarity for those displaced from the lands (Wightman, 2015).

The drive to financialise education and the recognition of learning is an extension of the unsustainable ways which our world has been organised and organises us. In the mechanics of financialisation there lacks a fundamental feedback mechanism which is associated with real world logistics – that
of an intrinsic and inelastic relationship with the physical realities of the environment. Amongst the progress our world has become colonized by some of the most detrimental and toxic practices we as a species could adopt.

Finance and the abstract world of numbers exists without significant enough means to feed information back from the physical. Without such feedback mechanisms, behaviours develop in response to ethereal and imagined signifiers like fluctuating figures on a page or a screen. These figures as representations of 'what is' lack the complex information arrays and cascades which the farmer in their field or individual in their community lives directly in relation to.

As forests across the planet are cleared for high intensity non sustainable agricultural farming (Kissinger, Herold, & De Sy, 2012), the buy and sell signals on the stockmarket or in bank accounts carry no information on the effect which they are having; that is, overwhelmingly the owners in the form of buyers and sellers grossly have no idea about the effect of their actions other than it makes them more money. This myopia factors into the unsustainable consumption of the world as easily as a financial instrument slips into a pension investment portfolio.

This capacity for large numbers of people to undermine the source of their own abundance was noted by Plato in ancient Athens when its land was deforested to build ships resulting in successive problems such as soil erosion. For short term success, self renewing resources are being plundered leaving a cost accumulating across generations and populations. Agriculture, overgrazing, the imposition of the built environment, the destruction of forests at a rate greater than their regeneration to supply a ship building industry has historically ended in lasting diminished capacities for the Ionic cultures (Plato & Taylor, 2014):

"The land was the best in the world, and was therefore able in those days to support a vast army, raised from the surrounding people....during all this time and through so many changes, there has never been any considerable accumulation of the soil coming down from the mountains, as in other places, but the earth has fallen away all round and sunk out of sight. The
consequence is, that in comparison of what then was, there are remaining only the bones of the wasted body....all the richer and softer parts of the soil having fallen away, and the mere skeleton of the land being left....and there was abundance of wood in the mountains. Of this last the traces still remain, for although some of the mountains now only afford sustenance to bees....Moreover, the land reaped the benefit of the annual rainfall, not as now losing the water which flows off the bare earth into the sea”.

As a scale practice the industrial and commercial is now extending past its usefulness as a means of organising human activity. The encroachment of the Anthropocene on the natural world is becoming apparent through the encroachments on Homo Sapiens. I argue that the logical conclusion to this short visioned behaviour of commercialisation and industrialisation has come to be in the scale problems we are collectively facing.

Education as Representing a Commons

The natural world as composed inclusively of the intellectual, emotional and sensate lives of homo sapiens have become tapped as income streams to distant venture capitalists and is withered as a result. Understanding this as the appropriation and consumption of commons through processes which amount to structural violence provides a way to orient ourselves in collective analyses in varying contexts and at different meta levels.

A commons refers to land or resources belonging to or affecting the whole of a community. Where an individual takes from a common stock which they did not create without leaving sufficient enough for the thriving of the commons and for others to share in too, a structural violence has been imposed on those parties who have not benefited.

To build a professional body around some human activity without at the same time provisioning for free and equitable means to access that profession and what it embodies is to impoverish the human activity itself. It is to steal the involvement of others in the activity and negatively affect general sufficiency; the collected commons which allow all to
thrive. Alternatively where one party has taken from a commons without having put what they have taken to productive purpose is to take sufficiency from another through wastage. This is to diminish the stock of the commons and withhold abundances from others. The resources which renew are sources of future abundance and existence, might be the ideas of an intellectual life, language, culture, and activity or it may be the great wilds or potable water. Commons can be tangible or intangible, what makes their finiteness is related to the happenstance of space and resources to exist.

If education is a question of Human Development, and that stock of social behaviour is to be found in the activity of conference, social participation, or/and mutual coalescence then I suggest that involvement gives access to that which is greater than a sum of its parts – the commons which emerges; the culture which evolves, the ecology of the systems and the atoms is what is at stake.

Some study of knowledge as identity can give texture to the existential encountering of learning as a process. Knowledge and learning emotes as a transformative experience. Learning about the human condition comes about spontaneously through action and gaining new perspective through experience is the result of a series of changes. Each change is a little death into a new life for new thoughts to appear.

Neurons have reached out within the tissues, touch and take form in the shape of the stimulus which has flooded in through the transduction of the senses displaying as a living changing organ responding to the internal and external environment. Should there not be enough nutrition – the physical stuffs which give the energy and materials to make new nerve cells, tissues, peptides, enzymes and hormones do not manifest. Equally the impact of trauma and stress informs the level of exhaustion of the neurons and physical systems – distinctly affecting cognition and behaviour as displayed formations of starvation.
Rewilding the Commons

'What ethos and processual compass can we use to orient ourselves in and navigate through these significantly linked problems which relate to the erosion of habitat?'... As a response to this question I suggest the philosophy in Rewilding can make a significant contribution in the discussions of what a sustainable future can look like. Humans have colonised the world and made it inhospitable. With the loss of the landscapes we depend on we are increasingly missing elements which we need to thrive.

In urban terrains it is hard to leave the house without spending money to go about our weekly business; parks, green spaces, locally grown and colloquial seasonal food stuffs, social clubs, and public places are disappearing.

Increasingly our watercourses are become polluted from various scale industrial sources along with our air; automobile culture has proposed itself as a trade off for the few between lifeshortening illnesses for some and a forced convenience of speed. What sense it makes to burn the petro-chemicals necessary to provide the energy to drive three tons of metal to a shop and back to bring several kilos of supplies is only found in an operationalised worldview of externalisation. What is lost is immense and incalculable.

The built environment has in many places crowded out the natural happenings of homo sapiens and nature. We are losing the environment which helps us survive and evolve. We are a developed hominid equal on the earth with all the life that has evolved with it over the millennia.

What constitutes a practical philosophy of education which can serve as a processual compass to human development independently of dominant cultures which have extended beyond their helpfulness (i.e. finance)? The philosophical elements emerging through engaging with the concept of Rewilding serve well to provide suggestions for bringing together the circumstances for learning beyond the dominant paradigm.
“Rewilding is a plastic term that has been applied to a range of visions and land management practices. It has multiple meanings. These usually share a long-term aim of maintaining, or increasing, biodiversity, while reducing the impact of present and past human interventions through the restoration of species and ecological processes. Understanding and addressing the trophic cascades associated with species extinctions have emerged as central organizing agendas for rewilding research and practice....Rewilding may also involve passive management, natural recolonization, assisted migration, and the reintroduction of species believed to be missing from a system.” (Lorimer et al, 2015).

In exploring the provocations in this writing I have aimed to have shown that there is an intrinsic link between our selves and our environment, and that a depreciation of our environment brings about a depreciation in our wellbeing and lives. I have aimed to illustrate how our cognitive reflex can be damaged by stress and trauma, and that expressing intrinsic behaviours is a vital factor in that wellbeing. I have reviewed learning as a behaviour linked with meaningful activity where cognitive processes are engaged.

With this narrative I have included the argument that the culture of over-finance and its abstracting forces is having the effect of diminishing the sociological environment in the same way that the ecological and economic environments have become diminished. As a response to the imperative need for human development which can exist without dependencies which make it fragile.

My conclusion is that through understanding and applying processes of rewilding and ecological conservation to our thinking and behaviour there are profound benefits which we can associate with an ideal of open education. Informal learning which is bound up with being and development of capabilities is what we might call 'learning in the wild'. Understanding ourselves as a part of nature is a helpful way to tap the benefits of a third person view to see homo sapiens – a social mammal - in the world they co-exist in to thrive.
Rewilding offers us applied strategies which are informed with systems understandings where we might get to comprehend what interventions and abstentions are important for stable and lasting (sustainable) economies. This uses intervention in the terms of medicine rather than of governance. Understanding the effects that invasive species have gives bearing on the relation of the multinational to the local grocer as much as the rhododendron does to the cornflower (an endangered species) – specifically multinational enterprises might not provide significant provision of space for small subsidiarity economies to flourish through aggressive provisioning of its own concerns.

Rewilding can speak of a non-colonising way of being in the world hinged on the values of diversity, ecology and intercultural welfare. It can speak to the non-institutionalised sociologies which happen in unprescribed circumstances and value them. As a concept it orients me as a thinker as part of nature rather than as is suggested by Dolly Jørgensen, a competitor:

“Taken as a whole, rewilding discourse seeks to erase human history and involvement with the land and flora and fauna. Such an attempted split between nature and culture may prove unproductive and even harmful....Ecological conservation and restoration actions which were previously labelled with more discrete terms such as animal reintroduction, reforestation, or habitat restoration, are being subsumed under rewilding....Rewilding has popular appeal because it aims to have a tangible positive effect on a future world, the environment in which people live or work or recreate.” (Jørgensen, 2015).

As a response to the behaviours of consumption which are corroding the human and natural world, rewilding proposes practice of letting natural processes have their space and the opportunity to develop to a place sufficient for it to make a contribution – it informs us of the importance to have domains which are free of bureaucratic control, colonisation and social engineering whilst valuing the best qualities of our institutions and institutional practice. In this I propose our institutions as fruiting bodies of the corporate – the corporate being the collected activity – which it above ground visible like fruiting bodies of a hidden mycelium. We must be able to ask as collectives what we want to fruit and why.
I argue that our habitat (sociological, intellectual, economic, natural world) needs to be reconstituted in the same ways which the natural world requires. Possessive individualism has come to dictate the terms of existence for many leaving lives bereft of elementary cultural phenomena important for health, well being and collective intelligence. These artificial poverties reveal themselves in studying the real world terms of freedom, equality, life expectancy, education and capacity which are spoken about in Human Development (O’Hearn, 2009).

Situating Myself in the Work: What This Means to Me

I am indebted to the many conversations I have had with various friends and friendly people about the ideas which I have been presenting. Dr Steve Tilley asked me ‘where are you in the work Alex ?’. In light of the forces of cultural and structural exclusion at work, I have proposed that those who most require human development processes and human rights are most distant from accessing them. I notionalise the Ragged University project of education as necessarily having to exist within the individual’s means whenever or whomever, they are. Being practical about the reality of creating one’s own process of human development and education one must incorporate understanding of ideas like “Interest Convergence” to be viable in the setting of human development.

This theory was put forward by Dr Derrick Bell in the field of Critical Race Theory whereby significant change may only come about when there is a convergence in the interests of the dominant culture with those of the individuals seeking parity. In plain terms, Bell suggested that white people will support racial justice only when they understand and see that there are advantages to them embracing the change – i.e. there is a convergence in the interests (Bell,1976; Bell, 1980).

The space between policy rhetoric and real world practice is vast and imperfect. The interests of the reified institution and those of the individual are evidently different in their commercial and habituated forms, particularly so in the shifting of the creation of public value to one of making 'profit'.
Education in terms of human development which is relevant to the individual therefore can be spoken of as centred in the life of the person where the individual has greater opportunity to construct a relevant process and arc of learning/development in context with their environment.

The vested interests of the dominant cultures are slow to react or myopic and the institutions seem to function retrospectively rather than proactively. Coming personally from a position of need it seems wise not to have great expectations of cultures which have built their power base on the extraction of wealth at the expense of others (wittingly or unwittingly).

Instead of such expectations there is a place for creating human development processes which are within the means of the people who need them acting to converge on interests when possible and act when practicable; we must revivify learning in the wild and the landscapes which will sustain collective, diverse futures ensuring the renewal of abundance. In this is a need for ‘tolerance of ambiguity’ and an acceptance of other people which might not accept or acknowledge the values and principles which are already identified with.

In short, I am asking to be in dialogue with society. I cannot furrow the ground and produce from the soil but I can take part in the practically infinite activities and contribute to, and through, a commons of knowledge. This is essential for my health and wellbeing but I believe I can contribute to something which is larger than myself.

While resources are now in tension with the very life systems which keep us alive, societally and on a species wide level we must find new ways of organising our selves which are in balance with the means of renewal of our wellbeing, and where that sense of wellbeing extends beyond our own lot.

If my neighbour is healthy and happy, it is not to the exclusion of me, but to my benefit. There in a custom of strangers, of the cordial and convivial, of the forgiving and learning we can find a way of stepping away from the primitive arms races for resources and control which have so excited homo sapiens over the millenia.
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Index and Navigation

This eclectic index which follows has been created to aid the reader in navigating the concepts which structure the thesis. It includes author names so that the reader is helped to identify the original source material in the Bibliography where references to accessing them has been given wherever possible.

This document has been constructed in a way which will hopefully aid the reader to both learn from primary texts themselves and critique the use of the references in context. The index makes the practicable the ongoing work of qualifying statements and interrogating the use of concepts as laid out.

There is an unexpressible intellectual debt owed to the authors of the original sources as well as with countless people with whom I have had conversations. The very best understanding is to be found in reading all of the texts which have been drawn upon and in living dialogue around the ideas put forward.

This is a working paper which represents the authors ongoing study of the project of education and will change over time as more questions are asked. Please get in touch and ask questions to help clarify and challenge any assumptions included.

The index includes nouns, verbs, phrases, key concept, author names and core texts. This allows for a cross comparison of the use of ideas for analysis to build up a nuanced understanding of the language in context. It also enables through the browsing of the bibliography the ability to locate the use of a given source in the narrative.

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diffuse isolation 

digital technologies 

diminish 

diminish the stock of the commons and withhold abundances from others 

diminished 

diminishing the environment 

diminishment of our habitat 

diminishment of their existences 

diminishments 

diminution 

Dina Bowman 

direct equivalencies in homo sapiens 

Directorate-General for Employment, Social Affairs and Equal Opportunities for the European Commission 

disabilities 

disability 

disadvantaged 

disappear 

disappearance of small hold farming 

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disciplinary perspectives into proximity with each other 

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Grief reaction stemming from the environmental loss of ecosystems caused by natural or man-made events.

Grief that is experienced when a loss cannot be openly acknowledged, socially sanctioned, or publicly mourned.
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Participation and recognition only available to those who have the relevant finance.
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