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Innovations and Sustainability (against Risks) in Hyper-Modernizing Cities Interfacing Social Innovation and Policy Learning for Humanity Future

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Economic globalization is not just challenging the limited governance capacity of nation states and their international governmental organizations (IGO), but also re-activating people's (non-governmental organizations - NGOs) quest for global sustainability in the last three decades. Yet, the anti-thesis of globalization under one nation state's geo-political maneuvering, namely, the de-globalization forces against the hegemony are actively re-energizing in recent years, not least with the rise of patriotic nationalism in both developed and developing, capitalist and socialist, worlds – mostly articulated by global power of the USA, Russia and China to making their geo-political moves in their sphere of influences. For civic forces, new media-facilitated critical progressive advocacies have been expanding opportunities for sustainability, with many social agencies-generated, or do-it-yourself, activities to cope with ecological problems. Juxtaposing dynamic active mobilizations, under the hegemonic nation states' project, there is yet a concerted parallel force to develop new initiatives to interfacing policy-social innovations. This brief examines these initiatives, against the embedded contradictions, towards sustainable future. It has four parts. After outlining the problematic globalization in hyper-modernizing cities, Part Two examines the future of humanity with biodiversity in risky society. Part Three discusses socio-political significance of the critical engagements and struggles for new norms -cum- ethics for ecological (-disasters driven) modernization, demonstrated by the apocalyptic re-learning for bio-humanity survivals. This brief ends with remarks on the project for sustainability - interfacing biodiversity and humanity, at the new abnormality of the pandemic: highlighting new media-enhanced global initiatives for not just green energy re-sourcing but new lifestyle changes.

Key Words : Cities, Innovations, Policy Learning, Risk Society, Sustainable Development

1. Problematic Globalization in Hyper-Modernizing Cities?

Much like its predecessors of the United Nations (UN) Earth Summit in 1992, the 2012 UN Conference on Sustainable Development (Rio+20), the UN Sustainable Development Summit (25-27 September 2015, New York, <https://sdgs.un.org/>) and

the UN Climate Change Conference (COP 25, 2-13 December 2019) in Madrid (<https://unfccc.int/cop25>), the ever-increasing numbers of representatives from governmental, business and non-governmental organizations confirm once again international communities' key consensus for human survival: acknowledging the need to further mainstreaming sustainable development (goals) at all levels, inte-

grating economic, social and environmental aspects and recognizing their inter-linkages, so as to achieve sustainability. Obviously, it is a new paradigmatic shift of (new) environmental justice for global-locality!

Historically for the Rio+20 policy agenda, much like other UN initiatives that follow, delivered a big package of (commitments for?) initiatives by world leaders on path for a sustainable future: more than US\$500 billion mobilized with over 700 commitments made. Its official document entitled: *The Future We Want*, calls for a wide range of actions: launching a process to establish sustainable development goals, detailing how to use green economy to achieve sustainable development, adopting a framework for tackling sustainable consumption and production, stressing the need to engage civil society and incorporate science into policy, and recognizing the importance of gender equality and voluntary commitments on sustainable development (UNCSD 2012) for Sustainable Development Goals (SDG) 2015-2030.

Yet the Rio+20 and SDG 2015-2030 are fallen short from the expectation and hope of many non-governmental organizations (NGOs), given their very “soft”, non-target or action-specific, and non-binding (if not weak) document – even less than a memorandum of understandings or a declaration like the Kyoto Protocol (1997)... At this historical conjuncture: it is not clear that how far existing policies for the sustainability could be further pursued in long-term without any confirmed commitment from the participating nation states....The question is how to make the policy -cum- praxis for transformation to the green and sustainable development; not least in terms of how we can go further to accelerate the progress towards truly sustainable patterns of consumption, exchange and production, not least for green energy (REN 21 2020a/b).

1.1 Global (Dualistic) Hyper-Urbanism - Sustainability in 21st Century

Urban life under globalizing forces has been instrumental in shaping life course of people; and hyper-urbanization has been, and still is, the major developmental challenge for any nation state. For instance, in the hyper-modernizing China, since 2010, over half of its population reside in urban areas: after two decades of economic liberalization- driven rural-

to-urban migration, amounting to over 200 million of people moved to cities. But the challenge of urbanization is just unfolding in Chinese cities that an addition of 300 million people will flow into urban areas in the coming decades (*Financial Times*, 13 June 2011). The dramatic hyper-modernizing urbanization is occurring in most developing economies as well. Obviously, chaos of urban life under the compressed time and spatial conditions have been shaping people’s survival in our lonely planet (Chang 2010).

The phenomenal transnational hyper-urbanism, as demonstrated by the *World City* and its hierarchy imperialist order, is being questioned in terms of social in-equity and inequality, socio-spatial justice of regional growth, quality of worsening life and global sustainability; while challenging the neoliberal economics globalization project championed by international financial institutes like IMF, WTO and the World Bank.

Yet, the debatable seminal work *Triumph of the City* demonstrates how cities make people richer, smarter, greener, healthier, and happier throughout history (Glaeser 2011). But the new dualistic (new versus old; formal vis-à-vis informal) hyper-urbanism project has its own contradictions, if not socio-economic calamities, in a globalizing world. The emergence of the so-called *World City* and/or *Global City* could be both a blessing and curse for sustainable development (Sassen 2004, 2007 Ed.).

The complexity of the so-called *World City* can be illustrated by the dualistic (formal versus informal, rich and poor: the very essence of the *Global City*) urban structure in major metropolitan areas, like London, New York; as well as the fast-developing cities like Seoul, Singapore and Hong Kong (Chiu & Lui 2009). More specific, the new dualistic urbanism -cum- hyper-modernization is demonstrative by an anthropological study on the Hong Kong’s Chung King Mansions, a rundown commercial-residential mixed building in the heart of Hong Kong urban core, where a(n) enclave of) diverse, less wealthy ethnic groups (other than Chinese) reside temporarily for economic purpose (same economic liberalization logic of the globalization project?) in the Asia’s *World City* (Mathews 2011): the globalizing spaces of the Chung King Mansions are not just the embodiments of multi-cultural and ethnicities in the *World City* (-cum-*Global City*), but also the manifestation of the fluidity of global (informal?) commercial

tourism of the migrant-entrepreneurs (vis-à-vis transnational corporations).

Against the back drops of high-end iconic mega architectural monuments of transnational capital financed urban form, new urban spaces are also the hub of economic nomadic transits for the low-end (free-riding temporary economic migrants) globalization pilgrimage. This is what the embeddedness of the complex system of socio-economic relations in strategic sites of the contemporary urbanism – the bolts and nuts of the *Global City* as conceptualized by Saskia Sassen (2001, 2007 Ed., Castells & Himanen, Eds. 2014). Yet, the specificity of new urban form is also characterized by its dual networking function and effects. In short, the new informational cities in 21st century are global hinges, serving instrumental functions for global-local socio-economic, cultural and political forces, to their hubs and spokes located at different geo-political sites of relations.

The transnational urban processes have strong repercussions for eco-impacts and biodiversity global-locally (Blok 2020, Keil 2020). To cope with the Climate Change, the connective partnerships for transnational urban governance are critical to shape the course of sustainability: “these networks exist in an ‘ecosystem’ of networked connections, not in isolation from either each other or other actors in global and local urban governance” (Acuto & Leffel 2020: 14).

The *problématique* of the *World (Global) City*, are driven by economic forces at transnational realms, under the auspice of the nation state and international financial institutions, with social agents’ crafting of transnationalism practices. But all these activities are embedded in multi-racial and new ethnicities, though fluid and transient in the process, bring along with a new creation of transnational spaces and new forms of cosmopolitanism, which are distinctly different from the one brand (high-end, iconic) demonstrative high culture and high prices goods and services in the urban core. Hence, *Global -cum- World City* is the embodiments of a variety of contradictory-dualistic urban conflicts, processes, experiences, and life chances. The socio-cultural dynamics of such urbanity will shape the destiny of global sustainability: the question is: *How new global urbanity with(-out) equity, human rights, and justice?*

1.2 A Collision of Crises in Hyper-Modernizing Cities and Beyond

The hyper-modernizing cities are without exception growing with the collision of crises of many, not least are clean water, food, and energy shortages (Meybeck & Redfern, 2016 Eds., Ren 21 2019, 2020). Conflicts are usually arising from water and food crises, driving the propensity for violence and war. Fresh drinkable water and food supplies determine human survival (Bizikova, *et al.* 2013).

For their survival there is urgency to re-sourcing for sustainable production, consumption, and exchanges. The Earth has many water resources: about 70% of the Earth’s surface is water-covered. But sea water accounts for 97.5% - salt water is filled with salt and other minerals, and humans cannot drink the water, though expensive desalination-distillation is available. The remaining 2.5% is fresh water: 2% of the water on earth is glacier ice (could be melted for drinking) at the North and South Poles but it is too far away from people. The emerging challenge is obvious that human society uses only less than 1% of the Earth’s (fresh) water; how to conserve (reduce, re-use and re-cycle) the precious fresh water resources is the survival challenge for (post-)modern society – policy initiatives for Integrated Water Resource Management (IWRM) and practices for Capacity Building should be in place, to provide a basic framework and action repertoire for clean-water-for-all (Leidel, *et al.* 2012, *et.al.* 2014).

In actuality, access to safe and climate resilient drinking-water resources, as well as sanitation, is increasingly critical in an era of continued, urbanizing, population growth under the Climate Change: ensuring access to safe, resilient and clean water and sanitation, particularly for the world’s poorest population and disadvantaged groups, will accelerate attainment of multiple environment and health-related goals for sustainable development (WHO 2012). This calling has been made for decades in development literature and donor-agencies’ advocacies in (and still) meetings after meetings... In fact, one of the United Nations (UN) Millennium Development Goals (MDGs; 2005-2015, and MDGs 2015-2030) is to halve the proportion of the population without sustainable access to safe drinking water and basic sanitation. And in Asia Development Bank (ADB) policy calling: *Attaining Access for All: Pro-Poor Policy and Regulation for Water and Energy*

Services (ADB 2010). Hence, ADB's water and energy policies also explicitly embody its goal of achieving poverty reduction.

Feeding global population, particularly to those poor-to-poorest people, is a daunting task, challenging the humanity in the last century! Creating the supportive conditions for pro-active policy for fostering green economy for sustainable development and poverty eradication, and along the UN's MDG is the key calling since the Rio+20. Collaborating with the framework of the Rio+20, the promotion of sustainable food systems (from agriculture to food retailing) has been undertaken by United Nations' FAO-UNEP since 2012, aiming to enhance resource efficiency and clean consumption-production along the food supplies chains, while ensuring food security (Meybeck & Redfern, 2016 Eds.).

If scarcity of water has a natural cause, food shortage is indeed human-made, due to global capital and finance industry in advanced capitalism: when seemingly everything has a (market) price is challenged by progressive forces, like David Harvey (2010), Michael Sandel (2012) and Stiglitz (2012). Global food crisis is a chronic one: with the under-supplied -cum- over-priced food, all threatening food (and commodities) security. Inadequate food supplies and inequitable distribution have been a global problem for long; much even worse when water and foods are being traded in terms of future commodities (hedging) exchanges, under a regime of global finance capital: seasonal and cyclic rise-and-fall of the commodities pricing has been replaced by calculative-speculation and hence price volatility – mostly beyond the parameters of normal supplies and demands in reality. More specific, it is the two-decade-long global “financialization” of food supplies system by a rapid growth of financial (de-) investment (plus liberalizing-deregulation) in agri-food business within/beyond the derivatives (of commodities trading) markets (Clapp & Helleiner 2012).

But the challenges ahead for steering the course for sustainability in/beyond 21st Century - the biodiversity -cum- humanity future, are the new urban inter-connectivity, mobility, flowing and fluid urban activities and their interfaces, with interconnections across space and processes of globalization, urbanization, and geopolitics (Goh 2020). The Rio+20 and MDG outcomes, like other UN initiatives, are just

some form of partial- consensus building but far providing the directional (with vortex), comprehensive, guide for the rocky journey towards sustainability!

2. Future of Biodiversity: *Finale* for Whom in Risk Society?

Risk is embedded in super-modern society (Beck 1986, 1992, 1998; Beck *et al.* 1994). The challenges for steering the course for sustainability in and beyond 21st Century are embedded into the crisis of advanced capitalism, coupled with cosmopolitanism in the informational age. The dynamics and contradictions of the informational city are conditioned by emerging mega-urban growth ideologies (Harvey 2009). Here, the one-dimensional global cosmopolitanism *per se* is in question; the variations of the differential, or multiple, modernity are more likely the reality in the advanced informational, digital capitalism in a globalizing world, coupled with socio-economic calamities (Jazeel 2011; Rosenau 2003).

2.1 Humanity in a Globalized Risk World

Confronting the crises, the quest for healthy lifestyle(s), in the post-industrial, risk society, becomes the major shift from free market to green consumerism. This emerging concern is on the crisis-embeddedness of technological global system. For instance, exposure to radiation from radio frequencies of mobile phone, high-tech gadget, is controversial yet the debate is never-ending (Burgess 2004). Risks are embedded with high-tech development at global scale - the unintended consequences of the modernity project - are controversial. Yet, the differential conceptions on risks and the communications of them are very much contingent upon the time and locational specific cultural and community context (Douglas & Wildavsky 1982) and in the modern world, the state agency's definition on risk acceptability (Clarke 1989). In short, risks and people-made disasters are the inevitability of the modern production and consumption system.

The Climate Change is unsustainability and catastrophe! The G8 Summit, at Heiligendamm, Germany, 6-8 June 2007, confirmed once again the global necessity that all stakeholders have to nego-

tiate within a UN framework to advance the Kyoto Protocol by the end of 2009, targeting to reduce CO₂ emissions substantially, on the way to 2050. But globalization processes are problematic and tend to polarize socio-economic life chance of people – this has been confirmed by the *Report of the World Commission on the Social Dimension of Globalization* (WCSGDG 2004); and the unbridled capitalism does produce effects of exploitation of the weak and socio-ecological degradation, and the malignant forces of globalization engender xenophobia, the demising local people's jobs, culture, language and hence identity (Milanovic 2003).

On the other hand, free and timely flows of capitals and goods across borders are become an integral part of global economy – globalization is the main force in shaping our world destiny.

Thanks largely to information and communication technology (ICT), participatory e-politics at a global scale seems more and more possible, allowing most forms of communication: one-to-one, one-to-many, many-to-one and many-to-many. The maximum utilization of ICT enables electronic mobilization; hence cyber-activism has become revolutionary in changing the mode of interaction for advocacy and empowerment, power relationship between the state and people, and the governance structure (Lai 2004a, Schuler & Day 2004). Take the Association of Progressive Communications and its Asian partner, South Korean Jinbo.net, for example: they are international networks of civil organizations for social justice and development, active in mobilising progressive forces for regional and global activism in labor, human (animal) rights and environmental movements alike, in both cyber and real spaces (Hajnal, Ed., 2004; Hick *et al.* 2000; Hick & McNutt Eds. 2002; <http://www.apc.org/>)

The key issues here are the opening-up of potential for transnational activism as far as interactivity, timeliness, active participation, and the progressive agenda setting are concerned, both in virtual and real political communities.... Multiple types of claim-making and oppositional politics articulate the global agenda. Going global has been partly facilitated and conditioned by the infrastructure of the global economy, even as the latter is often the object of those oppositional politics (Sassen 2004: 649). The synergy of global bio-ecological movements and ICT can be understood, analytically,

from three distinct yet inter-related debates on the governance of, and participatory politics in, the global system (Chambers & Evans 2020, Lai 2004a). They are: the '*Globalized Space*' thesis of James N. Rosenau (1997, 1998), the *Cosmopolitan Democracy* concept developed by David Held (1995, 1999), and the *Transnational Advocacy Networks* (TAN) thesis of Margaret E. Keck and Kathryn Sikkink (1998, 1999). Confronting globalization and the problematic of global governance, Rosenau (1997, 1998) rightly identifies the nascent social agencies, actions and networks: NGOs, the internet and social movements respectively. As it is widely agreed upon that current existing global governance is largely undemocratic, possibilities for democratizing these structures need to be discussed – an issue which Dryzek approaches discursively arguing that “democratic action in the international system is rooted in reflexive control of the prevailing balance of discourses” (Dryzek 1999: 43) and that deliberation or communication is the central feature of transnational democracy.

Despite regional differences of the interconnectivity of the internet, the creation of *Cyberspace* through the integration of ICT locally and globally has been extending the way, mode and form of communications, doing-business and policy-making, with emerging new and distinct (cyber)culture, (virtual) community and (virtual) reality (Castells & Himanen, Eds. 2014; Chambers & Evans 2020). In the *Globalized Space*, local, regional and global ICT are referred to by James N. Rosenau (1997, 1998: 46-7) as one of the functional equivalents of democratic governance where transnational issues are beyond the nation-state nor the state-sponsored institutionalised regime, like the UN:

“The widespread growth of the Internet, the World Wide Web and the other electronic technologies that are shrinking the world offers considerable potential as a source of democracy... by facilitating the continued proliferation of networks that know no boundaries; these technologies have introduced a horizontal dimension to the politics of *Globalized Space*. They enable like-minded people in distant places to converge, share perspectives, protest abuses, provide information and mobilize resources – dynamics that seem bound to constrain vertical structures that sustain governments, corporation and any other hierarchical organizations” (Rosenau 1998: 46).

On the transnational ‘activism front’, e-mobilization (which is one form of cyber-activism) revolves around the strategic use of the new media by NGOs. E-mobilization occurs within the cyberspace in form of virtual communication between activists using various means, such as fax and short-message-sending (SMS), e-mail, webpages, and hyperlinks (Brecher, *et al.* 2000: 83). Hence, the notion of ‘electronic mobilization’ (i.e. e-democracy aided by ICT) is in line with the theory of ‘Cosmopolitan Democracy’ of David Held (1995, 1999), in which he argues that, in a world of overlapping communities of fate, *Cosmopolitan Democracy* is the creation of new political institutions and a diversity of NGOs in global civil society, with the democratic principle and praxis of broad access to avenues of civic participation at national, regional and international levels.

2.2 Cosmopolitan Politics for Sustainability in World City

The eco-challenge of *Risk Society* is met by global social activism. But in a highly globalizing world in the information age, the emerging cosmopolitanism is embedded with the diversities and complexity of human civilization in, through and beyond cross-cultural and cross-border exchange-encounters and flowing (Castells & Himanen, Eds. 2014; Katz, Ed. 2008). By facilitating various civic progressive networks for the better world (say, the campaigns to end global poverty, global peace movement and sustainable future), *vis-à-vis* the globalizing economic hegemony shaped by international business and governmental organizations (IMF, World Bank and WTO; G8, G20 and World Economic Forum), it is to make transnational advocacies network to create cosmopolitan coalitions of progressive social agencies for sustainable future as the so-called cosmopolitan realpolitik for a better world (Beck 2010, Beck & Grande 2010: 435-436; Halle *et al.* 2013; Lai 2008, 2011a/b/c, 2015, 2019), with the following premises:

- The new historical conditions of world risk society that no nation can master its problems alone; those who play the national card *per se* will inevitably lose.
- Global problems produce new cosmopolitan imperatives which give rise to transnational communities of risk beyond nation state’s mitiga-

tion.

- International organizations are not merely the continuation of national politics by other means; they can perhaps transform national interests.
- Cosmopolitan realism is also economic realism. It reduces and redistributes costs (profits) because socio-economic costs rise exponentially with the loss of legitimacy.

The quest for environmental justice with realpolitik is critical. For the pursuit of individual and (compatible to) collective goals, juxtaposing the national and (serving for the) global ones, interests become ‘reflexive national interests’ through long term engaging strategies of self-limitation; more precisely, empowerment arises from self-limitation. The right approach facing these challenges is a critical re-examination and reflection on the ethics and norms of human civilization on the one hand, and bio-ecological ethics of the natural world on the other. Hence the future for cosmopolitan realpolitik is open (Held 1995, 1999; Held & McGrew 2002): all subject to our progressive endeavour. Yet, there are obviously many questions to be raised for pursuing sustainable course of actions at the ecological modernization frontiers; but prompt actions are critical and imminent, not least those can effectively facilitate the greening economy and socio-equitable fair development, and fostering the unique yet differential ecological reflexive modernization processes.

Strategically, the new cosmopolitanism calls for fresh critical engagements of individuals in global system; thanks to new media of the Internet and the “Clouding of New Media”, people can engage in global affairs more than ever – one forgotten dimension of social innovations originated from people around the world can be rejuvenated for participatory actions, in and beyond the cyberspace, with all kind of self-generating media contents (Chambers & Evans 2020; Lai 2008, 2011a/b/c). Hence, there is an emergence of new cosmopolitanism-driven sociopoliticking for the reflexive eco-modernity.

Sharing strong affinities with Doreen Massey’s calling for ‘geographies of responsibility’, the social agency in geo-politics thesis of Iris M. Young (2003, 2004, 2007) proposed a ‘social connection’ model in which political responsibility is derived from the ways in which different actors are shaping, as well

as being shaped, in structural socio-geo-political processes. The new political responsibility represents a collective practice, articulating social justice with the evaluation of individual conduct and social interaction in a non-reductive way. This alternative is a new model of ‘shared responsibility’ between individuals and the communal one in which responsibility is distributed across complex networks of causality and agency (Barnett 2011: 252). Here, the normative challenge for the *World City*, the globalization project at large, is echoing the critiques on global-local inequalities derived from new labor process in advanced capitalism (Harvey 2010).

More specific, the mistaken functional specific land use (spatial injustice) in cities (*World City* or *Global City* alike) throughout the last century is doomed to failure! For future, a socio-cultural compatible, small scaling and mixing-up of urban land/space use is the key for sociable, livable cities: people need spaces for socio-economic reciprocities, aiming and achieving socially sustainability. To achieve this, we need both normative appeals and positive logical reasoning, taking into account of multiplicity of urbanity in a globalizing world; say the least is the respect for social, economic and cultural rights and human needs at large.

Without a significant change from the pro-growth development model as championed by the market-friendly international governmental organizations, like IMF, World Bank and WTO, human civilization will be destined to be suicidal for genocide. Perhaps, Karl Marx and Friedrich Engels’ characterization on the inherent contradictions of the crisis-ridden capitalism is partially right, as in the context of 21st century, the pro-growth development model is grave-digging: strong population growth in urban centres, along with multiple mobilities, excessive global consumption and rising carbon, -cum- greenhouse gases, emissions... all are destroying human life and ecological worlds (Urry 2010: 192) – yet global climate change is an irreversible destiny: frequent flooding and drought, and (un-)seasonal disasters and catastrophes, plus extreme weather conditions become the norm, with no exception. And the only way for human survival is to mitigate such global crisis in the coming decades, whilst pursuing ecological modernization.

3. Global Consensus for Ecological (-Crisis-driven) Modernization?

Confronting the crises, social innovation and policy learning are articulated; as above studies shown that the speeding-up of global media attention on natural and human-made disasters across different geo-political spaces, and cyber-linkages are revolutionary in changing the mode of socio-cultural interactions, global-locally, behavioral repertoires among people in different geographical regions and time zones. The most developmental aspect of the informational age is new media’ enabling of multi-disciplinary, cross-and-inter-cultural communication for policy/practice learning of new experience and discoveries.

3.1 The Climate Change Differential Paradoxes

History of consensus building for sustainable development shows the half success of most global initiatives. In spite of many United Nations’ conferences so far in 21st Century: up to October 2015 – before the Climate Change Paris COP21 Conference, global initiatives for sustainable development have not been strategic nor demonstratively policy-enforceable, especially in nurturing global greenhouse gases emission limits after the Kyoto Protocol, nor enhancing biodiversity and sustainable development. For instance, the UN Climate Change Summit in Copenhagen (COP15; 7-18.December 2009) disappointed not just environmentalists and political leaders, but developing worlds at large, by failing to produce a legally binding treaty on reducing greenhouse gas, carbon dioxide (CO₂). Seemingly, it is also a double-failure of the United Nations’ initiatives on Climate Change for the related initiatives since 2010, the *modus operandi* is more meetings after meetings (<https://unfccc.int/>):

- 2011 — The Durban Platform for Enhanced Action at COP17: Governments clearly recognized the need to draw up the blueprint for a fresh universal, legal agreement to deal with climate change beyond 2020.
- 2012 — The Doha Amendment to the Kyoto Protocol is adopted at CMP8: new commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from 1 January 2013 to 31

December 2020; a revised list of greenhouse gases to be reported on by Parties in the second commitment period.

- 2013 — The Warsaw COP19/CMP9 include further advancing the Durban Platform, the Green Climate Fund and Long-Term Finance, the Warsaw Framework for REDD Plus and the Warsaw International Mechanism for Loss and Damage.
- 2014 — The Lima COP20 Meeting agreed the ground rules and terms on how all countries can submit contributions to the new agreement to be concluded in November 2015 Paris COP21. These Intended Nationally Determined Contributions (INDCs) will form the foundation for climate action post 2020 when the new agreement is set to come into effect.
- 2019 — The UN Climate Action Summit with new activists like Swedish schoolgirl Greta Thunberg (23 September 2019) famous speech of *“We’ll be watching you. This is all wrong. I shouldn’t be up here. I should be back in school on the other side of the ocean. Yet, you all come to us young people for hope. How dare you!”*

Here, young people activism and local initiatives for the Climate Change should be noted that Young people initiative for the climate strikes took place in at least 150 countries worldwide, reflecting a growing sense among youth of the urgency of action on climate change. And in 2019, 1,480 jurisdictions – spanning 28 countries and covering 820 million citizens – had issued “climate emergency” declarations. Furthermore, opinion polls across several countries demonstrated increased awareness of climate change and strong public support for renewable energy (REN 21, 2020a/b).

Since the post-Copenhagen preparative meetings for United Nations Framework Convention on Climate Change (UNFCCC), the search for new adaptation measure for post-Kyoto Protocol has been repeatedly toning down for a “flexible” and “comprising” approach for achieving something just for non-legally binding agreement for Cancun (Mexico) Climate Change Summit (COP16), 29.November to 10.December 2010 beyond – while the next hope will be another series of talks for Climate Change Conference COP21 in Paris November 2015, the COP25 - UN 2019 Climate

Change Summit.... But for all initiatives, the real question is still open: how to contain the “+2 degree Celsius” without concrete target and binding agreement; or just another round of talk?

Similarly, the “soft-targeting” biodiversity development without strong sanctioning – incentive mechanism is the key policy achievement (?) for the Convention on Biological Diversity (CBD, <https://www.cbd.int/>). Yet, the CBD is a compromised form for the contradictions between economic developmentalism and biodiversity: though it argues that functional aspects of bio-localism need to be strengthened. But the question of how to pursue for biodiversity (the nation states’ commitment in terms of policy and concrete targets) for sustainable development is still open.

New global initiatives are contingent upon new socio-political dynamics beyond their inertia. Perhaps more and more global summits (2010 Nagoya Convention on Biodiversity and Rio+20 in 2012, 2019 UN Global Climate Action Summit alike, waiting for more meetings after another apocalyptic disaster?) are needed prior to real consensus building and formation of the global will for the (dying?) human species and for ecological urban-modernization. But we are running out of time! Obviously, there is urgency for transparent communication and honest commitment for all involving nation states for real policy change!

Climate change is especially intertwining with a global-regional-local energy crisis, with the excess use of, and dependency on, the carbon emission fossil fuels; but it is exacerbated by the under-investment and development for renewable energy (REN 21 2019, 2020a/b; UNEP & WTO 2009). The inertia against “the global solution for global problem” is ironically demonstrated by apathetic participation of the emerging economies, like the BRICS and the once reluctant participant for global governance for climate change, U.S.A. Here, the role of BRICS is particularly critical in shaping global warming that since 2007, the BRICS countries, representing one-fourth of the world GDP, have contributed to over 30% of global energy use and 33% of CO₂ emissions from fuel combustion (IEA 2009a/b; Olivier & Peters 2010). At the very least, they are the growth engines, requiring more energy, emitting more greenhouse gas, for (or destroying?) global development for the past and for the future as well.

Perhaps the 3.11 disasters have never been fully learnt by Japanese business, trading and diplomatic communities once the risks and disasters are externalized territorially and for export-oriented growth, they are still exporting nuclear technologies overseas; juxtaposing strong competition between/among rival nation states in East Asia: hyper-industrializing giants of South Korea and China, geo-political position of newly energizing Russia and the unpredictable solo communist North Korea.

Obviously, the contradictions and controversies on nuclear power development will have security ramifications and geo-political consequences (not if but) when another nuclear fall-out occurs in those hosting (less developed) counties – like Japanese 3.11 history, multiple disasters are in waiting.... And nuclear power in the geo-politics of energy re-sourcing will not be withering away but be more problematic for human survival in future (REN 21 2020a/b).

For policy learning and consensus building for sustainability, digital capitalism as a global corporate led market system therefore is problematic. The present form of informatization of people's work and societal (virtual) encounters has reinforced a divided as well as a dual society: the informational-based informal economy is juxtaposed with a down-graded labor-based informal economy resulting in a spatial structure: a city which combines segregation, diversity, and hierarchy. ICT enhance a flexible production regime, generating more wealth and global economic activities. Yet far from developing an equitable and better society, our ICT-driven post-material society has produced more social disasters (gaps and divisions among communities, countries, and regions) in the period 1980–2010s than ever before. But there are protests and social mobilizations against the globalization project (Blok 220, Lai 2011a/b/c).

Yet, the timely critical issue is how societies around the world manage hyper- modernization and mega urbanization with clean and renewable energy, with less carbon footprints or neutrality, during climate change crisis – some form of smart city with sustainable energy re-sourcing locally is urgently required (IEA 2015, 2020). In other words, the paradigmatic shift requires more than technological change *per se*; normative-ethical questions and choices to foster the shift towards ecological modernity are deemed urgent necessary.

Obviously, the contradictions and mitigating strategies require good “realpolitik”. But we should be reminded that too much of the ‘sustainable politics’ kills sustainability. It ignores the fact that sustainability politics is precisely not about climate but about transforming the basic concepts and institutions of industrial nation-state's modernity – the calling is for a transformation of our life world (Beck 2010: 256). Hence, the new worldview for sustainability should be a fundamental shift of developmental course for the greening of economy and society - reflexive ecological modernization for global-cum-local sustainability!

3.2 Apocalyptic Learning: Post-2011.3.11 Re-Sourcing to Green Energy?

The obvious case for new risks and human-made disasters is nuclear energy syndrome: the crisis-ridden nuclear power reflects the post-war myths on the de-militarization of the new uranium-isotopic power (“the controlled radiation”) by the high-cost and questionably application of nuclear physics and engineering for peaceful use of nuclear power; though once questioned in the Three Mile Island accident (1979) and the Chernobyl disaster (1986). The mythical scientific regime confronting unprecedented risk of nuclear engineering is much under the historically old (over 25 years) yet critic-analytical delineation on *The Risk Society (Risikogesellschaft)* by Ulrich Beck (1986).

The Japanese case presents the challenges for risk society that they live in a highly hyper-modernized but have had to cope with natural disasters throughout history (Lai 2019), demonstratively by the most recent one of the Sendai Framework for Disaster Risk Reduction 2015–2030 (UN World Conference on Disaster Risk Reduction, 2015) to achieve substantial reduction of disaster risk and losses in lives and livelihoods.

Yet there are more challenges ahead for sustainable development, not least global warming and climate change. Confronting these challenges, Japan has recently been actively engaging in global multi-lateral initiatives (of the United Nations, UN) for sustainable development as represented by: firstly, the Kyoto Protocol (1997–2015) – extending the 1992 United Nations Framework Convention on Climate Change (UNFCCC, 2016) that commits state parties to reducing greenhouse gas emissions, to limit global

warming; secondly, the 2010 Nagoya Protocol for the Convention on Biological Diversity 2011–2020 (CBD, 2010, COP10) and the COP11 to COP14 initiatives alike, to conserve global biodiversity, promote sustainable resource use, and facilitate fair and equitable sharing of resource benefits by all stakeholders. Yet, more new initiatives are waiting for the CBD COP15 to be held in 2021.

But haunted by Fukushima crises (2011.3.11) and global financial crises (since late 2008); driving continued insecurity upon global development, there is irreversible trend and consensus towards alternative, clean, new and alternative energy re-sourcing (IEA 2015, 2020; REN 21 2019, 2020a/b): global new investment in renewable power and fuels increased by 17%, to a new record of US\$ 257 billion in 2015 and in 2019, renewable energy had another record-breaking year in 2019, as installed power capacity grew more than 200 gigawatts (GW) (mostly solar photovoltaics, PV) – its highest increase ever. More specific for global trends in 2019 (REN 21 2020a/b):

- New investment in renewables grew 2% compared to 2018 – as costs continued to decrease – reaching some USD 301.7 billion. Wind and solar power accounted for nearly all new investment; notably, investment in wind power outweighed the solar power one for the first time since 2009.
- Much more investment flowed to renewable power technologies than to other electricity-generating technologies, including coal, natural gas and nuclear power generating plants.
- 77 countries, 10 regions and more than 100 cities announced their commitment to net zero carbon emissions by 2050, and the European Commission proposed a European Green Deal roadmap to create the first carbon-neutral continent by 2050.
- Producing electricity from new renewables is more cost effective than producing it from new coal-fired power plants. Among renewables, wind and solar energy have become mainstream electricity sources, plus increasingly cost-competitive with fossil fuel power plants.
- Major energy companies to invest in renewable energy highlights both the cost-competitiveness and public appeal of renewables.

For Japan, the 3.11-disasters reveal the paradigmatic puzzles: the realism of the poverty of high-tech

based new energy sourcing at the post WWII (1950s–80s) and at the turn of the new millennium (2000–2011). The likely ending of nuclear power in Japan in some sense is not as accidental one as it is thought due solely to the 3.11 disasters, but it is embedded in the exponential growth of risks in large scale (speculative) high-tech system deriving from nuclear technology (for weaponry to kill?). Paradoxically against the sudden-death of nuclear energy in Japan, Japanese government through its bilateral aids and technology transfer initiatives, in addition to trading supports, Japanese nuclear power plant builders, like Toshiba, Hitachi and Mitsubishi Heavy Industries alike are still being commissioned to develop nuclear power plants around the world, particularly in ASEAN countries: Indonesia, Malaysia, Thailand, and Vietnam.

In short, the Japan's partial shift away from nuclear energy, with more energy re-sourcing for the renewable ones, is not unique; as is major development recently by the United Nations' Sustainable Energy for All initiative – calling for a global target of doubling the share of renewable energy by 2030 (along with targets and to ensure universal access to modern energy and to double the rate of energy efficiency (IEA 2012: 212). Yet, “transforming the power sector alone will only get the world one-third of the way to net-zero emissions, highlighting the need for greater efforts in other key sectors” (IEA 2020; cf. REN 21 2020a/b).

The pro-active energy policy should be stressed here. More strategic for future sustainable development, it is the emerging industrializing economies (e.g., the BRICS) which have strong dynamism to shape global development. The state policies for renewable future in general, renewable energy targets in particular, continue to be a driving force in shaping markets for renewable energy, despite some setbacks resulting from a lack of long-term policy certainty and stability in many countries: Cities have adopted renewable energy-specific targets and action plans, and by mid-2019 more than 250 cities worldwide had targets for 100% renewable energy, not only for the power sector, but also covering heating and cooling, and transport - for example through financial and fiscal incentives for the installation of solar PV, geothermal and green systems (REN 21 2020a/b).

Globally, the 2019 UN Climate Action Summit's *Zero Carbon Buildings for All Initiative* aims to

develop decarbonisation roadmaps for buildings and to mobilise USD 1 trillion in funding by 2050. In the maritime industry, leaders launched the Getting to Zero Coalition with the objective of operating zero emission vessels along deep-sea trade routes by 2030 (REN 21 2020a/b).

More problematic, there are still more words than actions for governing global-and-local re-sourcing for renewable energy. Global energy system has not been fully considered as global governance issue, if compared with health and peacekeeping – the pursuit for global transformation of energy governance has been a taboo in political and foreign policy circles (Karlsson-Vinkhuyzen, et al, 2012, 2016). Alternatively, there is urgency for a strong and coherent governance at all geo-political scales; but Rio+20 and the post-Kyoto Climate Change policy are less likely provide a roadmap for sustainability (Halle *et al.* 2013; Lai 2015).

3.3 Critical Eco-Engagements beyond Humanity

Global movement and local protests undertaken by global and local NGOs are phenomenal these days: questioning stem-cell research, against animal rights abuse, against genetically-modified (GM) products of transnational corporations (TNCs)...All these are critical for humanity, sustainability, the risk society and search for ecological modernization (Beck 1992, 1998; Mol & Sonnenfeld, 2000).

The ‘Battle in Seattle’ (demonstrations against the 1999 WTO ministerial meeting) marks the beginning of new epoch of global activism, aided by ICT in general and mobile communication in particular: e-mailing or increasingly mobile phone text messaging has become a central tool for the e-mobilization of global social protests against capitalist globalization (Bennett 2003; Brecher, *et al.* 2000; Held & McGrew 2002). The more recent example are: (1) the global peace campaign against the American imperialist calling for War-Against-Iraq; with the full-fledged utilization of ICT, the Internet/Web and mobile multimedia, over 12 million of protesters were on the march in hundreds of cities around the world on 15 February 2003; (2) the Anti-G8 Summit protests at Heiligendamm, Germany, 6-8 June 2007. All these global activisms are facilitated by mobile communicative networks The Net /Web and mobile communications therefore give leverage to ordinary

people, resource-poor activists and protest agencies to fight against the establishments - governments, big businesses and the mass media. All kind of ‘anti-‘ information and ideas in cyberspace, bypassing the mass media, turn into global real time social actions (details of the anti-globalization, anti-G8 protests networking, see: www.indymedia.org).

3.3.1 The PeTA’s Protests for New Eco-Norms

PeTA, People for the Ethical Treatment of Animals (<http://www.peta.org/>) challenges the predominant pro-growth, unsustainable development. As a single issue (animal rights) international nongovernmental organization (iNGO) found in 1961, it is a worldwide movement of people who campaign for animal rights. PETA believes that animals have rights and deserve to have their best interests taken into consideration, regardless of whether they are useful to humans (<http://www.peta.org>). This idea of harmony and co-existence between *homo sapiens* and other species, though not new, is a rejuvenation of humanity ideals.

PeTA’s work is based on careful research and on the standards agreed by the international community. It is independent of any government, political ideology, economic interest or religion. The main work of PeTA is carried out by volunteer activists, members and supporters. PeTA mobilizes volunteer activists — people who give freely of their time and energy in solidarity with animals which the rights have been abused. In 2007, there are more than 1.6 million members, supporters and subscribers in over 150 countries and territories in every region of the world. Despite of cultural and geographical diversity of PeTA’s activists, with widely different political and religious views, they are united by the determination to work for a world where animals enjoy their rights, parity to human being, too.

Over the last decade, PeTA international campaigns for animal rights, questing the conscience of people regarding biodiversity and animal rights, ranging from “Fur is Dead” to “Vegetarianism”; challenging animal testing of scientific communities. It works through public education, cruelty investigations, research, animal rescue, legislation, special events, celebrity involvement, and protest campaigns: “Fur is Dead”, “Vegetarianism”, “Anti-Animal Testing”, “Cruelty to Accompany Animals”, “Animals

used for Entertainment”.... (<http://www.peta.org/mc/photos.asp>).

PeTA advocacies’ communicative logics and strategies are: whenever there is animal rights abuse, as informed and/or discovered by its global network, it searches out the facts. PeTA mobilizes local informant, or sends experts (in some cases, as converted investigators) to conduct field investigation, observe and record the abuses. It also monitors thousands of media outlets and maintains contact with reliable sources of information all over the world. After detailed yet timely research on animal abuses, PeTA mobilizes its membership, through its communication networks. Its global network against the abuse, it takes actions, ranging from **5-minute** individual action like (<http://www.peta.org/actioncenter/getactive-5min.asp>):

- Write to the TV network of any program in which characters abuse or ridicule animals.
- Pen a brief letter to the newspaper that runs an ad for a fur sale.
- Call the sponsors of upcoming entertainment events that use animals, such as circuses and rodeos (look for ads in your local paper).
- Include a PeTA leaflet with every bill paid and place an animal rights sticker on the outside of the envelope.
- Ask the child's teacher to stop keeping animals in the classroom or requiring the students to dissect.
- Show others many great beauty products that aren't tested on animals.
- Ask for more vegan options at local restaurants and grocery stores.
- Include animal-rights quote or—better—Web link to a video in the e-mail custom signature.

And in the community:

- Buy animal rights books to donate to local library. Visit PETACatalog.org to purchase select books for the library at a 20 percent discount.
- Wearing clothes and buttons with pro-animal statements is a great way to be an advocate for animals who are exploited on factory farms. Our “[Ask Me Why I'm Vegan](#)” button is a great conversation starter.
- Post [PeTA literature](#) on bulletin boards (it's free).
- Offer to show videos, sponsor speakers, and host seminars.
- Take vegan meals (and the [recipes!](#)) to functions.
- Get on food committees.

- Speak up! When people ask you why you don't eat animals, don't just call it a "personal choice." Instead, paint a vivid picture of cruelty and explain how easy it is to go vegetarian!
- Lend animal rights books to friends and place them in the library of retirement home, town, school, church, or synagogue.

Or alternatively, with more time to commit for individuals (<http://www.peta.org/actioncenter/getactive-15min.asp>):

- Keep eyes and ears peeled for animal-related issues and write a letter in support of animal rights to the editor of every magazine or newspaper
- Thank producers for animal-friendly messages on TV and in print.
- Write letters to companies that conduct cruel experiments on animals, such as Iams and its parent company, Procter & Gamble.
- Call and write your legislators, asking them to support animal-friendly legislation and thanking them for any similar past support.
- Peruse the local paper for "free to a good home" ads. and call the people who place them, warning them that their animal might end up in a lab. Order PETA's "free to a good home" ad pack, full of info that you can provide. We'll send it for free!
- Give others a message when they leave one for you! Record an animal rights message on your voice mail or answering machine, such as, "Millions of animals die every hour in the United States for their flesh.

For urgent issues, online activism is obvious (<http://www.peta.org/actioncenter/online-activism.asp>), members and netizens are to be mobilized, to initiate global action to writing letters and faxes and to firing these appeals to the relevant authorities (political leadership, government agencies in and outside one nation state, international organization), demanding for immediate reaction for protecting the animals. This sort of mobilization is paralleling to other international NGOs’ mobilization, like the *Amnesty International* (2020, Lebert 2002). Yet, what distinguishes PeTA from other international NGOs’ e-mobilization strategy is apart from its strong new media-presence, there are also soft, down-to-daily-life activities of do-it-yourself.

3.3.2 Championing New Eco Ethics: Cyber-Animal Rights-Warriors

Animal rights activism reflects the crisis-driven animal farming industries at large. Recently, the mink-related Covid strains found in 214 people since June in Nordic countries (Beaumont 2020) and Denmark (the world largest mink producer) announced cull of 15 million mink over Covid mutation fears in early November 2020 (Kevany 2020) highlight the long-term criticisms of animal activists against animal farming for luxury lifestyles.

The above PeTA example highlights the communicative aspects, identity, and praxis, of *Cyber-Animal-Rights-Warriors* in action – an expression of new enhanced humanity! For the transformation of everyday life by/with the cyber-dynamics, within and beyond the e-mobilization for bio-ecological justice, four major processes have transpired as critical. First and foremost is the new self-identity-cum-empowerment formation (with and through individual actions), within a wider context of global/regional green-animal-rights political lobbying (the otherness). Cyberspace provides good information with hyper-links to other sources of information and it is a relatively safe-haven for people to have imaginative and innovative encounters with global policy problems. The cyberspace (for novices as well as veteran activists) is a learning-by-doing, action-oriented media at both individual and collective levels. By clicking the mouse, sending support and appeal letters or animated e-cards to the targets, the individual constitutes a new green identity of, as well as praxis for, involving in global bio-ecological movements as cyber-animal warrior.

Second, focusing on the right or wrong of the binary code of bioethics and eco-justices, the ICT enhanced cyber-cum-social mobilization extends the territorial (ir)relevance and enables “outsiders” to have an influence in and beyond the locally and regionally specific, territorially defined, environmental struggles. Within and beyond the transformative cyberspace, the “outsiders” are inherently bound and structurally anchored onto/into the ecological movements and therefore acquiring the identity of “insiders” or at the very least, an empathetic actor/supporter for victims of environmental disasters. Hence, the bio-eco-ethics movement articulates and reinforces the bondage between human agencies and animal world, juxtaposing the higher level of global

concern into national/regional/local sustainable spaces.

Third, the multiple linkages of cyber-networking and the offering of alternative lifestyles of PeTA, as representative for NGOs globally and locally, say, vegetarianism and no-fur clothing, in and beyond the cyberspace stretch geog-cultural localities, and they also extend to numerous individuals who used to be passive observers (of the mass media) and call upon their participation in a less militant, yet supportive, role for the sympathetic alternative lifestyle movement. Here, individuals can make a difference in the global sustainability, for animals in particular; especially on those issues (animal and human rights) normally neglected by the present state system. At this historical conjuncture of informational development, the everyday life green-and-for biodiversity praxis (of a few mouse-clicks) is not just transforming the greenness of one’s identity (its relationship with the natural world) but also reshaping the relationship between oneself and the otherness (animal world at large).

Finally, the cases of cyber-activism analyzed here, points towards the emergence of a new socio-cultural charged eco-green identity, and bioethics, within/beyond the cyberspace, extending the opportunity structure for daily life praxis – cyber-activists have a role to play! The cyberspace reinforces the civic forces not just for animal rights *per se* (the solidarity movement between human and animal worlds of various forms) and extends the horizon of ecological action – possibly keeping the ecological issues/calling alive even when social movement (in real world) become dormant at the local level.

PeTA’s international website (<http://www.PeTA.org>) provides animal rights resources on the Internet, enabling -cum-empowering people to take action to prevent the abuses. All these will serve a new (cyber-)space for animal rights advocacy, campaign, and promotion at various geo-social scale, in different countries and cultures. Hence, following the up-trend of e-mobilization, the future of transnational activism for animal rights looks good as shown in the development in cyber and real worlds (Calhoun 2004, Lai 2004a, 2011a). With informative and knowledge-rich cyberspace, this will help more cyber-networking for more social capital to enhance humanity (Huysman & Wulf 2004).

4. Creative Social Innovations and Policy Learning for Sustainability

The Climate Change challenges all sectors in our society, not least the calling for energy transformation that many technologies are available to reach net-zero greenhouse gas emissions by 2050 – according to IEA's *Energy Technology Perspectives 2020*, but the paradigmatic change/shift in all socio-economic activities is yet to come (IEA 2020; REN21 20201/b). Accordingly, "While markets are vital for mobilizing capital and catalyzing innovation, they will not deliver net-zero emissions on their own". Here, visionary socio-economic and technological innovations for clean energy development are needed to:

- Tackle emissions from existing assets
- Strengthen markets for technologies at an early stage of adoption
- Develop and upgrade infrastructure that enables technology deployment
- Boost support for research, development and demonstration
- Expand international technology collaboration.

Global population dynamics yet will have strong implication for sustainable development. Mega-urbanization means more than two-thirds of the global population will be living in cities by 2050; juxtaposing regional ageing for the developed economies and hyper-urbanization for the emerging economies should not be neglected (WHO 2015). The hyper-modernizing urbanism with rapid rate of urban growth has created enormous challenges – as the rapidly developing urban problems in the BRICS. Historically, cities create not just opportunities-driven hope but also concentrate health hazards and risks. Good governance is a must for coping urbanization crises, say the least is the swelling number of slum-dwellers (more than 800 million people in 2012), mostly in developing economies (WHO 2012). There is urgent need for slum improvement for better health with universal access to access to clean water, food, energy, and basic utilities.

4.1 New *Modi Operandi* of Humanity for Biodiversity?

The cyber-space and new (mobile) media have been not just reshaping the landscape of global and

local communications but defining new humanity. The most dramatic illustration is that, in the world of new media, individual can make a difference in broadcasting his/her text/video footages, as shown in the Instagram, LINE, Myspace, Twitter, YouTube platforms (Chambers & Evans 2020, Katz Ed. 2008, Lai 2011a). For the prospects of biodiversity advocacy and enhanced humanity towards a new modernity, four distinct yet inter-related issues can be discerned. Firstly, the globalization processes challenge how to address to the sustainability issue of mankind and biodiversity, bio-ecological justices. There is the recognition that global economic change reinforces the existing socio-economic-cultural fault-lines, but it also creates new and different kinds of alignments of non-state actors around core issues and across borders. Their collective impacts are rarely addressed to by research nor responded by the state policy (cf. Stone 2004). The contribution of transnational advocacies of NGOs, like PeTA and Greenpeace International, should redress this missing link: civic forces are mainstreaming in global social innovations.

Secondly, thanks to ICT, cyberspace becomes the domain whereby individuals can articulate non-mainstream politics, ranging from human rights to animal rights, ethical and justices on biodiversity at large. Here, non-state actors and non-traditional political themes can enter, and be represented, not just in the cyberspace, but also gain visibility in international politics beyond one's nation state territory (Johnson & Hestermann 2019, Sassen 2004, 2007). Indeed, the diffusion of animal rights information, ranging from the 'abuse' to 'good practices', from individuals and among NGOs, and social movements can be instrumental in defining the glocal animal-cum-human rights and sustainability.

Thirdly, the issue of culture and language must be taken seriously, particularly when human-cum-animal rights advocated as a global norms and value that many (but not all) cultures share. The problem of cyber-'imperialism' and cultural domination over the universal values of human-cum-animal rights should be noted (Hamm & Smandych 2004, Reifer 2004) here. Yet, English (as *lingua franca*?) consequently is the de facto standard language of the Internet, and the domination effect of the English language in global communication is threatening the existence of minority languages (Lai 2004b).

For this, PeTA and Greenpeace International have dedicated multi-lingual websites for the struggle of bio-ecological justices: that global animal rights and bio-ecological ethics and values be communicable in local languages: making the case for biodiversity and its universalism down-to-earth.

Last but not the least are the networking logics and dynamics, on the one hand, and the very fluidity of bio-eco-ethnics, on the other. For the former case, the logic of Internet enhanced e-mobilization is its bottom-up process: communities and interest groups create and facilitate themselves. We need to enable the deliberative skills (informational personality) people possess and explore what happens in the space for advocacy. The Net and IoT are instrumental in building up the informational personality in social mobilization: individual chat rooms and discussion lists enable people to communicate and learn from each other – the stage of discovery of new knowledge, then from knowledge toward the building up of trust among each other, then further enhance their capacity to mobilize others to make the social change – this is in short a progressive capacity building process for social agencies. To recapitulate, the call for biodiversity, its ramification for bio-ecological advocacy, are not just talk and communication in cyberspace, but action in real world as well: therefore direct actions at local (individuals and community) level are still the basics for change for a better world for humanity, as well as enhancing sustainability!

4.2 Eco-Modernization-driven New Lifestyles beyond the 2020 Pandemic

The 2020 pandemic has been structurally shifting new, or alternative ways of adaptive, lifestyles under the new (ab)normality, not least the prevalence of “social-distance” and tele-working. For instance, in New York City, it is observed that “the COVID-19 pandemic offers an opportunity to reimagine the workplace and workforce in ‘more efficient, more effective’ ways” (Zukin 2020: 3):

“reimagining the workplace will mean for cities that have spent the past decade building an innovation complex around physical density, digital technology and real estate development. On the one hand, many parts of the tech ecosystem that relied on face-to-face interaction – such as coworking spaces, hackathons and venture capitalists’ mentoring of start-up founders – have

already moved online. On the other hand, cutting tech ecosystems loose from place-based offices, labour markets and institutional networks puts cities’ economic future at risk.” (Zukin, 2020: 3).

The new pandemic abnormality lifestyle, yet accidental, is repeatedly re-calling for the questionably ecologically-unsound modern lifestyle(s) if hyper-globalization, as previously represented in terms of the excess of production, consumption and exchange - all charting the course of unsustainable development; over production-consumption -cum- wastage of energy is part of the problem: for instance, “frequent-flying “super emitters” who represent just 1% of the world’s population caused half of aviation’s carbon emissions in 2018” and researchers say Covid-19 hiatus is moment to tackle the problem (*The Guardian* 17 Nov. 2020). New lifestyle is derived from greening urban initiatives (Blok 2020, Garcia-Lamarca, *et al.* 2019; Loughran 2020; Zhang *et al.* 2020).

Epitomizing by the free flows of capital, goods and labors as championed by the IGOs like IMF and WTO, the last few decades’ globalization project (in advanced capitalism at large) has its destructive impacts both to making people’s livelihood worse and making ecology unsustainable; climate change is one of the apocalyptic syndrome (Chambers & Evans 2020, Goh 2020, Keil 2020, Lai 2019). The crisis-ridden global advanced capitalism has its inherent contradictions. Far from benign that fosters better economic benefits for all, the unbridled capitalism leads to the exploitation of the weak and to socio-ecological degradation, and engendering xenophobia and the demise of local people’s jobs and culture. The globalizing mobility processes have been not just indeed affecting, if not polarizing, people’s socio-economic lives; but also shaping the Earth’s unsustainable destiny toward humanity’s genocide as apocalypse.

The greening of urban transformation has its energy-wise foundation. Historically, nuclear energy was once (for a few decades) considered as safe, reliable and sustainable energy source; but the 2011.3.11 Fukushima disasters (earthquake, tsunami and nuclear power plant “accidents”) redefine what is (not) sustainable (re-)sourcing of energy and human destiny, in the repeatedly apocalyptic terms after Three Miles Island (1978) and Chernobyl (1986)....

The unmanageable risks of nuclear power are crisis-driven therefore Germany planned to decommission all nuclear power plants by 2022 and Japan, likely by 2040. Correspondingly there is a new call for, or the rejuvenation of, the less-energy -cum- carbon neutral lifestyle, represented by the LOHAS (lifestyle of health and sustainability) movement. International agencies' initiatives under the framework of the United Nations and European Union are becoming important, as the last resort! Here, the Nordic model of eco-modernization -cum- wellbeing promotion, is worth to be learnt by other (Witoszek & Midttun Eds., 2018). Hence, the greening of market may attribute to individuals' commitment to *Save the World* - with the motto of *Think Globally and Act Locally*, for individual's health and quality of life for LOHAS. Under a new global green mainstreaming, the quest for sustainable development has shaped the market conditions significantly (Emerich 2011, Lai 2011c, 2014I REN 21 2020a/b).

Globally, the rise of new media of e-learning reflects the instrumental role of ICT in a free global market is crucial and referred to as 'digital capitalism' – the conditions where ICT networks are directly generalizing socio-cultural range of the global (and local) capitalist economy as never before (Acuto & Leffel 2020, Harvey 2010). Economic forces also free to physically transcend territorial boundaries and, more importantly, to take economic advantage of the sudden absence of geopolitical constraints (Castells & Himanen Ed., 2014; Rosenau 2003).

Our deliberation highlights the emerging cosmopolitanism in the information age, focusing on the new initiatives and networks for global-local sustainability. Enhanced by new media (mobile communications, Internet, etc.), NGOs' critical e-mobilizations at various geo-political forums have been redefining international norms for global governance on sustainability: IGOs have been forced to make policy adjustments or concessions, resulting in new IGO-NGO policy regime for consultative consensus building for people's survival.

With new media-enhanced participatory regime for global governance for sustainable development, eco-friendly initiatives therefore are part of such new learning; bring back those socio-economic practices for sustainable development, with reference to good culture, ethics, traditions and wisdoms for preserving

human resilience and ecological vitalities (Blok 2020, Macer, *et al.* 2012; Lai 2011c, UN 2015). For the continuing learning for sustainability, the challenges for cross (or multi-) disciplinary, cultural and temporal-spatial communicative (re-)learning in both cyberspace and the real world, quest for not just new skills for adaptation in audio-visual interactive revolution, but also the communicative capacity building for individual learner, as well as social institutions, to cope with exponential growth of, questionably conflicting, 'green' information and knowledge.

Indeed, there are many issues to be raised for pursuing sustainable course of actions along ecological modernization frontiers. This is a challenge for all stakeholders to strive for the late September 2015 adopted United Nations' »2030 Agenda for Sustainable Development«, aiming to achieve 17 Sustainable Development Goals and 169 targets (UN 2015), as well as the UN and international communities' proclaimed goals for mitigating the Climate Change since then (<https://www.un.org/en/climatechange>). The demonstrated large scale and strong ambition for this new universal Global Agenda are unprecedented, more even so for the challenges of transnational and cross-cultural policy learning and praxis, juxtaposing civic forces and activism for social innovations. All these prompt actions are though imminent, need to be coupled with the socio-political will, to effectively facilitate the greening economy and socio-equitable fair development, and fostering the unique and highly differential ecological-reflexive modernization process. Given the closing-in of the window of opportunity - the limited time frame available, socio-economic ecological miracle is less likely, humanity is now just at best to embark the journey on the rocky and winding path to global-local sustainability!

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