Anthropocene Chronicles:
Preserving Earth's Equilibrium for Coherent Coexistence

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In a world riddled with contradictions, gross inequity, systemic failure, and challenges to hallowed ideas of democracy, free market, peace, and unlimited growth, there is a new planetary recognition and awakening ushered in by the emergence and establishment of the current Anthropocene Epoch. The twin processes of globalization and global warming become a central subtext in this discourse. This worldview is 'ecological', reaffirming the importance and uniqueness of 'life' more than ever before. In other words, only through building and nurturing communities can we sustain life and peace on planet Earth. The question is how can we live in peace on this planet?

This article seeks to extend the debate by providing a holistic understanding of what Peace means in this age of the Anthropocene. How does a 'systems' approach to life provide a renewed understanding of the need for peace? Drawing upon a review of the Good Friday Agreement in Northern Ireland, a perspective that peace has to do with the boundary conditions needed to integrate and sustain both the human and other forms of life on this planet is advocated here. Such a perspective will help restore the dignity of life in this fractious world.

Keywords: Anthropocene, dignity, biosphere, technosphere, peace process, planetary boundaries

War turns people into mindless beasts…
People who detest barbarism start to act in barbaric ways. This is the insanity of war![1]

The Russell-Einstein Manifesto states:
We appeal, as human beings, to human beings:
Remember your humanity and forget the rest.
If you can do so, the way lies open to a new Paradise;
if you cannot, there lies before you the risk of universal death.

PEACE as a holistic concept that essentially emerged based on human experience post World Wars I and II has run its course and has today acquired a more extended meaning and relevance in the age of the Anthropocene. The idea of peace needs a rethink in the context of the Anthropocene, as part of a complex family of interconnected problems and processes. Inevitably these contribute to the larger issue of the growing human footprint on the planet over the centuries, thereby fostering demand-led conflict to garner finite resources at all costs. Ever since World War II, our planet has seen an ecological overshoot with an ever-expanding world population fueling unrestricted conflict across the regions in search of scarce resources, and attempting to impose dogmatic ideologies from the right to the left of the political spectrum. Indeed, the very fact that humans have come to occupy the apex of the food chain in the last 10,000 years is not a mere evolutionary shift.[2] The implication being, the ecosystem never had the space or the time to adjust to this profound change imposed on the deep Earth's system. The Anthropocene, therefore, has come to be seen as increasing the ecological footprint of humanity.[3]

Why on Earth? The Anthropocene

The violence of economic growth and materialism has challenged our very existence on this beautiful planet. A modern industrialized economy was organized around the idea of growth and progress, not prosperity. This resulted in increased production of goods and services year in and year out, resulting in an excess of supply whether needed or not. This is particularly true since the profit margins of producers were contingent on excess supply being consumed, whereby consumers were made to believe that these were indeed necessities essential to their comfort and social status. This form of economic activity has fueled ecological breakdown and is driving catastrophic climate change. This profligate consumerism led by the global North and imitated by the South, is responsible for the largest drain on nonrenewable energy and materials at an unsustainable rate. There is a demand from the ecological economic fraternity to abandon GDP (Gross Domestic Product) progression and scale down unsustainable production and consumption, thereby securing the protection of human well-being, needs, and planetary existence.

Anthropocene as a term and as a new geological epoch, emerged in 2000 with the work of Crutzen and Stoermer who essentially announced that humans have become the primary influencers on the Earth's

systems.[4] This idea had its origins in the early 19th century with the establishment of imperial and colonial enterprises around the globe.[5] Subsequently, this viewpoint gained currency and remained important throughout the 20th century onward into the 21st, with the works of Sherlock, Thomas, Nir, Zalasiewicz et al., and Butler.[6] Scholars have used the term Great Acceleration to signify rapid transformations in the Earth systems with the advent of settled agriculture, the Industrial Revolution, the nuclear age, and finally the emergence of artificial intelligence (AI). The continued human impact on biotic and abiotic systems has continued unabated, with the incremental loss of species. What is significant about this Anthropocene age is the convergence of both human/ material and natural processes, thereby impacting the Earth system over time. The Anthropocene can be divided into the following three stages: Former Anthropocene, which began with human food production and settled agricultural systems, harnessing fire, and discovering tools; Middle Anthropocene, which is ascribed to the start of the Industrial Revolution of the early 18th century; and Latter Anthropocene, which is emerging as part of the post-industrial era, dominated by the harvesting of organs, tissues, GMOs, test tube interventions, the Internet, Facebook, TikTok, LinkedIn, Twitter, Thread, and of course, AI and Chat GPT and its variants. As Butler notes, "The Anthropocene can be studied as a starting point or as an ongoing time-transgressive phenomenon."[7]

One can trace the increasing dominance of the human race on this planet. After the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), 2017, there was a statistically defined degree of confidence about the predominance of anthropogenic contribution to global climate change. This was attributed to the incessant use of nonrenewable fossil fuels over the 300 years that helped compound the effect of changes to the established Earth systems. In this context, as Chakrabarty notes, how we manage our future 'carbon space' will be critical for not just the environment, but also for the future sustainability of peace on this planet.[8] The majority of global conflicts and proxy wars have continued to be orchestrated by military-industrial complexes situated in the US, its ally states, and Russia and China and their ally states, seeking access and dominance over critical resources such as oil, natural gas, rare minerals, and now water. This has also helped to foster sporadic and ongoing sectarian/ tribal-based conflagrations as witnessed in South Asia, the Middle East and North Africa (MENA) region, Africa, and Latin America. This scenario will only get compounded as we head toward the tipping point of global

warming, shifts in trade winds, and the inevitable warming of the global seas. Environmentally engineered conflict will be one of the greatest threats to human and planetary existence.[9] Peace in that sense will transcend the traditional definitions which have been in place since the World and Cold Wars. Peace is no longer what we owe to the present generation, but also more importantly what it means to the unborn, the future of humanity.

Are we ready for responsible stewardship of peace in this age of the Anthropocene? Can we reverse the sequential attempts to dominate nature by any means to meet our mandated ends, all in the name of progress, prosperity, and GDP? What would an enlightened planetary peace mean for humanity? The answer to these questions is aptly provided by Chakrabarty when he says, "We need to see humans in the context of planetary processes that have supported life in general for hundreds of millions of years."[10] The implication of entering the era of the Anthropocene also raises the question of its impact on the climate regimes of the world. There are biophysical limits to how much we can continue to extract from this planet and beyond. The wholesale adoption of ideas of development, modernization, and progress from the age of Enlightenment and scientific revolution created a vision of the world which celebrated Vegas' style of materialism, objectivism, dualism, and reductionism of modern science. A mechanistic view of the world converged into the physical world and promoted a fragmented approach to knowledge in lieu of a holistic one.[11] What we know now is that the origins of life more than three billion years ago were based more on partnership than combat. Sustainability was inbuilt into the entire web of relationships and involved all members of the planet, and nature allowed for the nurturing of diverse communities. The current issues of exacerbating climate change have to be considered in the context of the more complex ecological factors impinging on human existence across various scales from the local to the planetary — creating new conflicts and exacerbating old ones between and within nation-states.[12]

Military-Industrial Complex and Peace

The earliest reference to the Military-Industrial Complex (MIC) was by US President Dwight D. Eisenhower in 1961. Such a complex became a self-generating agency over time and reflected the collusion of diverse vested interests and institutions. This resulted in extreme competition for scarce resources toward increased military spending, and where external threats were exaggerated to justify spending. Such complexes

were most active until the end of the Cold War with the dissolution of erstwhile Soviet Russia and attendant Communism. With the emergence of a unipolar world dominated by the US at the apex of the pyramid, justifying the continued funding against external threats became more difficult. From 2000, state-industry relations underwent a further change, and saw the entry of private operators in the defense market and the creation of oligopolistic market-based procurement entities.[13] Today, the MIC still operates with the collusion of vested interest groups with proxy wars assuming wider geopolitical relevance. Here, the focus is on treating war and conflict as a 'business opportunity' to garner state resources.[14]

States inevitably are being re-engineered into the new Cold War camps, led by the imperatives of military-industrial complexes located among the superpowers — the US, China, and Russia. The people on the other hand are being manipulated by the exigencies of sectarian identity, perceived injustices, global inequality, and deprivation. Internecine conflicts based on religion as in the MENA region, or ethnicity as in South Asia, Africa, or Russia are clearly on the rise, adding to the planetary predicaments of unabated energy-fueled consumption. These threshold problems are only going to escalate unless steps are undertaken to come to grips with the changing nature of conflict in this epoch of the Anthropocene. In other words, only by expanding the socio-political-material deliberations which are co-constitutive with the Earth/ Nature/ Environment can Peace be sustainable. A piecemeal approach to Peace never succeeds even after it is bandied about across different forums. There are no buy-ins as demonstrated by the case of Belfast grappling with the aftermath of a hard-won peace.

Belfast Good Friday Agreement

The Belfast Good Friday Agreement of 1998 created a series of institutions to deal with the 30-year (1968–98) protracted violent sectarian conflict between the minority Roman Catholic nationalists (republicans), with allegiance to a united Ireland, and the overwhelmingly Protestant unionists (loyalists to the English Crown). In addition, the conflict also involved the British Army, Royal Ulster Constabulary (RUC), and paramilitary organizations such as Ulster Defence Regiments (UDR) and Ulster Volunteer Force (UVF) as members of the loyal legions of the Crown. In opposition was the Irish Republican Army (IRA) promoting the cause of a united Ireland and Irish independence from British rule since 1921. The civil war was

organized across streets and neighborhoods, and across the segregated cities of Belfast, Derry/ Londonderry, Strabane, Newry, etc. This so-called 'low-intensity conflict' saw 3600 people dead and more than 30,000 seriously wounded before both the Irish government and the British government came together under the guidance of the US and other independent observers to establish the Good Friday Agreement in 1998, toward ending direct rule from Westminster/ London. This also led to power-sharing by the two dominant communities — Catholics and Protestants — and the establishment of the Stormont Assembly.

The origins of the Troubles can be traced to the forced planting of British and Scottish landlords and tenants into independent Ireland in the early 17th century. In 1801 the region of Ulster, comprising six northern counties of Ireland steadfastly loyal to the British Crown, was formed. The remaining 26 counties went on to remain part of the Republic of Ireland under the Anglo-Irish Treaty of 1921. Thus from 1922, Northern Ireland began to function as an independent self-governing region of the UK. At that time the demographics were tilted toward the Protestant community with a million population while the Catholics were at 500,000. The labor market was highly skewed against the Catholics and favored the Protestants, with the most desirable jobs and occupations being cornered by them. Discriminations in the labor market spilled over into social housing, appointments in public services, investments into neighborhoods, etc. Civil rights were nonexistent for the Catholics and local politics was completely controlled by the majority Protestant parties. The right to vote was reserved for the rich Protestant ratepayers and the cultural identity of the Catholics was systematically denied. From 1956 to 1974, Sinn Féin, or We Ourselves or Ourselves Alone, as the political wing of the IRA was banned, along with the use of the Irish national flag. The election of IRA freedom fighter and hunger striker Bobby Sands to the British Parliament in 1981 ushered in the era of political republicanism. Gerry Adams, becoming the elected President of Sinn Féin, took his seat in Dáil — the Irish Parliament in Dublin — but abstained from taking the seat in the British Parliament. In 1983 it was the late John Hume of the Social Democratic Labour Party (SDLP) who initiated back-channel dialogue, and in 1993, both the IRA and SDLP issued a joint statement for the peaceful settlement of the Northern Irish conflict. In 1994, Gerry Adams was granted a visa to the US by President William J. Clinton, which allowed Sinn Féin to formally establish an office there to seek resources from Friends of Sinn Féin for promoting democracy and nonviolence. In 1997, the IRA reinstated the ceasefire and joined the multiparty peace talks. The outcome was the

Good Friday Belfast Agreement of April 1998.

Good Friday Agreement 25 Years On

This year, Northern Ireland celebrated 25 years of the Good Friday Agreement. Since the signing of the agreement, a lot has happened in terms of the Brexit from the European Union, and the demise of the original First and Deputy First Ministers of the Northern Ireland Assembly — Ian Paisley Sr. and Martin McGuinness. Change in the leadership of all parties also came about during this period, with the old guards giving way to new teams of leaders. There was also the assessment of the Three Strands of the Good Friday Agreement and what worked and what did not. To summarize, the original Agreement agreed:

1. To establish numerous institutions to engage with the existing political conflict in Northern Ireland
2. To manage cross-border cooperation
3. To normalize relations between Ireland and the UK

Recent studies have shown that coming out of the protracted conflict and distrust among the communities, new institutions were critical for dialogue and removing mistrust in terms of peace and reconciliation, support for victims of the Troubles, Inquiry into incidents of missing persons, Troubles legacy issues, decommissioning of arms, policing reform, etc., covering both the Catholic and Protestant communities. Over time, the second and third strands dealing with North-South, or Northern Ireland and the Republic of Ireland, and East-West, or Ireland and the UK, relationships were not fully implemented, especially post the Brexit of 2016. The North-South Ministerial Council (NSMC), the British-Irish Council (BIC), and the British-Irish Intergovernmental Conference (BIIGC) activities went into forced abeyance as the UK saw the transition of four Prime Ministers passing through the revolving door of UK politics impacting the prospects and future sustainability of the Northern Ireland peace process. Since the peace process, there has been a 'culture war' between the unionists demanding recognition of their Britishness and the republicans calling for parity of esteem in terms of recognition of the Irish language.[15] This led to a political crisis, with the nonfunctioning of the Northern Assembly as a result of the Brexit negotiations of the Northern Ireland Protocol and the most recent avatar of the Windsor Agreement, as endorsed by the British Parliament,

relating to an agreement about customs arrangements of goods and services passing through the UK and Northern Ireland and the Republic of Ireland, with which it has a common border. The Good Friday Agreement was about maintaining the delicate balance of protecting both the majority communities in Northern Ireland as well as incentives to promote a new future in terms of political autonomy for the citizens of the country. The main reason for the conflict, as analyzed by the late John Hume, stemmed from deep insecurity among both the communities — the nationalists and the unionists. At the core was a sectarian identity in conflict.[16]

Thus, the 'democratic deficit' was fueled by a 'trust deficit', jeopardizing reconciliation and stability in the region. Short-term politics trumped respect, dignity, and dialogue in the community. Both the unionists and republicans became unwarranted pawns on the chessboard of EU, UK, US, and Irish politics, each hoping for the patrons/ trustees to step in. Outstanding issues that remain are political stability, reconciliation, shared sovereignty, power-sharing, functional democracy, focus on long-term rather than short-term political gains, cultural disputes around language, flags, and community-based commemorations. Going forward, there is a need for greater investment in the communities and economies of Northern Ireland. As Ursula von der Leyen, President of the European Commission, noted:

> This brighter reality is only possible because on Good Friday, 25 years ago, the leaders and the people of Northern Ireland decided to plant a seed in soil previously stained with blood and tears. And it is the seed of peace and possibility for new generations which has been growing defiantly ever since.[17]

Later President William J. Clinton said, "No matter how good any deal is, how much endurance there is, what matters is how long it has a hold on people's imagination and trust, and whether the people who are in positions of power and influence will always do what's best for the people."[18] He further stated:

> I am really worried about how politics has drifted away from serious issues that affect people's daily lives, into identity issues which are subject to infinite twisting and the main purpose of them is to make people feel that some of us are more human than others. Some of us are more worthy than others. And that our differences matter more than our common humanity…. But people do get sick of it and the

basic, decent humanity you see in almost everybody person-to-person eventually asserts itself.[19]

Sadly, we are still waiting for this political inertia to end! As Senator George J. Mitchell stated during his keynote address recently:

> Today, a quarter century after the agreement, the people of Northern Ireland continue to wrestle with their doubts, their differences, their disagreements. They will continue to do so no matter how successful their political leaders are. The answer is not perfection or permanence, it is now, as it was then, for the current and future leaders of Northern Ireland to act with courage and vision as their predecessors did 25 years ago. To find workable answers to the daily problems of the present, to preserve peace. To leave to the next generation peace, freedom, opportunity and the hope of a better future for their children….
>   There is great depth in recognizing that the only way to help us emerge from the rubble of conflict is that we must learn to understand one another. We don't need to love one another. We don't even need to like one another, although we hope we could. But we must learn to understand one another and to be able to say yes to one another, especially when the quicker and easier answer is no.[20]

The lessons are many to be learned from this agreement for preserving the sanctity of human life on the planet. Peace remains a work in progress despite the success of globalization and integration of the global economy. Choosing Peace remains a judicious option in this fractious world.

Peace in the era of the Anthropocene

An integrated world of capitalism and neoliberalism based on intensive usage of energy systems has completely succeeded in overturning and discrediting the nature/ society or subject (human)/ object (nature) distinction that has been taken for granted for so long in all discussions of modernity. Technology from Internet of Things (IOT) to AI now continues to encroach into the critical planetary processes, deeply altering forever the delicate planetary and ecological balance. The ongoing scramble for better and more efficient AI systems is expected to profoundly impact our social and environmental systems. This is visible in the labor markets/ jobs, disrupting critical business models

and challenging governance and social welfare structures. This would indeed affect the very foundations of global consensus for peace in the age of the Anthropocene. At present the AI and IOT systems are trained and operate on biased datasets, which has the incredible ability to destabilize political agencies in decision-making. This will in effect compromise geopolitical and social stability across the globe. Therefore, without a regulatory oversight of data-centric knowledge generation, AI will continue to operate on biased datasets, reinforcing data injustices "associated with AI pretraining datasets".[21] As things stand, the impact of digitalization on social systems and the natural environment is still being assessed and a careful and judicious crafting of public policies remains in process. Biased data can seriously jeopardize policy by underrepresentation of critical socio-political variables, or indeed provide inaccurate estimations of global projections relating to health or climate change or political engagement. This will reinforce spatial inequities globally. Studies have shown that misinformation and disinformation are perpetuated due to digitalization of social networks, thereby influencing political opinions affecting the society. In fact, "humans have broken the planet's short-term carbon cycle by producing an excess amount of carbon dioxide that human institutions and technology cannot yet manage to recycle".[22] This process has impacted all things we have taken for granted and reflected in a catastrophic loss of biodiversity and attendant species extinction, as also in a rapidly escalating number of refugees seeking new beginnings, currently calculated at 110 million.[23] Securing human life is at a point of inflection due to the rapidity of climate change, and 'extreme weather events'. Peace thus has to do with the boundary conditions needed for the sustenance of humans and many other forms of life. The question is how far is there a consilience of knowledge regarding Peace and the Anthropocene.

For Peace to be secured, both ecological and social sustainability need to be realized for the common good of humanity. Here 'earth consciousness' is key to a lasting peace and should underpin all dialogue relating to the abolition of nuclear arms, and control of inter-ballistic missile production in this increasingly fractious world. By "imposing a technosphere on Nature, we have a population of 7.7 billion people equipped with a vast array of new technologies, making unprecedented resource demands".[24] This vast technosphere as a linear system survives on fossil fuels extracted from scarce, nonrenewable resources, promoting a mechanical basis of production and systemic chemical manipulation, all leading to endemic accumulation of pollutants in the atmosphere and

the oceans, and in the Earth. The concept of Peace needs to account for this shift to the technosphere from the traditional (geo-atmo-hydro-bio and cryo-spheres) in this age of the Anthropocene. This links directly with the AI revolution, which is slowly but surely encroaching on the 'human' space. The algorithms of peace will be very different from what has been conceptualized until now, and will replace traditional approaches to peace negotiations in operation since 1945. There is now a serious threat to the continuity of humans and other species on the planet. How can we continue to maintain a steady state of planetary equilibrium in the presence of diminishing biodiversity of precious Life? What are the prospects for Peace when we have the integration of the technosphere and biosphere? Will the Earth become an 'intelligent' planet to counter threats to peace and sustainability? Humans have the capability today to interfere with the long-drawn processes of life on Earth. The industrial and post-industrial growth pathways have imposed a technosphere with the assistance of advanced military-industrial complexes, which inevitably puts profit and economy before ecology and environment. This helps to brush environmental externalities during peace and conflict under the carpet. Peace therefore in the 21st century has to do with these boundary conditions critical for the sustenance of humans and many other forms of life on our planet. The definition of peace in the Anthropocene is the consilience between humanity and nature. In other words, 'planetary peace' is the harmonization of the five traditional spheres with the technosphere.

The incredible mismatch between the biosphere and the human-manufactured technosphere will perhaps be exposed, ironically, by the new informational order with AI-led awareness, the latest addition to our manmade technosphere. Conflict today is more symptomatic of humanity's ecological overshoot and therefore suggests a limitation to human-centered ideas about 'justice' and 'just transitions'. Such an ecological overshoot by humans while mirroring modernization and its inherent inequalities is also the story of Homo Sapiens dominating the biosphere to such an extent that it is threatening our existence. Conflict affects the distribution of all life on the planet. As Harari concludes, "Many historical calamities, from deadly wars to ecological catastrophes, have resulted from this over-hasty jump."[25]

Peace calls for "Facing the Planetary".[26] The idea of 'peace and sustainability' here acquires a new resonance today which is about more than life's continuity on this planet. It's about durability, the resilience to adapt to changing planetary shifts in climate, production, conflict, energy, and even peopling of humans across the regions of

the world. In all, religion just becomes a backdrop and context for this transformation. Therefore, Peace in essence implies more than an amelioration or cessation of conflict. The global with humans at its center is ultimately all about forms and values. The very fact that we are in the Latter Day of the Anthropocene Epoch, requires us to refocus on peace as a product of human emotion, guided by the values and ethics of coexistence. Not determined by the monetized imperatives of military-industrial complexes nor that of regionally determined trade blocks and their regimes, peace acquires a planetary consciousness which is based on the dignity and respect for life. Peace can only be a habitable proposition when we place Nature at the center of our interactive sphere. The anthropocentric idea of Peace needs to be married with the planetary imperatives of habitability. The idea of a planetary peace is more important than that of global imperatives for peace. Why? Because 'globally focused peace', tends to subscribe to the military-industrial complex of advanced capitalist societies. We saw stark examples during the Iraq Wars, post-9/11, in the ongoing civil wars in Syria, Afghanistan, Yemen, Myanmar, Sudan, and now the Russia-Ukraine War and the brutal devastation of Gaza. On the other hand, a peace initiative informed by a planetary perspective goes beyond the simple regurgitation of the politics of sustainability and allows for the novelty of humanness to percolate discussions about common values, respect, and dignity. New approaches to Peace call for a clear positioning between the Global and the Planetary. The predicaments of the Anthropocene are intimately entangled with issues of race, class, gender, ethnicity, spirituality, religion, economy, politics, power, geography, military-industrial complexes, security, technology, etc. Here again, the UN Sustainable Development Goals (SDGs) help to calibrate equity with empowerment and reiterate the point that ultimate peace cannot be divorced from the context of environmental and social welfare. SDGs will contribute toward sustained peacebuilding, governance, and development.

The Anthropocene compels us to revisit and reassess our understandings of peace, conflict, and sustainability. Our ongoing commitment and relationship to a materialist culture require deepening our understanding of the Earth systems, not as something 'out there', but as being deeply imbricated with our lives. This is the same as Daisaku Ikeda's call for 'cosmic humanism', a "holistic, or even cosmological, humanism, one that regards the life of the individual as extending out to and embracing the entire cosmos, and therefore meriting the most profound reverence".[27] Humans continue to have a

predatory relationship with the planetary environment, resulting in a significant ecological overshoot with an ever-expanding footprint, now reaching interstellar dimensions. Peace today calls for an undivided understanding of 'deep time', wherein humans have to be positioned within the deeper history of all life on the planet since its inception. This will contextualize the usual narrative of injustice, inequalities, etc., which continues to animate human existence and discourse. Peace in the era of the Anthropocene calls for a deeper understanding of the impact of 'obsessively humancentric'[28] materialistic activities that are eroding the sanctity of planet Earth. Peace therefore needs to acknowledge not just the impact of anthropocentrism, but of 'deep time'. This means recognizing the eternal Buddhist idea of a nonhuman perspective, i.e., spiritual cosmic humanism. This era of the Anthropocene change has been ushered by humankind's transgression of planetary boundaries, despite humans having yet to develop significant experience or understanding of the universe. These new tipping points and 'boundary conditions' have inevitably created new incentives and imperatives to resolve conflict, and by extension, for establishing the peaceful coexistence of both humans and nonhumans.

The question is, has the new epoch of the Anthropocene,[29] ushered in limits to the idea of Peace, a concept born out of the two World Wars, the Cold War, the multitude of internecine wars, and proxy wars all across our planet? Today, the global bilateral hegemonic assertions are being challenged by countries that are permanent members of the august Security Council of the United Nations — China and Russia — and also by the BRICS (Brazil, Russia, India, China, South Africa) group of countries and Saudi Arabia. We therefore need a new perspective on Peace that moves away from the traditional war games to cover the challenges posed by the Anthropocene to the Earth systems. What will these changes mean for human existence; for dealing with conflicts triggered by the scarcity of critical resources, from water to rare minerals, food, energy, and freedom that we have taken for granted for quite some time now?

The Anthropocene presents a signature of irreversible human impact on life processes, which has come to dominate planet Earth. As Bronislaw Szersynski notes, "[I]t is important to realise that the truth of the Anthropocene is less about what humanity is doing than the *traces* that humanity will leave behind."[30] What are the social, political, and economic realities that will come to dominate the discourse of peace in this age of the Anthropocene?

In terms of conflict and peace, which are both human-engineered,

the current challenge posed by the Anthropocene to human society will be "less hospitable to humans and other forms of life".[31] As James Lovelock notes, "Whatever we do is likely to lead to death on a scale that makes all previous wars, famines and disasters small. To continue business as usual will probably kill most of us during the century."[32] We saw this with the recent mortality caused by the lab-induced COVID-19 pandemic. Thus, the unintended consequences and the uneven impacts of climate change will inevitably have far-reaching planetary impacts triggered by the excessive obsession with 'material-energy' resources.[33] The future of Peace will be guided by recentering planetary imperatives, and only consciousness-led collective social agency can deliver a sustainable peace in a human-embodied environment. Thus, provincializing or focusing on the concept of the environment, or indeed the Anthropocene, will help to remove the long trap of peace as an exception in human history. In other words, peace today is seen as an exception to the rule and conflict is seen as a normalized part of our existence. The Anthropocene helps to challenge this normalized concept of conflict and gives peace a chance to be de-centered in the global discourse. The challenges posed by the age of the Anthropocene reiterate the increasing urgency for Peace.

The prospect of a human-triggered mass extinction due to climate change-induced conflicts in this era of the Anthropocene will have an irreversible impact on the opportunities for sustainable peace. Thus, the transition from the Holocene to the Anthropocene raises the specter of ever-increasing regional conflicts jeopardizing the very concept of peaceful coexistence. What will be the future redlines for peace? What will be the planetary boundaries for Peace? Indeed, the Anthropocene concept enables the framing of planetary boundaries for Peace. This calls for putting forward actions and thoughts for practical actions to secure peace. In other words, peace today is a product of social, political, economic, and religious actions. There is a need for a greatly strengthened framework toward maintaining a socially and politically desirable state of trust-based peace, of 'planetary stewardship' in this era of the Anthropocene.[34] The continued admixture of securitization of military-industrial complexes, of material, social, political, and environmental demands, presents a tricky challenge.

Restoring the Dignity of Life Through Dialogue

Barry Commoner notes, "Everything is connected to everything else,"[35] which chimes with the ancient Buddhist concept of dependent

origination or *pratityasamutpada*:

> One of the most important Buddhist concepts of dependent origination teaches that, at the most profound level, all life is interconnected and that nothing exists in isolation. Simply put, it means that the real nature of individuals or events can only be correctly understood in the context of their connections with others.[36]

A successful collective experiment for peace has been in operation under the able guidance and direction of Soka Gakkai International (SGI) President Daisaku Ikeda. This grassroots movement is based on the simple but deep philosophy of an 'inner human revolution' as being the precursor for peace and friendship for humanity. In other words, recognizing the 'dignity and respect' for all lives on this planet. Such a culture of peace starts from the home and goes on to encompass the place of work, our communities, and the environment. The emphasis is on the interdependent relationship of all life forms within the biosphere and noösphere (a 1922 concept popularized by a biogeochemist Vladimir Vernadsky and philosopher and Jesuit priest Pierre Teilhard de Chardin, defined as an advanced stage of biospheric development related to humankind's rational activities or "planetary sphere of reason").[37] Thus, the noösphere emerges as the third phase of the development of the Earth after the geosphere (inanimate matter) and biosphere (biological life). While the emergence of human life transformed the geosphere, likewise human cognition significantly altered the biosphere at a planetary level, resulting in the age of the Anthropocene. Such a *Global Consciousness*[38] has ushered in fundamental changes to our relationship with the planet and toward sustainable peace. This invites us to reconsider and acknowledge the depth of the human experience of living through the planetary crises imposed by the age of the Anthropocene. Therefore, only by discarding convenient pragmatism can we move forward.

As Clark Strand notes:

> [A]s a spiritual movement, the Soka Gakkai offers a much broader and more versatile model than we normally see in a religious paradigm. Its ... focus on the human potential for altruism and peaceful cooperation are the basis for a "sustainable" model of progress. It's the next model because its focus remains on progress in culture, in human rights, and the human spirit.[39]

Adopting a participative consciousness will help to shift our deeply embedded desire to acquire, amass, control, and manipulate toward an appreciation of justice and equity, and a true understanding of the demands of the Anthropocene.[40]

Conclusion

In May 2018, UN Secretary-General António Guterres, in launching the UN Disarmament Agenda, noted that annual global military expenditure had surpassed US $1.7 trillion, the highest since the Iron Curtain was brought down in Europe. This is around eight times what is required to maintain the humanitarian needs of the entire world. He stated, "It never is certain, not even today, whether those types of weapons constantly being produced could not lead to an outbreak of war, after all."[41] Thus, disarmament initiatives not only go beyond politics and security questions but also impinge on the humanitarian question and most importantly on the survival of the planet or the Anthropocene. We have indeed entered an era of 'peacelessness'.[42] The Secretary-General outlined three perspectives that went beyond the essentialist security arguments, namely, disarmament to save humanity, disarmament to save lives, and disarmament for future generations. Such a perspective provides the framework for engaging with disarmament in the age of the Anthropocene.

Changes in the boundary conditions necessary to sustain all life forms call for a new assessment of the ideas and concepts of Peace. Incremental warming of the planet will challenge the survival of humans and all other life forms. Given that the Anthropocene is emblematic of the ecological overshoot is suggestive of the recurrent limits to our post-war-centered conceptualization of peace and justice. The new conceptualization of Peace needs to evolve beyond human-centered ideas to include the planet and all of its reproductive life on the Earth. This aligns with the primacy of the concept of 'Life' in our uncertain and highly complex world. Extinction or the possibility of a planetary system without 'human' presence is a possibility, given the emergence of the ticking 'climate time-bomb'[43] speeded up by increased CO_2 emissions.[44] Peace, therefore, assumes new significance in terms of the engagement not just between humans, but also between the human species and planetary systems. The planet therefore becomes a "dynamic ensemble of relationships"[45] and the future of peace demands engaging with this ensemble. Therefore, thinking about peace in planetary terms is critical to our everyday consciousness and awareness. Thus, peace

in the time of Anthropocene calls for placing not just humans but all species and renewable and nonrenewable resources at the center, thereby reiterating the values that matter most for survival and sustainability, i.e., 'planetary habitability'.[46]

Given that today the politics and policies for securing human life are being compromised at all levels, the challenge is to secure lasting peace beyond the manipulation by military-industrial complexes of 'buying peace' through an incessant race for more efficient weapons of mass destruction. Stephan Harding's 'Age of Enchantment' renews our pledge that the "rights of the Earth are equal to those of human rights".[47] Here, Peace resonates with this renewed pledge. There is a need for, as Vandana Shiva notes, "an epistemology of care and co-creation" and "shifting of our consciousness from the mechanistic monoculture of the mind to an abundant biodiversity of mind, based on interconnectedness, diversity and multiplicity".[48] This in effect will help reconcile the challenges posed by the conflicts exacerbated by the Anthropocene, and in turn, become the key to establishing a meaningful Peace — one that discards the colonial mindset of 'human exceptionalism' and embraces the new planetary ethos of the recognition of the 'intelligence of all life' forms. Such a unity with nature is not alien to the ancient Indic civilization, where diversity nurtured ecology, democracy, and freedom. Thus, the absence of diversity will be detrimental to all. How is the creation of an 'active imagination' toward a peaceful, coexisting planet to be supported?

A regenerative approach to peace in the context of the Anthropocene requires a conscious reduction of our ecological footprint on the Earth systems; a recalibration of our response to an escalating downward spiral of sustainable systems collapse engineered by geopolitical, technological, material, and political imperatives. Mitigation based on technological intervention has its limits and cannot ensure ecological security to sustain the well-being of all. We need a correction to our sense of reality, which has been fragmented rather than holistic. Peace then becomes a property of a holistic web of relationships, involving all communities. The way to nurture peace and life is to nurture communities in all their diversity. Goals for common goodness include social justice and peace. To live in peace with life on Earth is the goal.

As Ikeda asserts, a "people-centered multilateralism" is the only way forward to ensuring peace in the age of the Anthropocene, and such an outlook relates well with the UN-mandated SDGs.[49] This approach can ensure security for all sentient and insentient beings on this planet. Evidence shows that despite the many bilateral agreements

between the US and Russia toward the reduction of weapons of mass destruction, there has been no elimination of nuclear warheads (14,465 in existence today). The role of civil society in the efforts to make the world free of nuclear weapons with effective regulations in place cannot be underestimated. An Anthropocene approach calls for: reiterating the "common awareness of a universal sense of history to prevent recurrent tragedies"; promoting an empathetic understanding of deep Earth systems as "our common home, where no one is to be excluded on the basis of difference"; and "[p]romoting the humane orientation of politics and economics, cultivating the wisdom needed to achieve a sustainable future".[50] Thus, creating a 'global consciousness of solidarity' of civil society and all other stakeholders,[51] to protect the 'global commons',[52] and of appreciating the enormous challenges thrown up by the Anthropocene Epoch will be key for the future progress of humanity. To paraphrase Senator Mitchell, "Because, like it or not, we are all in this together, facing the reality of the future, rather than clinging to the myths of the past, takes strength and courage, and vision."[53]

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