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Rethinking Human Development In an Era of Planetary Transformation

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ABSTRACT

The 2030 Agenda for Sustainable Development, the Sustainable Development Goals, the Paris Agreement on climate change, the Global Biodiversity Framework and the Sendai Framework on Disaster Risk Reduction together set the vision for a new balance between people and planet, in stark contrast to the heavy social orientation and human-centric nature of past development policy. This background paper for the 2020 global *Human Development Report* reflects on what this entails for the future of human development policy and practice, with a view to making the human development paradigm fit-for-purpose in an era of planetary transformation.

Climate change and ecological fragility call into question the assumption that human progress will make the future look better than the past. Recent years have witnessed record carbon emissions, accelerating levels of biological extinction, and the growing frequency of disasters and outbreaks of disease. As ecological and social fabrics are destabilized, so are basic principles of human development theory such as capability, agency and freedom. What happens to the concept of human agency when humanity has revealed itself as an agent of planetary change? How can the concept of 'development as freedom' evolve into 'sustainable development as freedom' as ecological change causes mass disruption, and as sensibilities about freedom and rights transform? How can development pathways shift from linear to systems approaches to better grasp the complexities of planetary transformation?

Ecological change is destabilizing the status quo of development theory, exposing deep contradictions in policy and practice. The 2030 Agenda reflects an aspiration to bring together the social and natural foundations of development policy. Achieving this goal will require more than scaled-up finance and green technology. Transformational change will demand adaptation of the concept of human development itself.

Introduction

PEOPLE, PLANET AND THE NEW DEVELOPMENT AGENDA

The cumulative implications of climate change, loss of biodiversity, land degradation, water insecurity and toxic pollution threaten achievement of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). We are entering a new era of complexity and instability, with atmospheric carbon dioxide reaching levels not seen in 3 million years, the onset of a sixth mass extinction in the Earth's history, and growing frequency and severity of disasters and pandemics affecting billions of people. These drivers of change are now slowing the rate of progress for achieving the 2030 Agenda and SDGs, and could well lead to a reversal of development gains by mid-century, pushing hundreds of millions of people into extreme poverty and situations of displacement, and eroding the fundamental freedoms and choices at the core of the human development paradigm.

As our ecological and social fabrics are destabilized, the consensus at the base of development policy and practice is also in flux. Traditional paradigms of development are increasingly seen as being complicit in the world's ecological disruptions, outdated and ill-equipped to address the spectre of civilizational collapse. In response, the 2030 Agenda for Sustainable Development, the SDGs, the Paris Agreement on climate change, the Global Biodiversity Framework and the Sendai Framework on Disaster Risk Reduction together set the vision for a new balance between people and planet. But achieving this vision will require more than integrated policy solutions, scaled-up green finance and clean technology. It also demands adaptation of human development theory itself, beyond the heavy social orientation and epistemic constructs of nature on which development theory was historically built, lest it dissolve as a depleted mould of humanism.

The conventional view of human development elaborated by Amartya Sen and Mahbub ul Haq has been that progress is about expanding human potential, enlarging freedom and helping people develop the capabilities that empower them to make choices. The pace of ecological change and societal impacts today makes this equation incomplete. The 2030 Agenda is a call to bring development theory back down to earth, a catalyst to think outside the box, and an opportunity to achieve consilience between natural science and social policy—spheres of practice long separated in silos. But to achieve the vision of transformational change, one must first understand the internal contradictions and barriers that exist in the foundations of the human development paradigm.

The dominant epistemological frameworks that drive development theory retain an implicit bias towards the exploitation of nature as a means of achieving human development, moving along a linear pathway from a mythic 'state of nature' to the modern 'developed' world. This explains why, despite intentions to the contrary,

modern development theory is itself one of the root causes of the planetary crisis. Beyond new global frameworks for expanding cooperation on biodiversity, climate resilience, green finance and clean technology, transformative change also needs a motivating moral narrative to set a forward-looking vision for human development.

HUMAN DEVELOPMENT THEORY DISRUPTED

Climate change and ecosystem fragility are no longer passing crises but instead are generating a "profound mutation in our relations to the world,"[1] destabilizing the status quo of development theory, and exposing deep contradictions in policy and practice. The disruption of planetary functions imperils the future of development and poses an existential threat to humanity. As planetary boundaries are breached, many aspects of development are being destabilized, and so too are basic principles of human development like capability, agency and freedom. What happens to the concept of human agency when humanity has revealed itself as an agent of planetary change? How can the concept of 'development as freedom' evolve into 'sustainable development as freedom' as ecological change causes mass disruption, and as sensibilities about freedom and rights transform? How can development pathways shift from linear to systems approaches to understand the complexities of planetary transformation?

In recent decades, a distinct paradigm of human development has emerged, taking inspiration from, among other places, Sen's concept of development as freedom, a major force shaping the narrative of development policy and its operationalization. Building on the role of enhanced human capabilities and human agency, the human development approach seeks to achieve a broader path to freedom.[2] As elaborated by Sen, "[e]xpansion of freedom is viewed both as the primary end and as the principal means of development. Development consists of the removal of various types of un-freedoms that leave people with little choice and little opportunity for exercising their reasoned agency…. If the point of departure of the approach lies in the identification of freedoms, the main object of development, the reach of the policy analysis lies in establishing the empirical linkages that make the viewpoint of freedom coherent and cogent as the guiding perspective of the process of development."[3]

But the 2030 Agenda now expresses the reality that climate change and ecological fragility have risen as a source of 'un-freedom' in the world, with the shifting climate, declining biodiversity, and rising food and water insecurity impacting a range of goals from poverty reduction and women's empowerment to inequality and peace. As highlighted in a landmark report by the United Nations Special Rapporteur on extreme poverty and

[1] Latour 2017, p. 8.
[2] Fukuda-Parr 2003, p. 304.
[3] Sen 1999, preface.

human rights, these trends threaten to undo the last 50 years of development gains across the global South, generating deeper levels of inequality and injustice within and between countries. "Even if current targets are met, tens of millions will be impoverished, leading to widespread displacement and hunger…. We risk a 'climate apartheid' scenario where the wealthy pay to escape overheating, hunger and conflict while the rest of the world is left to suffer."[4]

For human development theory to evolve, the concept of human capability needs to be better contextualized within the capability of the planet's ecosystems to support development and life on Earth. The concept of agency will also need to evolve, no longer limited to human agency but also considering the agency of ecosystems. Two principles have historically been at the base of the capability approach—that the chosen capability be universally valued, and that the capability be so basic that without it many other capabilities would be foreclosed. Resilience to ecological change can now be considered one such capability at the core of development, an important part of transitioning from Sen's original development as freedom framework to a 'sustainable development as freedom' one. In addition to the five freedoms outlined in Sen's original framework, resilience to ecological change is now emerging as a sixth freedom. But to achieve this, one must first overcome barriers at the foundations of human development theory.

The human development paradigm retains deep roots in a vision of the ascendance of humanity from a mythic 'state of nature' to the modern 'developed' world, from humanity "as a prisoner of climate" to humanity as one of the main architects and drivers of planetary transformation.[5] But as elaborated by Chakrabarty, many of these original assumptions now rest on shifting ground, with ecological disruption catalysing a "collapse of the age-old humanist distinction between natural history and human history."[6] Some of the basic premises of human development theory have become undone, as ecological change "severely qualifies the humanist histories of modernity."[7] An awareness of our geological agency is arising, with a view to the limitations we are placing on the Earth's ability to sustain planetary functions.

A new appreciation that we are not only agents of social change but also agents of planetary change is exemplified in the concept of the Anthropocene, recognized by many as a new era in which humanity itself has now become an agent of planetary change.[8] As posited by Chakrabarty, "[t]he mansion of modern freedoms stands on an ever-expanding base of fossil-fuel use."[9] He states, "[i]s the geological agency of humans the price

[4] Alston 2019. See also Ban Ki-moon and Verkooijen 2019.
[5] Chakrabarty 2009, p. 206.
[6] Ibid., p. 205.
[7] Emmet 2016, p. 8.
[8] Hamilton, Bonneuil and Gemenne 2015.
[9] Ibid, p. 208.

we pay for the pursuit of freedom?...The relation between Enlightenment themes of freedom and the collapsing of social and natural constructs of history is more complicated than a simple binary would allow."[10]

On nature and culture

TRAVERSING THE ONTOLOGICAL DIVIDE

A key task in rethinking human development will be to deconstruct the concept's history, understand how the divide between nature and culture shaped the evolution of modern development theory, and appreciate the many ways this divide continues to influence us today. As noted by Descola, for many around the world, the elements of nature were seen traditionally as imbued "with souls, consciousness, language and culture, much like that of humankind…. Nature was one and reigned everywhere, distributing equally among humans and nonhumans a multitude of technical skills, ways of life and modes of reasoning."[11] Many cultures around the world saw agency in both human and non-human entities, without a clear separation between humans and our environment, with societal norms focused on maintaining a balance between people and planet.

Modern human development paradigms, however, owe their legacy to a distinct set of principles that arose out of the Enlightenment, spread globally through colonization.[12] For Argyrou, an anthropology of modern development theory reveals that the concept of progress has ever since been dependent on people's freedom from the constraints placed on us by the natural world. This was a vision of the environment as a domain of utility to be brought under our control, with humans seen as "a band of bold though diminutive giants, gradually descending from the mountains, to subjugate the Earth, and change climates with their feeble arms."[13] In the modernist paradigm of human development, society and culture have evolved beyond the primitive natural environment out of which we arose, with human freedom being based on freedom from nature.

As described by Fitzpatrick, in humanity's ascent, "culture confronted nature in standard mythic terms, and won…eliminating the deific obstacle to human progress and unveiling the true nature of the universe; a kind of reversal of Eden" whereby humanity would itself control nature and in turn reshape the planet in its own image.[14] Those opposing this agenda were seen as primitive, traditional and underdeveloped. In the modern paradigm of human development, "[n]ature was devoid of a spirit and was a standing reserve of resources for

[10] Chakrabarty 2009, p. 210.
[11] Descola 2013, p. xiv.
[12] Argyrou 2005, p. vii.
[13] Del Valle 2013, citing Johann Gottfried Herder, *Outlines of a Philosophy of the History of Man*.
[14] Fitzpatrick 1992, pp. 44-53.

man to serve his development. Mastery of nature came to be regarded as an expression of cultural superiority and the key mark of civilization."[15]

The transformation of nature was a "primordial act, transforming chaos into order, imbuing the environment with human form – a divine-like act to craft a new world and a new reality."[16] The ability to control and conquer nature was seen as a pre-condition for progress, and identified with individuality, liberty and freedom. Humanity's subordination of nature became among the most important criteria for defining the nature of the modern development paradigm. Freedom from nature meant internal freedom, and out of this process came a 'liberated, sovereign subject' who would dare to overcome the boundaries with which nature confronted us. This individual, the 'developed human', became the great character in the story of our long march to modernity. Conquest of nature took on a sacred, mythic character at the base of a globalized order and theory of development, the basic elements of which continue to this day. The developed human and our freedom from nature became the central character and axis mundi in a new cosmology and paradigm of progress.

The subordination of nature through development policy and practice remains intact and strong today. The 2030 vision is important in this regard, potentially serving as a catalyst for a new vision of human development that addresses this legacy of ontological duality between nature and culture. Today, "the two-story edifice of dualism, built to last by the great architects of the classic age, is still solid" but its faults are increasingly apparent owing to planetary disruption and the impacts on society.[17]

RECONCILING GLOBAL AND LOCAL, PAST AND FUTURE

The nature-culture divide that arose from Enlightenment thought was operationalized through policies enacted around the world during the colonial era. As colonial forces came into contact with local communities, a negative teleology emerged by which the idea of modern developed humanity was constructed in opposition to primitive 'others', who seemingly lacked the agency and capability to reshape their environment for the benefit of civilization and progress.[18] This negative teleology and the epistemological divide between nature and culture was a driving force for the civilizing mission that emerged during the colonial era, with an Enlightenment vision of modernity and progress replicated as a universal mandate, in opposition to the pluralism of worldviews that existed on the balance of people and planet.

The civilizing mission held that "acquaintance with the physical laws of the world, and the accompanying power of unlocking the secrets of nature and adapting nature to man's own ends, are on the whole, lowest among

[15] Ibid., p. 2.
[16] Eliade quoted in Argyrou 2005, pp. 10-11.
[17] Descola 2013, p. xvii.
[18] Fitzpatrick 1992, pp. ix-xiii.

savages, mean among barbarians, and highest among modern educated nations."[19] Spreading modernity became a core mission, with societies around the world called on to leapfrog onto a linear, universalized pathway. For most peoples across the global South, the colonial interaction was a dramatic disruption to long-standing paradigms on nature and society. For societies around the world, nature has ever since stood "in dialectic relation to the colonial destruction that has preceded it… [I]ts roots consumed blood, and its extracted tears from the soil raised them through its branches, dispersed them in its architecture."[20] This era of 'Enlightenment imperialism' was in many ways the beginning of today's world order and systems of modernity, with the nature-culture divide taking on practical consequence for local societies, and the poor and vulnerable in particular.[21]

By the start of the decolonization process in the mid-twentieth century, and the rise of the United Nations, a new vision of international development evolved, but nevertheless inherited many of these underlying defects. The idea that human progress was inherently contingent on a conquest of nature continued in many ways as a core premise of development theory. As noted at the time by the United Nations, "progress occurs only when people believe that man can, by conscious effort, master nature."[22] For most countries, "it was a time to pause, some for years some for decades, to compose and reflect on whether there was anything more to do than to take the plunge forward and end up in a matter of decades on the other side of time."[23]

Attempts in recent decades to address ecological change have often been constrained by the legacies of this past of violence against nature and communities. But with the toll on the planet mounting, many countries have started to rethink the defects inherent in modern development paradigms. Evolving out of the 1972 Conference on the Human Environment, the 1992 Earth Summit and the 2012 World Summit on Sustainable Development, today's 2030 Agenda can potentially serve as an inflection point, as the world looks over its shoulder at the concept of human progress and reconsiders its evolutionary uncertainties. At a time when modern paradigms of development have been strongly rooted in global society, the 2030 Agenda demands a future that bridges the divide between humans and nature. Understanding the legacy of dualism between nature and culture, the basis for much of today's human development theory, is critical to achieving transformational change in the SDG era.

[19] Argyrou 2005, p. 17.
[20] DeLoughrey and Handley 2011, pp. 5-6. Also see McCarthy 2009.
[21] Del Valle 2013, p. 436.
[22] Rist 2004, p. 27.
[23] Argyrou 2005, p. 33.

Reimagining Human Development and the Planet

For the human development paradigm to evolve, an ontological transformation is needed to reset the boundaries of nature and culture, and create "a new 'physics', a new 'anthropology' and a new order of things."[24] What follows is an exploration of such a transformation, elaborated as an outward unfolding of four concentric layers: (1) rethinking assumptions of personal agency at the individual level, (2) understanding ways this unfolds at the next outward layer of society, (3) implications at the still broader level of the planet as an overarching frame of reference for sociopolitical response, and (4) ways that evolving understandings of our planetary context are catalysing new cosmological worldviews on the state of nature and the nature of the Earth.

AGENCY AS A SOCIOECOLOGICAL COMPLEX

Bridging the divide between nature and culture is key to reshaping human development theory and its constitutive elements, including the concept of agency. We need to move beyond the assumption that human agency is the only force shaping development, and to embrace the increasingly apparent fact that natural systems such as the climate and other components of the global ecosystem possess a form of capacity, serving as 'impersonal agents' shaping our world.[25] Embracing both social and ecological sources of agency entails a far-reaching shift beyond conventional human-centric assumptions of agency, and towards an approach to human development theory that embraces complexity and systems theory.[26]

To this end, human development results should no longer be seen merely as the product of human agency, but rather as an emergent property of a broader socioecological system. With planetary boundaries breached and earth systems in a state of flux, our world will be defined by a "proliferation of entanglements between human and nonhuman materialities." [27] Climatic systems, biological species, water systems and other key aspects of planetary 'behaviour' are now seen as 'actants' in their own right, with "trajectories, propensities and tendencies of their own" that need to be taken into account when contemplating the future direction of human development theory.[28] Ecosystems, with their power of metamorphosis, exhibit self-governing capacities with different components impinging upon each other and human development results in numerous ways.[29]

A new concept of 'impersonal' or 'distributive' agency would go beyond the traditional focus of agency as a feature distinct to humans and underpinning human exceptionalism. It would instead place social and

[24] Ibid.
[25] Bennet 2010, Connolly 2017, Latour 2017.
[26] Folke 2016.
[27] Bennet 2010, p. 115.
[28] Ibid, p. viii.
[29] Connolly 2017, p. 4.

ecological forces on a level playing field, as a means of bridging the long-standing nature-culture divide in development theory. Humanity can no longer be understood merely as social actors in a social sphere but rather as biophysical actants "integral to planetary systems."[30] The concept of impersonal agency casts light on our forgotten connections between humanity and ecology spheres, takes us beyond the reductionist view of nature as a mechanistic automaton at our service, and counters the ways in which a "thoroughly instrumentalized matter feeds human hubris and our Earth-destroying fantasies of conquest and consumption."[31] It recognizes that the Earth is not inert or inanimate but rather that it is "animated by countless forms of agents."[32]

A new concept of impersonal agency counters the narcissistic reflex embedded in conventional anthropocentric approaches, and ways that "thoroughly instrumentalized matter feeds human hubris and our Earth-destroying fantasies of conquest and consumption."[33] A reimagined theory of human development would acknowledge these 'agentic' forces within nature that make up the world we live in. Evolution towards an impersonal and distributive theory of agency allows for a more ecologically resilient, systems-oriented approach that "stretches received concepts of agency, action and freedom" embedded in conventional theory.

A key element in this approach would be the vision of an 'agency of assemblages'—the socioecological complex of forces in the world that interact across place and time to cumulatively affect development pathways. In this view, "the locus of agency is always a human-nonhuman working group."[34] This acknowledges the role of ecosystem services beyond being mere 'intermediaries' that transport causes and consequences, to 'mediators' playing their own part in the story of development and the world.[35] When we approach ecosystems, "we do not find in them the inertia that would allow us, by contrast, to take ourselves to be agents but, on the contrary, we find agencies that are no longer without connection to what we are and what we do."[36] Human development theory needs to move beyond the atomistic notion of agency that has come to define our modern paradigms of progress. No longer is the human moral subject the sole cause and effect to be considered. Rather, development theory must introduce the cumulative effect of both classic human-generated intentionality and the ecosystem forces that shape outcomes. "Humanity and nonhumanity have always performed an intricate dance with each other. There was never a time when human agency was anything other than an interfolding network of humanity and nonhumanity."[37]

[30] Kotze and Kim 2019, p. 4.
[31] Bennet 2010, p. ix.
[32] Ibid., p. 63.
[33] Ibid., p. ix.
[34] Ibid., p. 63.
[35] Latour 2017, p. 93.
[36] Ibid., p. 62.
[37] Bennet 2010, p. 31.

Viewing human development as a socioecological complex, and agency as located within a system of complex interactions between human and nonhuman actants, is not simply an acknowledgement of the environment as a factor to consider within integrated policymaking. Rather, it recognizes human development as an emergent property of a broader socioecological system, that the impersonal forces of nature have trajectories and tendencies in their own right, that they hold certain degrees of resilience, and that they drive many development results in much the same way human actions do. This perspective helps shape a new view of human development, beyond inherited visions of a reductive, linear and mechanistic agency, and towards the multidimensional reality in focus under the 2030 Agenda.

A shift to an impersonal and distributed form of agency in human development theory triggers new ways to think about and practise development. With the planetary crisis now destabilizing the foundations of human civilization and threatening to reverse many SDG results by mid-century, the reality of our interconnectedness to the climate, the biosphere and other components of the global ecosystem has become a new driver of policy evolution. [38]

ECOLOGICAL CHANGE IN A MULTIPOLAR WORLD

We next turn to ways that a new vision of development unfolds at the societal level. As elaborated earlier, geography has played a pivotal role in the emergence of modernity and the dispersal of paradigms of civilization and development. Colonial and postcolonial eras generated a matrix of geopolitical power and normative influence that shaped the world order and in many ways continues to shape dominant modes of development thinking. Today, the re-emergence of the global South socially and economically acts as a disruptive force, destabilizing the geopolitical consensus around the process of development, and driving an evolution in development policy and practice. This also has implications for the future of human development theory.

Alongside the push for integrated policy solutions, the 2030 Agenda sets a vision of bottom-up solutions to the planetary crisis. Combating ecological change as a new source of 'unfreedom' in the world requires us to engage the diversity of solutions across the global South and craft a pluralist assemblage of constituencies for action. [39] But while re-emerging economies across the South proactively engage in reshaping global norms, a "post-colonial wariness of globalizing impulses" also exists. [40] Indeed, the tension between global and local, and past and future, were at the centre of negotiations over the 2030 Agenda and global agreements on climate

[38] Folke 2016.
[39] Connolly 2017, p. 9.
[40] DeLoughrey and Handley 2011, p. 28.

change and biodiversity in recent years, with the need to overcome past legacies at the forefront of geopolitical tensions.

To many across the global South, the planetary crisis is first and foremost the product of a social rift, with the great divergence that emerged in colonial and postcolonial eras based on a conquest of nature by the West. The ecological plunder of the South during the colonial era was a primary factor in the successful emergence of the industrial era, which became a take-off point for today's advanced economies.[41] This history of social and ecological exploitation in the South is an important factor in understanding the roots of today's planetary crisis and the potentials for new policy solutions.[42] By engaging in remaking global development policy, the South revalorizes its place in the world as an act of agency and re-emergence, but it also brings to the process critiques of modernity and a postcolonial understanding of the geopolitics of knowledge production. In doing so, an appreciation is acquired of "the local and often inassimilable aspects of culture and history, which helps to uphold a sense of alterity while still engaging a global imaginary."[43] While repositioning itself in the world order, the re-emerging South is also catalysing new ways of thinking about development policy and practice.[44]

Mignolo posits two aspects of this process—"de-westernization" as the South seeks to rebalance global and local forms of knowledge, and "decoloniality" as a practical force and act of agency to delink from the geopolitical matrix of power that shaped colonial and postcolonial eras.[45] Key to this process is an epistemic struggle to reclaim and shape core parts of the global policy agenda. Engaging in bottom-up solutions is not meant as a form of reverse Orientalism or a return to the past, or to run contrary to the universality of the 2030 Agenda, but to "re-inscribe the past in the present, towards the future."[46] It is a means of adapting development theory to engage diverse visions on the balance between people and planet, and the evolving local contours of societal change.

Two important examples of the emerging multipolarity in the world are China and India. Both are now infusing global frameworks with their evolving values and assertions as co-equal powers in knowledge production. As noted above, while holding the aura of universality, human development principles need adaptation to local constructs of nature and society if the 2030 Agenda is to succeed. Agency in this context means creating new hybrid solutions between global and local, engaging the diversity of society as a foundation for sustainability, and calling into question orthodoxy in development policy and practice. For poor and vulnerable communities in particular, a new vision of human development seeks a shift beyond a political economy of exclusion and

[41] Lewis and Maslin 2015, p. 177.
[42] Dawson 2016. See also Crosby 2004, Marks 2007, Folke Ax et al. (eds.) 2011.
[43] O'Brien 2001.
[44] Ramalingam 2013.
[45] Mignolo 2011, pp. 10-13.
[46] Ibid., pp. 49, 330-332.

ecological decline, increasingly based on a networked form of connectivity among social movements for accountability and change.[47]

India, for example, has seen a surge of grassroots advocacy in recent years around issues of climate change, resource insecurity and ecological resilience, with large-scale protests expressing the voice of civil society. Rather than a new dynamic, these tensions have deep roots in the development policies enacted during colonial and postcolonial eras. Colonial systems of control in India were enacted with a clear view of the value of ecosystem exploitation, operationalized through a "tripartite alliance between political reality, revenue enhancement, and climate theory."[48] The paradigms of progress initiated during this period were in many ways born out of a confrontation between nature and culture, with the modern developmental state arising from basic assumptions about the divide between civilized and primitive, nature and culture, and so on. The freedom movements and eventual independence of India by the mid-twentieth century included a critique and challenge to these underpinnings by emerging leaders.

For Mahatma Gandhi, humanity's mastery over nature was not a benchmark for measuring civilization, and he led an early drive to overcome colonial legacies and craft an alternative to dominant paradigms of development as an act of societal agency and self-awareness.[49] Despite his call to rethink development and nature, the civilizing mission of 'freedom from nature' came to be formalized in the postcolonial era through the policies and systems of the modern developmental state. Nonetheless, his vision continued to inspire social movements for change, including the rise of the now famous series of influential protests in the Himalayan foothills over forestry.[50] The Chipko tree hugger movement that emerged in the early 1970s inspired a wave of nation-wide movements in the decades to follow, focused on the need to transform conventional views of human development, engage bottom-up worldviews, and reset the balance between communities and ecosystems.[51]

An important legacy of this process can be seen more recently in the 2017 landmark case of *Lalit Miglani v State of Uttarkhand* (Writ Petition PIL No.140).[52] In public interest litigation before a court in the Himalayan foothills, civil society petitioners called on the State to recognize the existential threat to local ecosystems and broader the concept of agency under the law by providing ecosystems legal personality. The High Court agreed, stating that the Himalayan ecosystem—its "rivers, streams, rivulets, lakes, jungles, forests, air, meadows, dales,

[47] Connolly 2017, pp. 121-150, and generally Nixon 2011.
[48] Barton 2002, p. 19.
[49] Khoshoo and Moolakkattu 2009.
[50] Guha 2006, p. 55.
[51] Ibid., p. 119.
[52] See: www.harmonywithnatureun.org/content/documents/20170405Waterfalls_%20As_Legal_Persons.pdf.

wetlands, grasslands and springs"—are to be considered by law as 'juristic persons' entitled to legal rights,[53] and that "[t]he rights of these legal entities shall be equivalent to the rights of human beings." [54] Through this decision, the Court recognized under law the impersonal agency of ecosystems, holding that "[f]or a bigger thrust of socio-political-scientific development, evolution of a fictional personality to be a juristic person becomes inevitable. This may be any entity, living inanimate, objects or things."[55]

New policy directions have also emerged in China, likewise driven by bottom-up social movements for change and a turn to local tradition and culture. China's rapid march to modernity has also created some of the world's fastest growing planetary risks, evidenced, for example, in its emergence as the world's largest carbon-emitting country, and as a node of pandemic outbreaks. The signs of ecological stress in China are evident, with growing calls from society over the past decade for a new vision and paradigm of development. This was reflected in an unprecedented fashion in the current 13th edition of China's Five-Year Plan (2016-2020), which calls for a new balance between humanity and nature, and the goal of becoming an 'ecological civilization'.

Modern paradigms of development first entered China in the late nineteenth century, with the rise of industrial power seen as a celebration of civilization based on society's conquest of nature.[56] This aligned with the Marxist notion that the more humans change the world, the more they become their true self, and culminating in national slogans during the Cultural Revolution of the 1960s and 1970s that 'man must conquer nature' and that 'battling with Nature is boundless joy'.[57] In more recent years, in addition to the continued resonance of Marxist principles, China is also seeing a revival of indigenous Chinese concepts on the balance of humans and nature, seen by many as a source of inspiration and creativity to rethink local development pathways.

A prime example is the principle of ecological civilization.[58] Summarized by a leading Chinese official who helped establish the initial expressions of the concept, "[f]or the past century, China has studied the west and followed the western path of industrialization. And while three decades of reform and opening up have brought astounding economic achievements, China has also concentrated into those 30 years levels of pollution it took the west a century to create. China must not continue to follow in the footsteps of developed nations. Instead, it should take time re-examine western industrial civilization and its own cultural traditions."[59]

As an official part of state policy, becoming an ecological civilization constitutes a new drive to "redefine the relationship between humanity and the environment" so that "human prosperity can and should be achieved

[53] See *Lalit Miglani v State of Uttarkhand* (Writ Petition PIL No.140 of 2015), Decision March 13, 2017, p. 63.
[54] Ibid, p. 65.
[55] Ibid, p. 62.
[56] Weller 2005, p. 48.
[57] Ibid., p. 49.
[58] CCICED 2017.
[59] Pan Yue 2011.

in a manner that respects the capacity of nature."[60] In advancing the approach, "[t]he existing development model needs to be fundamentally changed", with innovation needed in the nature of human development, resource use, production and consumption. "Accelerating the pursuit of ecological civilization is the main means for China to implement the 2030 Agenda for Sustainable Development" and "promote human progress within the carrying capacity of ecosystems." [61]

The ecological civilization principle is also an important example of how the global South seeks to shape global policy with ecological reconceptualizations of development. The principle has emerged as part of China's soft power aspirations, with China's international cooperation policy seeking to promote ecological civilization for "developing countries as they undergo industrialization."[62] It is the overarching theme for the critical global Biodiversity COP15 Summit that China will host in 2021, at which a new global framework will be issued for the sustainable use of ecosystems and biodiversity on the road to 2030.

FROM GLOBAL TO PLANETARY

Towards building on the opportunities articulated above to overcome the anthropocentric legacies of the past, reformulating agency and repluralizing societal visions of sustainability, this section explores a further layer of transformative change envisaged in coming years—the evolution towards a new planetary ethics and a new political ecology. In some ways, the shift from the Millennium Development Goals (MDGs) to the 2030 Agenda and SDGs intimated the beginning of such as transition. Relative to the MDGs, with their emphasis on the notion of the global as a socioeconomic and financial-technical frame of reference, the 2030 Agenda places much greater emphasis on the planetary boundaries of human development and recognition of planetary sustainability as a common concern of humanity. [63]

Today we see a flux not just in the climate and biosphere, but also in our overarching concepts of the world we live in. As cultural and political aesthetics evolve, a new planetary ethic and consciousness could arise in the coming years with implications for development policy and practice.[64] A planetary perspective would bring the potential for new forms of collective self-awareness and a break from the dominant Enlightenment era constructs of development, which have been complicit in the plunder of the planet. While the eventuality of a new planetary consciousness remains speculative and is far from having a fixed position in today's schema of development and global order, new creative thinking is starting to emerge.

[60] CCICED 2016, p. iii.
[61] Ibid, pp. 2-3.
[62] Ibid.
[63] Steffen et al. 2015.
[64] Elias and Moraru 2015, p. xvi.

Chakravorty Spivak, for example, points to the concept of the planetary as a "species of alterity," a form and function of the world beyond inherited constructs of global order, with a new planetary sense of being leading to greater concern for solidarity and commonality across conventional boundaries of geography and ideology.[65] The concept of the planetary represents a growing sociocultural imperative to reimagine humanity and our place in the world. It is as if we thought we knew our home and ourselves, but are being reawakened to the natural forces and complex socioecological systems that drove our history and shape our fate. The idea of the planetary can serve as a catharsis for awakening from humanity's hubris and the socioeconomic allures of globalization, in which our sense of self, actions and behaviours have become deeply embedded.[66]

A shift in sociopolitical imagery from the global to that of the planetary could also trigger new geopolitical discourse. Latour, for example, envisages a new self-awareness of our existence as "planetary terrestrials"[67] and "a politics in which the role of Nature is explicit."[68] A new mythic image of the planet is envisaged as a force, "half cyclone, half Leviathan," at once "mythical, scientific, political," and bringing transformational power to the task of remaking order.[69] He sees such a figure as charting a pathway beyond neo-liberal 'global' aspirations for limitless human endeavour and universalized normativity on one hand, and the expanding dismay of society and rise of more 'local' isolated realms of nationalism on the other.[70] Between the global and local impulses in today's geopolitical flux, Latour envisages a 'terrestrial' mode as a third attractor beyond conventional political forces,[71] a new way of "worlding" and "commoning" subverting conventional spatial and temporal boundaries.[72]

A narrative of the planetary can emerge as a powerful expression of the fears and hopes of society around the environmental crisis and existential dilemma.[73] For example, might the shift to a planetary narrative overwrite the terms of globalism and reshape concepts of the collective, collective responsibility and the commons?[74] The ethical dimensions of such a transition are important, with a growing consciousness of our role as 'planetary beings' intimately connected to the deep history and complex evolution of the planet's ecosystems, and our complicity today in its destruction.[75] "By re-imagining the world, the subject is also re-imagined,"

[65] Chakravorty Spivak 1999, pp. 34-88.
[66] Heinberg 2007, p. 23.
[67] Latour 2017, p. 86.
[68] Ibid., p. 47.
[69] Ibid., p. 2.
[70] Ibid., p. 42.
[71] Ibid., p. 39.
[72] Ibid., p. 54.
[73] Marshall and Connor 2017, p. 96.
[74] Chakravoty Spivak 1999, p. 338.
[75] Dartnell 2019.

bringing with it the potential to go beyond the conventional Cartesian orientation and reductionist, utilitarian ethics embedded in human development theory.[76]

A still nascent paradigm, the shift from a global to planetary ethic would have profound implications, holding the potential to reconfigure our epistemic constructs of human development, create new forms of collective self-awareness and instigate a break from the dominant paradigms at the base of today's ecological crisis.[77] The evolution and expansion of the planetary ethos inferred by the 2030 Agenda can be a potent force in the future, to reshape human development theory, infusing it with a new political ecology and a "system of values, a moral story, an ontological master narrative within which the ecological crisis becomes not only visible but also relevant and meaningful."[78]

BEYOND PLANETARY BOUNDARIES

Previous sections have explored ways in which human development theory can be shaped by evolving spheres of individual agency, global society and planetary ethics. This last section explores a final outward sphere of influence catalysing new thinking around the natural world and our place in it—the cosmic environment. Just as new insights into the cosmos were the basis for original Enlightenment thinking, and shaped narratives about the nature of the world and humanity, what impact might today's expanding view of the cosmos have?[79] As the comic vista expands and we come to see the Earth as one among thousands of diverse 'ecospheres' across an expanding cosmic horizon, new forms of consciousness and understandings of civilization and development could arise in coming years.[80]

Far from being an academic exercise, the nexus of the cosmos, the Earth and humanity played a key role in the evolution of environmentalism in recent decades. The 'Earthrise' moment of the 1960s, when the first photo of Earth was taken by astronaut William Alders during the Apollo 8 Mission, was a formative moment for Western environmental consciousness, inspiring the public with a new sense of wonder.[81] One of the most influential images in modern history, it was the first time the planet was seen from an external vantage point. Seeing the Earth "framed against the black emptiness of eternal space" created an appreciation of the planet's

[76] Gabrys 2018.
[77] Elias and Moraru 2015, p. vii.
[78] Argyrou 2005, p. 48.
[79] Rees 2018, pp. 1-2.
[80] Dick 2018.
[81] Jasanoff 2001.

uniqueness amid the emptiness of space and a sense of humility.[82] As noted by Apollo 8 astronaut James Lovell, "[t]he vast loneliness is awe-inspiring, and it makes you realize just what you have back there on Earth."[83]

Earthrise became a powerful symbol of our fragility and generated a wave of environmentalism in the West. This spirit was taken forward to the 1972 United Nations Conference on the Human Environment, with the Stockholm Declaration issued under the theme of 'only one Earth' setting the stage for the first multilateral environmental agreements in the decades that followed.[84] To some, the implications for consciousness held as much transformative potential as the Copernican revolution of the sixteenth century, which placed the Sun rather than the Earth at the centre of our solar system.[85] As noted by the World Commission on Environment and Development in its landmark 1987 report, *Our Common Future*:

> In the middle of the twentieth century, we saw our planet from space for the first time. Historians may eventually find that this vision had a greater impact on thought than did the Copernican revolution of the sixteenth century, which upset humans' self-image by revealing that the Earth is not the center of the universe. From space, we see a small and fragile ball dominated not by human activity and edifice but by a pattern of clouds, oceans, greenery, and soils. Humanity's inability to fit its activities into that pattern is changing planetary systems fundamentally.[86]

While an important example of how our cosmic context shapes social narratives and environmental thought, the impact of Earthrise has nonetheless been limited, with modest influence in changing the trajectory of ecologically destructive paradigms of development. While holding the potential for a shift in outlook, it may have entrenched deep-rooted Enlightenment era sensibilities of anthropocentrism and control over nature. The ability to leave Earth and look back on it reaffirmed in some ways the power of humanity to conquer natural boundaries. But the view to the cosmos still holds the power to re-energize the imagination and re-enchant the connections between humans and nature.

Beyond the introspective 'only one Earth' perspective that emerged from Earthrise, today's revelation of thousands of Earth-like planetary systems across the sky opens the possibility of a complex cosmic environment.[87] In doing so, it triggers a rethinking of our own planet and ourselves. As noted by Campbell, a sense of awe "transfigures our fragmented, tragic world, and helps us glimpse new possibilities by asking what

[82] *Nature* 2018
[83] Dent 2018.
[84] Jasanoff 2004.
[85] Dick 2018.
[86] World Commission on Environment and Development 1987, p. 308.
[87] Rees 2018, pp. 1-2. See also Rees 2001.

if?"[88] The recognition that we are part of a diverse cosmic environment could galvanize new epistemic constructs of cosmos, planet and humanity in the years to come.[89]

It was in 1992, the year of the Earth Summit and landmark United Nations conventions on climate change and biodiversity, that the first 'exoplanet' was discovered—a planet outside of our own solar system.[90] Since then, more than 4,000 exoplanets have been detected.[91] While a very limited understanding of these planets exists, it is now clear that planetary emergence in the universe is common, not rare—a profound revelation with the potential to transform our view of the cosmos and our place in it.[92] Experts now estimate that between one in four stars in the universe could host Earth-like planets—rocky planets found in the habitable zone of their respective suns, at a distance where temperatures might allow Earth-like prerequisites for ecological life such as water, atmospheres and biochemistry to emerge. With billions of stars in our galaxy, and billions of galaxies in the universe, this could translate into countless Earth-like planets possibly on the horizon.[93]

One of the most prominent examples is the Trappist-1 system, a group of seven Earth-like planets orbiting a red dwarf star 40 light years away from us.[94] Other recent examples from 2019 include planet GJ 1252b, identified in late 2019 by the new Transiting Exoplanet Survey Satellite; Pi Mensae c; TOI 270b and Teegarden b and c. Beyond the detection of exoplanets and Earth-like planets, this process is also leading to new speculation and imagination about the life cycles of planets—the ways in which the triple signature of carbon dioxide, water and oxygen, along with forces of geology and attributes of host stars, come together to enable planetary ecosystems to be emerge, adapt and transition.[95]

Closer to home, Venus and Mars are good examples of how planetary analogues can help stir creative thinking on the state of the Earth. Known as the Earth's twin sister, our closest neighbour, Venus, is about the same size as our planet and emerged at about the same time within the habitable zone of our solar system. But Venus suffered the ravages of a runaway greenhouse effect leading to its current harsh environment.[96] Today its atmosphere is 96.5 percent carbon dioxide, with average temperatures hot enough to melt lead and clouds raining down not water but sulfuric acid. Venus provides an example of the end-state of planetary habitability, triggering creative speculation on the future of the Earth hundreds or thousands of years from now should

[88] Armstrong 2005, p. 9.
[89] Swimme and Tucker 2011, p. 2.
[90] Ward and Kirschvink 2015, p. 14.
[91] Starr 2019.
[92] Tasker 2017.
[93] Hsu et al. 2019.
[94] Anderson 2019.
[95] Ward and Kirschvink 2015. See also Seigel 2019.
[96] Launius 2012. See also *The Daily Galaxy* 2019.

carbon footprints continue to expand unabated.[97] Mars, the red planet, likewise serves as a key analogue in the emerging narrative around ecological futures.[98] Permanent polar ice caps have recently been found to have existed on Mars, possibly alongside deep-water systems. Before the mass desertification of the planet, Mars had large rivers with water flowing across its terrain, possibly even hosting Earth-like ecosystems.

In imagining the abstract ecosystems of other planets are we envisaging a possible future for the Earth, or perhaps its past?[99] The comparative view of planetary ecosystems shifts our conventional sense of space and time, encouraging us to connect our existence with the infinite breadth and depth of cosmic cycles, and providing fresh scale, perspective and context for our ecologically disruptive actions on Earth. As a new narrative arises on the relation between cosmos, Earth and humanity, this process could also drive us to rethink our existential planetary crisis.

Relative to the original Earthrise vision of the planet as a self-enclosed sphere, a new 'Earthrise 2.0' narrative could arise focused on the Earth not as a solitary unit, but as one node in a vast web of ecosystems. Through this outward lens, the multiplicity of potential 'other Earths' reflects back at us, with our own home becoming new and mysterious, and taking on a novel quality of alterity and 'otherness'. The realization of a diverse cosmic ecosystem is nothing short of revolutionary, energizing the social imagination unlike anything in recent history. The greater the insights from other planets, the more we learn about Earth and ourselves, challenging our anthropocentrism and helping us better "understand our place and time in the cosmos."[100] As we look to the future, might we see new narratives about the state of our planet in which planetary futures will no longer be seen solely as an Earth-bound story? Might global and local narratives of sustainable development and environmental crises be transcended, and tied to the evolving story of our cosmic environment?

While impossible to envisage the outcome of such a transformation, an "integrative, planetary vision" would have the effect of moving us beyond the dogmas and paradigms of modernity.[101] A new vision of the cosmic environment and a new form of planetary consciousness could in turn reshape the philosophical underpinnings of development and order, re-enchant the connection between humans and nature, recontextualize our place in the cosmic environment, and remind us of the mysterious forces that generated the Earth and to which our destiny remains closely connected.

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[97] Arney and Kane 2018. See also Kane et al. 2019.

[98] Cabrol 2018.

[99] See Preston 2016, p. 121. Understanding extreme alien-like ecosystems here on Earth is also part of this creative process. The biological, chemical or geological uniqueness of extreme environments on Earth serve as analogues for possible ecosystems on other planets. For example, the analysis of extremophiles, organisms living at extreme temperatures, or locations such as the deep sea, deep underground or remote polar environments, helps us imagine how other planetary ecosystems might function. See Kleim 2009.

[100] Ward and Brownlee 2003, p. 9. See also Swimme and Tucker 2011.

[101] Moore Daly and Frodeman 2008, pp. 136-137.

Conclusion

The 2020 *Human Development Report* comes at a critical juncture as the world seeks new solutions to achieve the 2030 targets under the SDGs, the Paris Agreement, the Global Biodiversity Framework and the Sendai Framework on Disaster Risk Reduction. In addition to scaling up innovative finance and green technology, an opportunity has also arisen to rethink and reset the nature of human development policy and practice. Far from an academic exercise, the need to adapt human development pathways is a key aspect of achieving the 2030 Agenda and can be a pivotal feature in our effort to halt and reverse the destruction of nature. The decade up to the 2030 Agenda can be characterized by our continued plunder of ecosystems, the breach of planetary boundaries, and more frequent outbreaks of disasters and pandemics. Or it can be defined by a shift towards a new generation of human development policy that resets the balance between people and planet.

For many practitioners, the assumption with the launch of the 2030 Agenda was that the disciplinary fundamentals of development were already set, and that the challenge now is simply one of implementation. But there is still a need to enhance the foundations of development policy and practice. As observed by James Speth, former Administrator of the United Nations Development Programme, "[t]he top environmental problems are selfishness, greed and apathy…and to deal with those we need a spiritual and cultural transformation." [102] The far-reaching implications of such a transformation will require an evolution of the social and cultural foundations of human development theory.

The conventional view of human development elaborated by Sen and ul Haq was that progress is about expanding human potential, enlarging freedom and helping people develop the capabilities that empower them to make choices. The pace of change today has made this equation incomplete. Ecological fragility is now arising as a source of 'un-freedom' in the world, with our shifting climate, declining biodiversity, and rising food and water insecurity generating unprecedented levels of social vulnerability and disruption. As argued above, the transformation of our planetary systems is also destabilizing the status quo of development theory, exposing deep contradictions in policy and practice. Out of this process emerges an opportunity to reset our dominant epistemological frameworks at the base of human development theory, towards a broader understanding of human development as having emerged from and still embedded within a larger socioecological system.

To explore the parameters of such a transition, this paper has reviewed various historical, cultural and geopolitical barriers to change that exist within the foundations of conventional human development theory. It elaborates four aspects of an agenda for change: (1) the prospect of shifting from a personal to an impersonal

[102] Quoted in Cederwall 2019.

and distributed form of agency, (2) the geopolitical imperative for more pluralistic and transversal social norms that overcome legacies of the past, (3) the turn from a global to a planetary ethic and a new political ecology of human development; and (4) the future implications of an expanding vision of the cosmic environment and the place of the Earth and humanity within it.

As expressed above, a group of imaginative thought leaders have emerged in recent years from around the world, bringing unique and diverse perspectives on ways to rethink development. The visions expressed in this analysis are meant both as a basis for further research and as a source of inspiration for development practitioners and policymakers as they advance new forms of development policy and programming on the road to 2030.

Development has always been a contested project, with the path to transformative change shaped not only by global frameworks, but by emergent properties of social and cultural change. This paper has sought to shape the narrative towards a transformative vision that embraces human development not as a set of linear targets and goals, but as the emergent property of a multidimensional, complex and adaptive socioecological system. The 2030 Agenda is a call to bring development theory down to Earth, a catalyst for creative thinking beyond conventional worldviews, and an opportunity to achieve consilience between people and planet.

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